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MEETING

OF THE

GENERAL MEDICAL COUNCIL.

HELD AT THEIR HOUSE, OXFORD-STREET, W.

SIXTH DAY.—WEDNESDAY, JUNE 24.

THE Council resumed its sittings in committee on the Reports of Examinations. The first that came up this morning for consideration was that of Trinity College, Dublin.

After some remarks on and explanations of the report, which were mostly inaudible,

Dr. STOKES said it gave him great pleasure to peruse the report of the visitors. The visitors had suggested that the time devoted to the *vivâ voce* clinical examination was too short, but he was of opinion that a judgment as to the *mens medica* of the candidate could be better arrived at by a written description of a case than by answers to any number of oral questions. He was further of opinion that the proposed exclusion of the professorial element from examining boards would imply a want of confidence in the morality of the examiners.

Dr. STORRAR did not think it would be expedient to allow a candidate to come up at various times for different parts of his examination. This would rather favour a superficial knowledge, which could be obtained very easily by the system of cramming.

Dr. HALDANE, while expressing, as one of the visitors, his great satisfaction with the oral clinical examination, was of opinion that the time allowed for it was, without doubt, rather too short.

Dr. AQUILLA SMITH thought that quite sufficient time was given, and remarked that the best papers were very often written in the shortest time.

Sir DOMINIC CORRIGAN was of opinion that if visitations were continued it would be necessary to instruct the visitors as to the special matters to be inquired into. He had found, on examining the reports, that there was no identity of purpose in them, and no similarity of information. There was a regulation of Trinity College permitting any person to attend the medical lectures on payment of a fee of five shillings, and this was a regulation to which he thought the visitors should have called attention; as also to the fact that a student was permitted to take a licence in medicine after four years' study in medicine and two years' study in arts; and that on completing his arts course and taking a degree of M.D. he was not subjected to a further examination in medicine.

Mr. QUAIN believed that in other universities a medical degree might be taken without any degree in arts at all; so that there was no transgression whatever on the part of Trinity College.

Dr. STORRAR said that at the London University a student was not compelled to take a B.A. degree before taking the degree in medicine.

Dr. HUMPHRY stated that the case was the same at Cambridge, but candidates had to pass an examination very similar to that required for the arts degree.

Dr. ROLLESTON said that at Oxford candidates were required to go through the arts curriculum, and also to take the degree. He thought the Council ought to take into consideration the question of permitting different parts of examinations being taken at different times, because it was a practice which favoured the grinding system, and often led the examiners to intensify their questions to such an extent as to make them beyond the capacity of average students.

Mr. MACNAMARA said that the examination for the licentiate was exactly similar to that for the degree of M.B.

Sir DOMINIC CORRIGAN said that, as he before stated, there was no special examination for the degree of M.B., but that it could be taken by completing the arts course and paying the requisite fees.

Sir WILLIAM GULL said that the examination for the licence was also an examination for the M.B. degree. The only difference between the two was that the one student had a longer career at the University than the other.

It was resolved that the report of the visitors should be sent to Trinity College for consideration and remarks.

The Report of the Visitors of the Examinations of the Durham University then came up for consideration.

Dr. PYLE, referring to a remark that the examination was conducted exclusively by the teachers of the University, said that that was an accidental circumstance, and was not in accordance with the system usually adopted. For the last thirty years the University had one or two examiners in the arts course from Oxford, so that he could hardly understand why a graduate of the University, being a candidate at the examination, should have shown such deficiencies as had been alluded to in the composition of his thesis.

Dr. WOOD thought it a very remarkable thing that a university should confer the degree of M.A. upon a man who was ignorant of composition and spelling. This was neither creditable to the University nor to the profession. He maintained, whatever had been said to the contrary, that the medical examiners ought to reject any candidate who showed a deficiency of general education. When illiterate candidates who had obtained arts degrees appeared at professional examinations the examiners should ascertain who had been the examiners in general education, and report the result of their inquiry to the Council, who would then endeavour to rectify the matter.

Mr. TURNER said that a candidate could present himself a second time for practical chemistry on condition that his papers in anatomy and physiology were considered good, and his paper work in chemistry fair. Under the circumstances, however, this candidate, who was said to have made a very indifferent dissection, should not have been allowed a second chance. No thesis should, in his opinion, be accepted unless it was creditable in a literary as well as a scientific point of view. He could not agree with Sir Dominic Corrigan that the writing of a thesis was a sham. At Edinburgh a candidate was required to certify on his honour that his thesis was of his own composition, it being necessary that such thesis should be good in point of literary composition, and that it should contain the results of the writer's own inquiries and observations.

Dr. STORRAR said that to the University of Durham was due the merit of introducing the system of practical examinations at a very early period. It was really necessary that there should be outside examiners. The University of Durham had hitherto resisted the temptation of granting the old-fashioned St. Andrews' degrees, which was something to its credit.

Dr. HUMPHRY said that the circumstance mentioned in the report, that the candidate who had made such a "hash" of his dissection had obtained ninety-three marks out of one hundred for his paper on oratory, showed the importance of dissections.

The PRESIDENT said that some fifteen years ago he visited the University of Durham, and a similar circumstance to that mentioned by the visitors with regard to the examination in arts then occurred; and on that occasion he used almost the same words as the visitors had done—namely, that it was hard upon the professional examiners that they should be placed in the dilemma of passing persons who could not spell or write English, and who ought never to have been granted an arts degree. An indelible impression was then made upon his mind, in consequence of which he was led in his address to remark upon the condition of the arts examinations. He thought that sooner or later it would be incumbent upon the Council to consider whether these examinations came properly up to their requirements.

It was agreed that the Council should adjourn for an hour, during which time several committees would meet for the dispatch of business.

The Council having reassembled,

Dr. ANDREW WOOD moved that the resolutions of the Committee of the Council with reference to the reports of the visitors should be adopted.

Sir WILLIAM GULL seconded the motion.

Dr. THOMSON moved an amendment to the effect that the resolutions be adopted, with the exception of that passed with reference to the Royal College of Physicians, which was the only body whose attention had been specially directed to deficiencies in the examinations. The proceeding was, in his opinion, a partial one, and he thought the better way would have been to send down the reports without comment, as they had not yet been taken into consideration by the bodies themselves, and it was therefore inexpedient to make special allusions to them. It was undesirable, he thought, to single out one body as the subject of remark.

Mr. QUAIN seconded the amendment.

Sir WILLIAM GULL thought it was not enough to send down simply the reports of the visitors, and complained of the

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policy and delay which had been so often adopted by the Council.

Mr. QUAIN complained that on this and other occasions Sir William Gull was not so courteous as he might have been to the other members of Council.

Sir DOMINIC CORRIGAN thought, for the sake of consistency, the better course would be to introduce all the other bodies into the resolution, so that they might all be dealt with alike.

The amendment was then put and lost by a majority of ten to eight. The motion was put and carried.

Dr. STORRAR gave notice of the following motion:—"That the duties to which the General Medical Council are appointed are defined by the Medical Acts, and the Council are of opinion that their appointments do not authorise them to represent to the Government the views of the profession on the large social question of the expediency or otherwise of admitting women to practise medicine."

Letters were read from Miss Jex-Blake and Mr. Arthur Norton with reference to the registration of women; and also a letter in reference to Mr. Cowper-Temple's Bill from Dr. Shuttleworth, which letters were ordered to be entered on the programme.

The Council then adjourned.

SEVENTH DAY.—THURSDAY, JUNE 24.

FEMALE PRACTITIONERS.

The first subject on the programme for to-day was the consideration of the report of the Committee which had been appointed to report on the following letter, which had been written by direction of the Lord President of the Privy Council, by Mr. Simon, to the President of the General Medical Council:—

"Medical Department, Privy Council Office, June 8, 1875.

"Sir,—I am directed by the Lord President to request that, at the meeting now shortly to be held of the General Medical Council, you will have the goodness to bring under the consideration of that body the Bill which has been introduced in the House of Commons by Mr. Cowper-Temple 'to amend the Medical Act, 1858, so far as relates to the registration of women who have taken the degree of doctor of medicine in a foreign university,' and that you will move the Medical Council to favour his Grace with their observations upon it.

"It appears to the Lord President that Mr. Cowper-Temple's Bill, though very limited in its direct scope, can hardly fail to raise in Parliament the general question whether women ought to be able to look to medical practice, or certain branches of it, as open to them equally with men as a profession and means of livelihood. And I am to say that, as Government may have to express an opinion on this general question, with regard, on the one hand, to women who desire to obtain legal status as medical practitioners in this country, and, on the other hand, to the examination rules, or conditions, which prevent them from accomplishing their wish, his Grace would be glad that the observations with which the Medical Council may favour him should not be restricted to the particular proposal of Mr. Cowper-Temple's Bill, but should discuss, as fully as the Medical Council may see fit, the object to which that proposal would contribute.

"I am, Sir, your obedient servant,

"Dr. Acland, F.R.S., Oxford. (Signed) JOHN SIMON."

The PRESIDENT said that he should have to ask the opinion of the Council as to what course should be pursued. The chairman of the Committee (Mr. Turner) proposed to move the reception of his report. But then they must decide in what way they would deal with the notices of motion which followed on the programme—namely, those of Sir Dominic Corrigan, Dr. Andrew Wood, and Dr. Storrar. In addition to these, there was a notice of motion given by Dr. Bennett, and which was now in the printer's hands. This motion, like the motions of Sir Dominic Corrigan and Dr. Wood, was an alternative report, so that there were, in fact, three alternative reports claiming the attention of the Council. The motion of Dr. Storrar stood in a somewhat different category. It was not an alternative report, but it was definitely an amendment. Unless there was an objection to such a course, he would call at once upon the chairman of the Committee to move the reception of his report.

Dr. STORRAR wished it to be fairly understood that he should have the privilege of bringing forward his amendment before the report of the Committee was considered.

Sir DOMINIC CORRIGAN said that he must object to that course, as his own amendment came before that of Dr. Storrar on the programme.

The PRESIDENT said that he might be permitted to suggest that the fairest course would be that all three of the alternative reports should be treated in the same way as the original report as regards being received and entered on the minutes, as sooner or later they must be. He did not see how justice could be done to the several documents by any other course. Supposing that Dr. Storrar's amendment stood between the original report and the alternative reports, the Council would then be discussing an amendment shelving the whole question without having had all the documents before them.

Dr. ANDREW WOOD said that he thought that the great point would be for them to have a debate upon the great general principle. It was a large question, and one not to be dealt with in a discussion upon this thing or that thing. Mr. Turner would propose the adoption of the report of the Committee, and then the fairest way of proceeding would be that Dr. Storrar should follow with his amendment, and for this reason: that if Dr. Storrar, by any chance, which he (Dr. Wood) thought was a very distant one, should carry his amendment, the whole thing would be at an end. The amendment of Dr. Storrar amounted to a refusal to consider the question, and if that was carried nothing further could be done. But if that amendment was thrown out, as it probably would be, then the next step would be to take Sir Dominic Corrigan's amendment, because he proposed a different course. His object was to delay a decisive answer until the licensing bodies were consulted in regard to the great question. If that motion was carried, the matter would be delayed for another year. If, however, it was thrown out, then the next thing would be to take up the consideration of Mr. Turner's motion. His (Dr. Wood's) own motion was to a great extent the same, and therefore he considered that his best course, to bring the whole thing before the Council, would be to move, in the form of amendments upon Professor Turner's report, those clauses which differed from that report. In that way the sense of the Council would be fully taken upon this very important matter.

Dr. ROLLESTON said that he thought that, as a point of order, there could be no doubt that Dr. Storrar's notice of motion—to which he objected as strongly as anyone in the world—ought to take precedence of anything else, because if it should be carried it would save time. It said that the Council were not competent to discuss the matter. Therefore that point ought to be settled at the outset.

The PRESIDENT said that he thought that his best course would be to ask Mr. Turner to move his motion.

The following report was then presented by Mr. Turner.

Report.

The Committee having taken into consideration the letter of Mr. Simon, recommend the General Medical Council to adopt the following as the reply to be sent to the Lord President of the Privy Council:—(*a.*) In reply to the communication addressed to them by the Lord President of the Privy Council, the Medical Council have to state that, being thus directly appealed to by the Lord President, they have felt bound to consider the question of the admission of women to the medical profession. (*b.*) After due deliberation, the Medical Council have to express their opinion that the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties which cannot be safely ignored, and some of which cannot be obviated. (*c.*) Instead of medicine offering more facilities and less difficulties for women than other professions, the Medical Council believe, that as the whole question is looked into, there will be found peculiar hindrances, moral and physical, to the successful pursuit of medicine by women. Moreover, they desire to add that if it be admitted that women should enter the medical profession, the existence of an equal fitness in women for other professions must be assumed. (*d.*) If, notwithstanding such objections, it should appear to the Government and the Legislature expedient that women, who desire to obtain the legal status as medical practitioners in this country, should not be debarred from obtaining that status, the Council recommend that it should be under some such conditions as the following:—1. That in the interests of public order the education and examinations of female students of medicine should be conducted entirely apart from those of males. 2. That, with regard to the "examination rules, or other conditions," which prevent women from obtaining a legal status as medical practitioners in this country, it would be sufficient if an Act of Parliament were passed which should enable the Medical Council to recognise the examinations of the licensing bodies under schedule (A) of the Medical Act, separately or conjointly, or such other examination or examinations as the Medical Council may, from time to time, deem sufficient, for the purpose of granting admission of women to the Medical Register under the title of "Licensed Practitioners of Medicine." 3. That the examinations of female candidates for a licence entitling their names to be placed on the Register, should be of the same character as those of males. 4. That the education and examinations for these licences should be under the supervision of the Medical Council in the same way as is required for the other licences of this country. (*e.*) As to other than mere legal difficulties which prevent women from accomplishing their wish to engage in the practice of medicine and surgery, the Council are of opinion that such difficulties must be overcome by private exertions, and that no special legislation is called for, except, perhaps, in the case of midwifery. Moreover, the Council are of opinion that any course of legislation which would interfere with the free action of the universities and corporations mentioned in schedule (A), in respect of the medical education of women, is undesirable. (*f.*) In regard to Mr. Cowper-Temple's Bill, the Council cannot approve of a measure intended to confer on women the privilege of registering certain foreign degrees, from which, under Clause 46 of the Medical Act, men are debarred, and over the education and examination for which the Medical Council have no means of exercising that supervision and control to which all the licensing bodies of this country, whether universities or medical corporations, are subjected. (*g.*) It is understood that there are women who would prefer to have a special qualification, and to be entered on a special register, recognising their competency to practise

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midwifery. The Council believe that the education and examination of persons with such views will not be found to differ greatly, upon the whole, from those required of candidates for ordinary licences to practise. Nevertheless, women might be fit for registration on a special register, without passing an examination in various parts of surgery, and, indeed, of medicine. The decision of this question of a special register does not affect the question of admission of women to the General Register, but would require an alteration in schedule (D) of the Medical Act. (A.) It is right to observe that the Committee were not unanimous on some of the propositions in this report. WM. TURNER, Chairman.

Mr. TURNER said that his motion was, as the Council would observe, simply a proposal to receive the report and enter it on the minutes; but this might, nevertheless, be the right stage for him, as chairman of the Committee, to explain the report which they had handed in. The Committee had arrived at their conclusions with a due sense of their responsibility, and without haste. Several hours had been spent in a discussion on the two points raised in the letter. The first point related to the Bill introduced into Parliament to amend the Medical Act of 1858, so as to permit the registration of women who had taken a foreign degree of doctor of medicine. There could be no doubt that the consideration of this Bill fell within the legitimate province of this Council, for the registration of foreign degrees was specially referred to in one of the clauses of the Act under which the Council were constituted. The Committee came to a unanimous decision as to the answer which should be given to this part of the Lord President's letter. With reference to the more general question which was raised, there was naturally room for much greater difference of opinion than was found in connexion with the point relating to Mr. Cowper-Temple's Bill. The opinion was expressed at the Committee that it was a subject not legitimately within the province of the Medical Council. Dr. Storrar had put a notice of motion to the same effect on the programme for this day. No doubt Dr. Storrar was technically correct in his view, but the question which the Committee had to consider was whether the Council should, by a merely technical objection, avoid giving the opinion which had been asked of them by an important department of the Government. He had heard complaints expressed to the effect that the Government did not sufficiently consult the Medical Council on various questions connected with the profession, and on which this Council might fairly be asked for an opinion. Certainly, if they refused to go into the present question, it was not at all likely that they would be ever again appealed to by the Government. On this ground, therefore, if on no other, it was important that they should endeavour to express some view as to the admission of women, whether that view was favourable or otherwise. Another preliminary question was raised in the Committee before they felt themselves prepared to go into the consideration of the general matter, and that question had been embodied in a motion, notice of which had been given by Sir Dominic Corrigan, whose idea was that the Council were not authorised to express any decided opinion without first submitting the matter to the consideration of the several licensing bodies, whose representatives they were. The Government, however, did not ask for the opinions of the various licensing bodies, but they asked for the opinion of this Council, and therefore they ought not to hesitate to express their opinion in the matter. The Committee having decided that they would take up the question, the next point for them to consider was what answer they should give as to whether women ought to be able to look to the medical profession as a means of livelihood. This was a more intricate matter, and naturally excited very great discussion. The Committee at last decided upon recommending the two following paragraphs:—"After due deliberation, the Medical Council have to express their opinion that the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties which cannot be safely ignored, and some of which cannot be obviated." "Instead of medicine offering more facilities and less difficulties for women than other professions, the Medical Council believe that as the whole question is looked into there will be found peculiar hindrances, moral and physical, to the successful pursuit of medicine by women. Moreover, they desire to add that if it be admitted that women should enter the medical professional, the existence of an equal fitness in women for other professions must be assumed." He might give one or two reasons why he agreed to the statements made in these two paragraphs, and in doing so he did not wish to commit any other member of the Committee to those reasons. He had no wish to say anything which might hurt the feelings of anyone, either man or woman. It would ill become him, whose domestic relations with the opposite sex had been all that could be desired throughout his life, to say one word which might be regarded as depreciating women. There were, however, certain general facts which could not be ignored in looking at this question. He had heard it argued that men and women were alike in capacity, and great ridicule had been cast upon those who asserted that woman had a distinctive sphere. He, however, looked upon such arguments as idle talk. No amount of special pleading could break down the physiological barrier which separated the two sexes from each other. They were not on a footing of equality, and they ought not to be rival claimants for the same object. He believed that it was a perfectly sound physiological doctrine that each sex had its own excellences, and one was the complement of the other. The physical framework and muscular apparatus of a woman were less powerful than those of a man. A woman's bones are more slender, and her skull exhibited a smaller amount of departure from the infantile condition than was found in a man. Her brain also was smaller and lighter. The average difference was as much as 10 per cent. in favour of the male. This was a fact of great significance, and the anatomical differences ought to find some physiological expression. The lower brain-weight implied a smaller capacity for concentration of thought, intellectual activity, and prolonged exertion, either mental or bodily. In woman the emotional qualities greatly preponderated over the logical. This preponderance was one of the most valuable characteristics of woman, and imparted those qualities which we valued so much in the wife and in the mother. It was also of the greatest importance in connexion with the function of a nurse, which she so often had to perform. The preponderance of the emotional qualities, however, ill adapted woman for a profession such as that of medicine, in which the exercise of the logical faculty was most desirable. He was not aware that the name of a woman occurred in connexion with the discovery of any leading scientific fact. He put forward these considerations as arguments in support of one of the statements contained in one of the paragraphs of the report—that there were peculiar hindrances, moral and physical, to the successful pursuit of medicine by women. He would admit that there were men in the medical profession who were sadly behindhand in the appreciation of all that was necessary in connexion with the study of disease; but he doubted whether the introduction of women would raise the standard. The expression that the fitness of women for other professions must be assumed, was inserted by the Committee in consequence of the medical profession having been made a battle-ground upon which should be fought out the question of the equality of the two sexes, which had come prominently forward in recent years. It would be seen that they had many weighty objections to recommend to the Lord President in regard to the introduction of women into the profession; but still the Committee felt that if the Government decided to give facilities to women for entering the profession, it would be seemly to indicate how this might be done, and to lay down certain propositions or conditions which ought to be carried out in connexion with the matter. He felt that it was very important that nothing should be done to interfere with the free action of the corporations in this respect. The plan had, therefore, been suggested for the consideration of the Privy Council. The last sentence in the report bore upon the question of a special register in connexion with the recognising the competency of women to practise in midwifery. It embodied very much the spirit of the report of the Committee presented to the Council in the year 1873. It was with especial reference to that report that the last paragraph was inserted in the present report. Mr. Turner concluded by moving the reception and entry of the report.

The motion was seconded by Sir WILLIAM GULL, and carried unanimously.

Mr. TURNER then moved—"That the Medical Council approve of the report of the Committee on Mr. Simon's letter."

Sir WILLIAM GULL seconded the motion.

Dr. ANDREW WOOD recommended that the clauses of the report be considered *seriatim*.

Upon this suggestion the motion was withdrawn, and Mr. TURNER moved in substitution—"That the Council resolve itself into a committee to consider the report on Mr. Simon's letter, paragraph by paragraph."

This motion also was seconded by Sir WILLIAM GULL.

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Dr. STORRAR moved as an amendment—"That the duties to which the General Medical Council are appointed are defined by the Medical Acts, and the Council are of opinion that their appointments do not authorise them to represent to the Government the views of the profession on the large social question of the expediency or otherwise of admitting women to practise medicine." He said that his opposition to the report did not arise from any essential difference from Professor Turner as to the proper function of women, but from a difference of opinion as to the expediency of the Council taking up this question at all. The Medical Council was a corporate body, acting under a common seal for definite purposes. Those definite purposes, according to the Acts of Parliament, were the charge of the Medical Register, the supervision of medical education, and the compilation of a British Pharmacopœia; and he apprehended that they had no authority to discuss questions outside the area of these matters. The medical bodies who were represented by the members of the Council, reserved to themselves the duty of deciding upon questions which were not within the scope of the medical Acts. To take an instance from his own case: he was the representative of the University of London, the Senate of which had decided that they would not take any steps to enable them to confer degrees upon women. The members of the Senate might, therefore, fairly turn round upon him if he favoured the discussion of this subject, and ask him what right he had to take a share in arriving at a conclusion which might possibly be different from that at which they had themselves arrived. It was on that ground that he opposed the motion. As a Council they were not there to fire at every object which might be thrown up in the air. Nothing could be more distinct than the duties assigned to them under the Acts relating to the Council. But it seemed that some of the members of the Council were impressed with the honour of the distinction which had been conferred upon them by the Lord President in referring the present question to them. For his own part, he did not entertain so strong an impression of this distinction, for he could not help recollecting all that had transpired in past years between the Privy Council and this body. He would merely refer to the time when they were discussing a Medical Bill which the Privy Council undertook to carry through Parliament, and which, after it had passed the House of Lords, was withdrawn in the House of Commons. The Privy Council had shown a disposition on every occasion to push them aside. Two years ago a deputation from the Medical Council waited upon the Marquis of Ripon, who was then the Lord President, to ascertain whether he was prepared to introduce a Medical Bill, and, after being with him for about an hour, they knew no more of his intentions than they knew before the interview. Such difficulties had spread over a series of years, and had been experienced during successive Governments. Whoever had been at the head of the Privy Council, all the communications which had been made to the Medical Council had passed through the same channel of communication. Whatever the source of authority, the letters had always been signed "John Simon," and it was impossible not to see that the views of the Government had received peculiar expression in passing through that channel. In whose soever hand the department had been, they could see that, though the hand was Esau's, the voice was Jacob's voice. Instead of looking upon the reference of this question to the Medical Council as conferring an honour upon them, he regarded it rather as a Trojan horse. It contained the elements of destruction, and he could very well conceive all the persons in the Privy Council saying among themselves, "What are we to do with this Bill of Mr. Cowper-Temple? Nobody seems to have very definite ideas about it. It will be a very nice bone of contention to send down to the Medical Council. Let them worry over it for a few days." The Council had worried over it, and they had got no fewer than three reports out of a very small Committee. If the Council once got into the entanglement of a discussion on this great social question, with which, in his opinion, they had nothing to do, they would find themselves at loggerheads with the bodies whom they represented, and they would be asked by those bodies what right they had to exercise a function which was not assigned to them by the Medical Acts. He confessed that he could not defend himself in an event of that kind. As regards the main question, if they decided in favour of the admission of women, they would have a large number of persons finding fault, and laughing at them, and telling them that they were interfering with matters with which they had no concern. On the other hand, if they decided against the women, it would be said, as had been said already, "Of course you decide against the women, because you are a trade's union." From the commencement of the year 1858 to the present year they had kept clear of these subjects, but they had never questioned the right of women to be registered if they produced the certificates of any of the bodies whom the Council were authorised to recognise. The names of Rhoda Garrett Anderson and Miss Blackwell were already on the Register. He did not call into question the propriety of the Privy Council appealing to the Medical Council on the question of the registration of foreign degrees. That was a question regarding which a good deal might be said, apart altogether from the question of registering women under those degrees.

Dr. PARKES said he thought that Dr. Storrar's remarks about the Marquis of Ripon were somewhat unfair to a nobleman who had taken the greatest possible trouble with regard to the Medical Acts. He then called attention to the report of the deputation upon the minutes of the Council. The passage referred to was read from the minutes of 1873. The report said that though his lordship was favourable to the introduction, by some private member, of a measure removing any legal difficulties which might exist, preventing the Council from carrying out Clause 19 of the Medical Act, such a step must not be regarded as precluding his consideration of a larger measure, if he thought it desirable on a future occasion.

Dr. STORRAR: Precisely so. He simply said, "Take what course you please, and I shall reserve to myself the right of opposing or supporting." Thus it amounted to absolutely nothing.

Dr. THOMSON seconded the amendment. It was not his intention to offer any observations upon the wide question which threatened to come before the Council, but he would merely explain the grounds upon which he seconded Dr. Storrar's motion. He thought that it was altogether beyond the province of the Council to express, either for themselves, or, as it might appear, for the profession at large, any opinion upon this subject. The admission of women to practice was a subject which could be settled only by the licensing bodies or by the Government, but he did not pretend to say by which. At the same time, the utmost courtesy ought to be shown both to the Lord President and to Mr. Simon in any answer which was given to the Privy Council; and that part of the inquiry which related to the registration of foreign degrees must be dealt with.

Dr. ROLLESTON said that he had listened with great pleasure to what Dr. Thomson had said, for he had taken a large view of this matter. If it could not be settled by the licensing bodies, it must be settled by the Legislature. Since 1858 the licensing bodies had taken no step whatever, but ever since that year public opinion had been declaring itself, not only by most able writers, who, according to the custom of this country, wrote anonymously, but also by others who had forced their names upon the public, and through the public upon the Legislature. The sort of reasoning with which they had now to deal was that contained in Mr. Mill's book on the subjection of women, which was one of the wisest and best books he had ever written. That was the kind of reasoning which influenced the Legislature; and was the Legislature going to act without advice? If not, would it take the advice of these clever writers? or, as Sir William Gull had suggested to him (Dr. Rolleston), would the Legislature come for counsel to the Council? It wished to get advice from the very best source, and in that respect it was acting with more wisdom than some other Governments had done. He cared comparatively little whether the Government said "yes" or "no" to the question whether a couple of dozen females should have what some people call "justice" done to them, but he maintained that it would be a slur upon the Council if it failed to consider the question, and to give its opinion respecting it. With reference to what Dr. Storrar had said, he (the speaker) used to think that the older universities had practised the art of "how not to do it," but they had rather dropped that art during the last ten or twelve years.

Dr. STORRAR: So it seems.

Dr. ROLLESTON would remind the members of the University of London that they owed their *raison d'être* to the way in which the older universities had practised that art. They refused to do justice to one-half of the males of this country—namely, the Dissenters; and the result was that the London University was established. Now some persons were refusing to do justice to one-half of the human species.

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Whether the London University chose to follow the example set by the older universities a generation ago, and "not do it," or to follow the example which he believed the older ones would now set, and "do it," it would make no difference; but it was a serious matter to enter upon this line of not doing things, unless what was proposed had something absolutely wrong about it. Holding their tongue when they were asked to speak was one of the very worst things they could possibly do. If the older universities had not studied that art, he was sure there would not have been a representative of the London University now present at the Council board; for there would have been no London University in existence had it not been for the older universities refusing to do justice to the Dissenters. If the representatives of the London University who were sent to the Council were tied down in the way suggested by Dr. Storrar, they could scarcely be called representatives, but must rather be regarded as delegates.

Dr. STORRAR denied that he was a delegate. He was elected to exercise his judgment upon matters which formed the proper function of the Council, but he had no right to deal with any other subjects.

Dr. ROLLESTON could not agree with Dr. Storrar in his view of the limit of his duties. He would say that their motto ought to be, not "Strike, but hear," but "Strike, but answer." The question of the admission of women had been tried elsewhere. We had had such persons as Queen Elizabeth and Queen Caroline; he meant the first, not the second. And now we had at this time Queen Victoria on the throne of this country. Nevertheless, women were totally unfit! Their brains were smaller (Professor Turner had omitted to add that their bodies also were smaller) than those of men. We knew that there was a good deal of relation between the size of the body and the size of the brain. Though they might say all this, let them not run away from their duty, but take for their motto that of a fine classical novel, "*Adsum cave!*"

Dr. THOMSON added, in consequence of what had fallen from the last speaker, that he did not wish to be understood as having expressed any opinion one way or the other upon the general question. That would remain for the future.

Sir WILLIAM GULL said that he thought that the whole of Dr. Storrar's argument fell to the ground, when he (Sir William) considered why he himself, together with Dr. Stokes, Dr. Sharpey, Dr. Parkes, and Dr. Quain, formed part of that Council. Whence had they got their authority? If they had none, then had Dr. Storrar himself got any? This consideration seemed to cut away all the ground from under Dr. Storrar.

Dr. STORRAR: You have no power beyond ours.

Sir WILLIAM GULL said that that was what he wished to be understood, but he wanted Dr. Storrar to take a larger view of his own powers. The fault which he had committed was that he had taken a too narrow view. According to that view, as Dr. Rolleston had said, Dr. Storrar was rather a delegate than a representative. He (Sir William) could not take the position of a delegate, for he had nobody to delegate him except the whole country. What defined his duty defined that of Dr. Storrar. They came there to give counsel to the whole country with reference to medicine and medical practice. He was not sent there merely to act the part of a policeman, which any tolerably respectable man receiving £3 a week could do as well, and perhaps a great deal better. The Government had taken him from his important duties—to do what? Not to do next to nothing. The preamble of the Medical Act said:—"Whereas, it is expedient that persons requiring medical advice should be enabled to distinguish qualified from unqualified persons." The Register was only subordinate to that end; and it was for the Council to consider what the Register should include.

Dr. STORRAR: The schedule tells you that.

Sir WILLIAM GULL thought that it was within the province of the Council to determine what should be the extent of the Register, and the conditions under which people should be put upon it. That took in the whole question whether it was expedient that women should look to medical practice as a means of livelihood. The duty of the Council was to help the public to determine who were fit persons to be consulted; and if the public said, "We wish to consult women," the Council were bound to say under what conditions women might be consulted safely. What was the meaning of the word "council"? Surely it implied some function beyond looking after the Register. Dr. Storrar had said that the Government had not treated the Council well. Then let the Council give the Government good for evil, and be ready to offer them their best services in the best way they could render them. They would then be treated better by the Government in future. Dr. Storrar had remarked that the letter had come from Mr. Simon. Well, let it be taken *quantum valeat*. For his own part, he had an intense personal respect for Mr. Simon.

Dr. STORRAR; So have I.

Sir WILLIAM GULL, continuing, said that he did not know why Mr. Simon's name should have been introduced. They were bound to consider the letter as coming from the Privy Council. The Lord President had that day told him (Sir William) that he was much interested in this matter, and that he should be happy to confer with the Medical Council at any time that they might desire. This was not a corporate question at all. It had been said that they ought to inquire what the profession had to say. Did any man pretend that he did not know what the profession would say? And how could the voice of the profession be got at better than it was known at present? The whole thing had been discussed in the journals, and talked of on all occasions. If the Council was a representative Council of the whole profession, whose business was not limited to the keeping of the Register, but included the fulfilment of a large and important duty, let its members help the Government and the public in the best way they could.

Dr. QUAIN said that they had to deal with a question of law and a question of expediency. By law they had no right to express any opinion such as was asked of them. ("No, no.") Their duty was to carry out the Act of Parliament. He agreed with every word which Dr. Storrar had said, but should be obliged to vote against him because he deemed it expedient to give a suitable answer to the question which had been put to them by the Government.

Dr. ANDREW WOOD said that he should vote against Dr. Storrar's amendment because he disagreed with every word which Dr. Storrar had said. He held that they were not sent there as the delegates of any corporations, and he would not sit there in that capacity. When his college appointed him to come to the Council they left him at perfect liberty to deliberate upon all matters coming before the Council, and, if they were not pleased with the way in which he did that, they could turn him out. He believed the Council to be a representative body, and, if it was so, what did it represent unless it was the medical profession? They were all medical men sent in the interests of the public, in order that the public might get the best medical aid that could be got. He was astonished that a slur should be thrown upon the Government because it had come with courtesy and asked for advice. When the Duke of Richmond, who was most anxious to do what was right, asked their opinion, why should they not give him an answer? The Duke of Richmond might ask the opinion of anybody he chose, but he naturally looked upon this Council as the body from whom he might hope to get the best advice. Would they say to him that they must decline to give advice because it was not within the clauses of the Medical Act that they should advise the Privy Council upon the medical education of women? The medical profession was threatened with a revolution in the form of the introduction of women into it, and, when it had been pressed upon the Government that they should take up this question, they were anxious to get the best advice on the subject. If the Council adopted the amendment they would lose an amount of influence which could never be restored.

Sir DOMINIC CORRIGAN said that he agreed with Dr. Storrar that they were not authorised to take up this question, but he would not go so far as Dr. Storrar, and say that they never could take it up. For himself, he felt that he was not justified in deciding on so important a question, without going back and consulting his constituents as to their opinions upon it. Therefore what he would suggest was that the settlement of the question should be delayed until time had been afforded for them to take that course. Technically speaking, Dr. Wood was incorrect in saying that they were representatives of the medical profession. They were, in fact, representatives of the nineteen licensing bodies who had sent them; and there was a wide difference between the two things. There had been a struggle coming on for many years between the British Medical Association and the Medical Council, with regard to getting admission to this Board. He did not want to take one side or the other, but he contended that technically they were not representatives of the profession.

Mr. MACNAMARA said that Clause 18 enabled the Council to take into consideration generally the requisites for obtaining

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qualifications. That seemed to entitle them to take into consideration whether being of the male or female sex was requisite for the licence.

Dr. SHARPEY said that he had heard with some pain the introduction of the word "delegates," as applied to the members of that body. He had had the pleasure of sitting on the Council for many years with Dr. Storrar, and the whole tenor of the conduct and proceedings of that gentleman had been anything but that of a mere delegate. Dr. Storrar was mistaken in supposing that their function was restricted to carrying the Medical Act into effect. They had, in fact, often been called upon to propose amendments to that Act. The technical objection of Dr. Storrar was not sufficient. Independently of the question of expediency, they were quite competent to give an answer to the Government on this subject.

The amendment was put to the meeting and lost, a large majority voting against it.

Sir DOMINIC CORRIGAN then proceeded to move the amendment which stood in his name, and which contained a different form of answer to the letter from the Privy Council. He said that there would not be a second opinion upon the Council as to the answer which should be returned on the subject of Mr. Cowper-Temple's Bill, for that Bill would admit upon the Register the names of women who held the degrees of foreign universities, over whose course of education and examination the Medical Council had no control, while men were denied the privilege of having those degrees recognised. That part of his proposed answer which related to Mr. Cowper-Temple's Bill coincided with the reply in the report of the Committee, and with what he believed to be the views of the Council. The next part of the letter of Mr. Simon put the question whether women were to be admitted to general practice, and then whether they were to be admitted to certain branches of practice. He did not think that the last point had been sufficiently dwelt on in the report of the Committee. Then, in the last part of the letter the writer went on to inquire what were the conditions with regard to examination-rules or other matters which prevented women from obtaining a legal status as medical practitioners in this country. The letter simply asked for information on that point, but the report of the Committee passed it by, and, instead of affording information as to the present obstacles, it laid down a plan for the Government by which women could obtain admission on the Register. The Lord President asked one question, and the reply of the Committee answered another. This formed a very serious objection to the answer which was proposed by the Committee. The Committee went on to say that in dealing with the letter of the Lord President they felt bound to consider the question of the admission of women. He himself felt bound to consider it, but he was not bound to consider it upon such short notice as twenty-four hours, without consulting the University which he had the honour to represent. Dr. Wood had said that they ought to give an answer immediately, but he (Sir Dominic) could not think that the Lord President would wish to hurry them in a decision upon so important a matter. The report then went on to say that there were difficulties in the way of the admission of women which could not be obviated; and it submitted a plan by which that admission might be made possible. It would have been more manly, independent, and straightforward, if they felt that there were difficulties which could not be safely ignored, and some of which could not be obviated, to decline being made a party to any compromise which would admit women into the profession. The scheme proposed by the Committee, for giving to the Government information for which it had not asked, would have the effect of making three or four examining bodies in addition to those which already existed, while for years the Council had been working to promote a conjoint scheme. They would therefore be blowing hot and cold in that respect if they adopted the proposal of the Committee. Sir Dominic went on to criticise various other portions of the report, and expressed the opinion that the document was not one worthy to be sent to the Lord President, and that it could not be altered so as to make it so. His own form of reply dealt with the questions alluded to in the letter of Mr. Simon. The allusion to "special branches of surgery" which might be practised by women, he supposed referred to midwifery. On this point he held that the Council ought to prevent midwifery licences being granted, except by the legitimate corporations. As to the settlement of the general question, there would not be any real delay if the matter were deferred for a year while the opinion of the licensing bodies on the subject was obtained. If that course was adopted, he should have no objection to withdraw his amendment.

Dr. AQUILLA SMITH seconded the amendment. He said that it differed very materially from that of Dr. Storrar, because it did not ignore the question, and did not take from the Council the power of considering it. He concurred with the opinion that it was the bounden duty of this Council, when it was honoured by a communication from the Privy Council, to entertain the question and return a becoming answer. He also supported the amendment on the ground that it would supersede the report. The report of the Committee pointed out, in clear and strong language, the incapacity of women to compete with men in the medical profession, and yet in the latter part it suggested that an Act of Parliament should be passed to introduce women into that profession. The report appeared to contain such contradictions that he could not give his sanction to it. He also objected to the recommendation that the examinations of female candidates should be in all cases the same as those of males. He would ask those persons who were teachers whether they would feel themselves warranted in going into the very important and wide subject of syphilis and all its consequences? He had reason to know that there was one lady who had come into practice who would not shrink from the inquiry into syphilis in its most revolting forms. This would occasion a difficulty. This subject had never been brought under the notice of the body which he represented, and he should not feel warranted to state an opinion that females should be admitted according to the suggestions of the report.

Dr. ANDREW WOOD wished to recall the Council to the question which was raised by the amendment. The real point to be decided at the present moment was, whether they should go on to consider the whole question at once, or whether they should tell the Privy Council that they were not prepared to entertain it until they had ascertained the views of the licensing bodies upon it. On that point there might be a difference of opinion, though the question certainly was not a new one. Indeed, nothing had excited so much attention for many years as this subject of female doctors; and he, therefore, held that to tell the Privy Council that they had not had time to consider a question which, in fact, they had been considering for years, would be a great stultification.

Sir WILLIAM GULL said that this was not in the least a question for the corporations or the universities, but it was a question for the public, the Medical Council, and the Government. The report particularly stated that the corporations and universities should be left free, and it deprecated any interference with their system. To send the question to the corporations would be to admit that the Council consisted only of the nominees and representatives of different bodies.

A vote was taken upon the amendment, and it was negatived.

Dr. ANDREW WOOD said that he should not at present intervene between the Council and the Committee by proposing the amendment which he had put upon the programme.

After a little further discussion, the motion for going into committee on the report was agreed to.

The consideration of the reply proposed by the Committee as that which should be sent to the Lord President was then commenced. Much time was occupied in making slight verbal alterations and in the comparison of certain paragraphs with corresponding passages of the alternative replies.

Mr. TURNER moved, and Sir WILLIAM GULL seconded, the adoption of the following paragraphs (*a*, *b*, *c*) as corrected:—

"(*a.*) In reply to the communication addressed to them by the Lord President, the Medical Council have to state that, being thus directly appealed to by the Lord President, they have felt bound to consider the question of the admission of women to the medical profession. (*b.*) After due deliberation, the Medical Council have to express their opinion that the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties, which cannot be safely ignored, and some of which cannot be obviated. (*c.*) Instead of medicine offering more facilities and less difficulties for women than other professions, the Medical Council believe, that as the whole question is looked into, there will be found peculiar hindrances, moral and physical, to the successful pursuit of medicine by women. Moreover, they desire to add that if it be admitted that women should enter the medical profession,

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the existence of an equal fitness in women for other professions must be assumed."

An amendment proposing the admission of these paragraphs was moved by Dr. PARKES and seconded by Dr. BENNETT.

After a long discussion, the amendment was carried, and was then submitted as a substantive motion. Upon this,

Dr. ROLLESTON moved the further amendment—"That the report be remitted to the Committee, and be brought up to-morrow, and that Dr. Bennett be added to the Committee."

This proposition was seconded by Mr. TURNER, and carried unanimously.

The Council then adjourned.

EIGHTH DAY.—FRIDAY, JUNE 25.

In consequence of a statement by the President that the amended report on Mr. Simon's letter had been drawn up, but had not been delivered by the printer, the further discussion on that topic was deferred to a later part of the meeting.

MEDICAL EDUCATION OF WOMEN.

The following letters from Miss Jex-Blake and Mr. Arthur Norton on the medical education of women were laid before the Council:—

"32, Bernard-street, London, W.C., June 17, 1875.

"Sir,—May I beg you, as President of the General Medical Council, to lay the enclosed letter before the Council. Awaiting the favour of an early reply, "I remain, Sir, yours obediently,

(Signed) "SOPHIA JEX-BLAKE."

[*Copy.*]

"32, Bernard-street, London, W.C., June 17, 1875.

"Gentlemen,—In the year 1869, we, the undersigned, were registered as students of medicine by the Registrar of the Branch Council of Scotland in the Government Register kept by order of the General Medical Council, and we inscribed ourselves as students of the Medical Faculty of the University of Edinburgh, for that and the three following years.

"In that University, and in the Extra-Mural School of Medicine of Edinburgh, we attended during five years all the classes comprised in the full medical curriculum, taking some of them also a second time. We also complied with the usual requirements respecting hospital attendance and dispensary practice, including practical midwifery, pharmacy, and vaccination, and received clinical instruction in both medicine and surgery from recognised teachers of these subjects.

"Having thus completed the full course of study usually required from medical practitioners, we are ready to submit to the ordinary examinations, with a view to placing our names on the Register as ordained by the Medical Act of 1858.

"As, however, it appears that the examining boards are unwilling to admit women to their ordinary examinations, although we are not aware that the Act of 1858 gives them any authority to draw such distinction, we beg to apply to you, as the highest medical court in this country, for instructions respecting the course which it is now incumbent upon us to pursue with a view to comply with the existing laws regulating medical practice. "We have the honour to be, Gentlemen,

"Your obedient Servants,

(Signed) "SOPHIA JEX-BLAKE.
ISABEL THORNE.
MARY EDITH PECHEY."

"6, Wimpole-street, June 18, 1875.

"Sir,—As the General Medical Council will, probably this day, take into consideration the matter referred to the Council by the Lord President of the Privy Council, concerning the registration of women as qualified practitioners of medicine, I beg to submit to your notice the following facts:—

"1. That there is at the present time a school of medicine for women in London.

"2. That the lectures and demonstrations given at this school are precisely the same as at other medical schools.

"3. That the lecturers and teachers are for the most part teaching the same subjects at other medical schools, as shown by the enclosed prospectus.

"4. That since October last twenty-three women students have attended lectures at this school.

"5. That application has been made to the several examining bodies in Great Britain and Ireland to register the names of students attending this medical school with a view to admit them to examination at the termination of the required curriculum. And that the replies have been to the effect that the examining bodies do not consider themselves empowered to admit women to examination.

"I am, Sir, your obedient Servant,

(Signed) "ARTHUR T. NORTON, Dean of the School.

"Dr. Acland, Chairman of the General Medical Council."

Dr. ANDREW WOOD moved that the foregoing letters be acknowledged, with a statement that they had been considered by the Council.

Dr. BENNETT seconded the motion.

Dr. STORRAR said that the letters asked a distinct question. He thought that the Council could not advise on the subject. He doubted whether it would be a fair answer to say that the letters had been considered when the fact was otherwise. The ladies, however the Council might differ from them, were respectable ladies, and ought to be dealt with fairly.

Dr. ANDREW WOOD said that the letters had been referred to a committee.

Dr. STORRAR: There has been no report of the committee to the Council.

The motion was carried *nem. con.*

FOREIGN DEGREES.

The following letter from Dr. Shuttleworth, on the registration of foreign degrees, was read by the Registrar:—

"Royal Albert Asylum for Idiots and Imbeciles of the Northern Counties, Lancaster, June 21, 1875.

"Sir,—Having, on behalf of myself and several other registered practitioners who are graduates in medicine of foreign universities, been in communication with Mr. Cowper-Temple on the subject of the Bill which I find is now referred to the consideration of the Medical Council, I beg leave to bring to your notice, as President of the Council, the following facts and suggestions:—

"1. That there is a considerable number of registered British practitioners, some occupying important public positions, who, for various reasons, have, since 1858, obtained degrees in medicine at foreign universities of repute.

"2. That such degrees, though possessing no *legal* value, have been generally recognised, not only by the courtesy of the profession, but by many of the examining boards in this country, as possessing *examinational* value.

"3. That, were it lawful for the Council to register, *as additional qualification*, well-attested foreign degrees in the case of persons previously admitted to registration as qualified by British diplomas to practise medicine, no objection could be urged on the ground of public policy. The registration, under such conditions, of *bond fide* foreign degrees would moreover clear the way for the stringent suppression by law of the use, by unqualified persons, of medical titles based upon worthless (so-called) degrees.

"The concession suggested in the last paragraph, though not reaching the extent contemplated in Mr. Cowper-Temple's Bill, would probably be received with satisfaction by the promoters of that Bill, as recognising the medical qualifications already held by women, contingently upon their being hereafter admitted to examinations under the control of the Council. At the same time, it would satisfy the just aspirations of those who, like myself, possess a foreign degree, the examinational value of which is confessedly superior to that of the 'minimum' British qualifying diplomas, but who, in the present state of the law, can require only the lower and not the higher class of qualification.

"I have the honour to be, Sir, your obedient Servant,

(Signed) "G. E. SHUTTLEWORTH,
B.A. Lond., M.D. Heidelberg, M.R.C.S. Eng., L.S.A. (Regd.),
Medl. Supt. Royal Albert Asylum.

"H. W. Acland, Esq., M.D., F.R.S., Pres. Med. Council.

"P.S.—In apologising for troubling you with this letter, I may mention that a memorial to the Council would have been drawn up had time permitted, but that the views I have ventured to put forward are, I believe, shared by the undermentioned foreign graduates with whom I have been in communication:

(Degrees unregistered having been acquired since 1858.)

"BALTHAZAR FOSTER, M.D., Erlangen, F.R.C.P. Lond., Physician to the General Hospital, Birmingham.
GEO. FOWLER BODINGTON, M.D. Geissen, M.R.C.P. Lond., F.R.C.S. Eng. (Exam.), Kingswinford.
WILLIAM ORANGE, M.D. Heidelberg, M.R.C.P. Lond., Med. Supt. State Lunatic Asylum, Broadmoor.
WILLIAM HOFFMEISTER, M.D. Heidelberg, Cowes, L.R.C.P. Lond., and Surgeon to H.M. the Queen in the Isle of Wight.
JOHN HABKER, M.D. Heidelberg, L.R.C.P. Ed., Surgeon to Lancaster Infirmary.
W. WINGATE SAUL, M.D. Heidelberg, M.R.C.S., etc., Surgeon to Lancaster Castle.
Dr. LAKING, M.R.C.P. Lond., Apoth. in Ord. to Her Majesty's Household; and
DR. HARDWICKE, Coroner for Central Middlesex, are two well-known London foreign graduates."

Dr. SHARPEY said that it was quite clear that the proposal in Dr. Shuttleworth's letter could not be carried into effect without an amendment of the Medical Act; but before that letter was written it had occurred to him that it might be an advantage to have some sort of registration of foreign degrees acquired in foreign schools of repute. This would lead to no misconception on the part of the public. He did not intend to ask the Council to consider this subject so late in the session, but he would move—"That the Council take into consideration at a future meeting whether, with a view of furthering the desire of extended accomplishments in medicine and science among the medical profession, it would not be advantageous to make it lawful for the Council to insert in the Medical Register, after the name of the person registered, and the qualifications in medicine and surgery obtained in the United Kingdom, the appropriate title indicative of the medical degree obtained after study and examination in a foreign or colonial university approved for this purpose by her Majesty's Privy Council, on the recommendation of the Medical Council."

Dr. ROLLESTON seconded the motion.

Dr. HUMPHRY regarded the matter as a most important one. Next to medical education there was, perhaps, no subject more deserving attention than the registration of honours after admission. Any stimulus given in that way by the Medical Council would be of the greatest importance to the profession.

Sir DOMINIC CORRIGAN said that there was a technical objection to the Council deciding on such a resolution as was now before them. It was not in the power of the Board to say that any particular course should be taken in future sessions. The Council next year might be composed of

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different members, and could not be pledged to any particular line of action by the present members.

The PRESIDENT said that the objection would be met if Dr. Sharpey would insert the words "that it is desirable" at the beginning of the resolution.

This having been assented to by Dr. Sharpey, the motion was altered accordingly, and carried unanimously.

It was then resolved—"That the receipt of Mr. Shuttleworth's letter be acknowledged, and that he be informed that the Council have reserved the consideration of the subject of his letter."

MR. RICKARD'S LETTER ON THE MEDICAL ACTS.

The following report was presented by the Committee on Mr. Rickard's letter, which was laid before the Council on the 17th inst.:—

Report.

The Committee appointed to consider the proposed repeals of parts of the Medical Acts, submitted for the consideration of the Medical Council by E. K. Rickards, Esq., the Speaker's Counsel (as contained in the appended schedule), after consulting the Solicitor to the Council, is of opinion that the repeals proposed are merely formal, and do not alter the principle or effect of the several Acts. The only doubt the Committee has had is whether the whole of Section 46 of the Medical Act, 1858, should be repealed, or only that portion of it which relates to students who had commenced their studies before the passing of the Act. On the whole, however, the Committee is of opinion that no part of the section is now required, and that the whole may be repealed.

June 21, 1875. JOHN STORRAR, Chairman.

SCHEDULE of proposed Repeals of the Medical Acts, submitted for the consideration of the Medical Council.

Year and chapter.	Extent of proposed repeal.	Reasons.
21 and 22 Vict., c. 90. Medical Act, 1858. (In part.)	Section 2. Section 17 and Schedule B. Sections 32, 34, 36, and 37, the words "after the first day of January, one thousand eight hundred and fifty-nine." Section 46, from "and also, so far" to the end of that section; or qu., the whole?	Section 2. Spent. Section 17 and Schedule B. Spent. Sections 32, 34, 36, 37, as to parts specified in column two, virtually repealed by 22 Vict., c. 21, s. 1. 23 and 24 Vict., c. 7, s. 3. Section 46. (Qu. as to part specified in column two?) Spent. [Repealed in part by 22 Vict., c. 21, ss. 2, 3.]

Observations.

Section 2. Commencement of the Act. It is not, I think, necessary to retain this now. The date of commencement is not important for any purpose.

Section 17 and Schedule B provided for the registration of persons actually practising before August, 1815. Having regard to the time which has elapsed (sixty years), it would seem to be impossible that this provision could ever be acted upon again, and I submit that it may safely be repealed.

Sections 32, 34, 36, 37 fixed a date after which registration was to be required for certain purposes. The date was twice postponed ultimately to January 1, 1861, by 23 and 24 Vict., c. 7, s. 3. But I submit that it is not necessary to show that date at all now, and that the words may properly be repealed, leaving the sections to stand as, what they are in fact, an absolute disqualification in default of registration, without regard to a date long since past.

Section 46 enabled the Council to dispense with the provisions of the Act in certain cases. With regard to medical students, it would appear that this must have been done, if at all, long ago, and that the section is spent, so far as students are concerned.

Qu. Whether it is of any further value at all? Is it likely ever to be acted upon with regard to the other classes of practitioners therein mentioned? or may it be wholly repealed, as spent?

Year and chapter.	Extent of proposed repeal.	Reasons.
22 Vict. c. 21. (In part.)	Section 1. Section 2. Section 3.	Section 1. Virtually repealed by 23 and 24 Vict., c. 7, s. 3,—further postponing the date. Section 2. Superseded by 23 and 24 Vict., c. 7, s. 4. Section 3. Spent.

Observations.

Sections 1 and 2 postponed the date at which certain disqualifying sections of the Medical Act of 1858 were to come into operation. The date was further postponed by 23 and 24 Vict., c. 7, ss. 3, 4, and as the sections have long since come into operation, it is, I think, unnecessary to retain the sections which fixed the date for their coming into operation.

Section 3 altered Schedule (D of the Medical Act of 1858. This alteration would not be affected by the repeal of the section, which may, I think, properly be repealed, as *functus officio*.

Year and chapter.	Extent of proposed repeal.	Reasons.
23 and 24 Vict., c. 7. (In part.)	Sections 3 and 4.	Section 3. Spent, or unnecessary, the date fixed having long since passed. Section 4. Spent, or unnecessary.

Observations.

These sections again deferred the operation of certain sections of the Act of 1859 to a later date.

As the date at which the sections came into operation has long since passed, and is now of no importance, I submit that these sections may safely be repealed, with the words in 21 and 22 Vict., c. 90, ss. 32, 34, 36, and 37, mentioned above, and 22 Vict., c. 21, ss. 1, 2.

GEORGE K. RICKARDS.

Speaker's Counsel's Office, House of Commons, S.W., June 4, 1875.

Dr. STORRAR moved the adoption of the report.

Mr. TURNER moved—"That the last paragraph of the report be omitted." He doubted whether it would be expedient for the Council to give up any power which it now possessed under the Medical Act. Clause 46 gave a certain power, more especially with regard to the recognition of students who had commenced their studies before the passing of the Act, and it was quite possible that there might yet be some men who were in that position, and who might be desirous to continue their medical studies. It was not desirable that the Council should debar themselves from the privilege which the Act conferred upon them.

The amendment was seconded by Mr. MACNAMARA.

Dr. STORRAR said that the omission of the last paragraph would not effect the object which Mr. Turner had in view.

Dr. QUAIN asked the President whether he could say if it was the intention of the Government to pass a new Act, with all the alterations, in a consolidated form, or to leave persons under the necessity of referring from Act to Act to see what changes had been made. The latter would be very perplexing, and the point was a serious one.

Dr. STORRAR said that it would be obvious that the same objection would apply to all Acts of Parliament which had been amended. The revision of the Medical Acts formed but a very small portion of the task which Mr. Rickards would have to perform.

Dr. AQUILLA SMITH said that great practical inconvenience would be entailed upon them if the Acts were not reprinted in the altered form.

Dr. BENNETT thought that it would be very unbecoming in them to offer any objection to the very necessary and useful proceeding which Mr. Rickards was about to carry out.

Dr. APJOHN reminded the Council that the four amendments of the Act of 1858 were all printed separately, and that no attempt had been made to consolidate them.

Dr. PARKES did not think that it was at all necessary that any further information should be placed before the Council. The only question before the meeting was whether the last paragraph in the report should be accepted by the Council.

Dr. ROLLESTON said that the appendix to the report showed that the lawyers were of opinion that, so far as students were concerned, section 46 was spent. They had been assured by persons who knew the students that individual cases of hardship would arise. Should individual cases of hardship be allowed to arise because persons wanted to be cutting and pruning like over-busy gardeners?

Dr. STORRAR said that he had called the attention of the Solicitor of the Council to the student part of section 46, and that gentleman had said that the way to read the clause was that it was intended to apply to students continuously studying at the time the Act was introduced, and not to a student commencing his studies twenty years ago, and resuming them now.

Dr. ANDREW WOOD did not think that it would be regular to alter the report of the Committee.

After a little further discussion,

Mr. TURNER withdrew his amendment in the form in which he moved it originally, and substituted the following:—"That the report of the Committee be adopted with the exception of that part which proposes the repeal of Section 46."

The amendment was then carried without opposition. It was afterwards put as a substantive resolution, and confirmed.

EXECUTIVE COMMITTEE.

The election of the Executive Committee by ballot took place, and resulted in the choice of Dr. Bennett, Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, Dr. Sharpey, and Dr. Quain.

CONJOINT EXAMINATION SCHEME AND EXAMINATION IN STATE MEDICINE.

Dr. PARKES moved, according to notice—"That, in reference to the communication from the University of Oxford, relative to qualifications in State Medicine, the Council considers that, in the interests both of the public and of the advancement of medical science, the principle embodied in the Conjoint Examination Scheme for licences to practise medicine and surgery

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should be extended to any licences or certificates in State medicine or public health." He said that, as the University of Oxford had thought it necessary to bring to the notice of the Council its sense that the multiplication of qualifications in State medicine ought to be avoided if possible, it seemed extremely desirable to follow up the communication of the University with such a motion as that which he had brought forward, in order to prepare the way for carrying out the principle of the communication at some future time. The Council had so often strongly insisted on the advisability of conjoint examinations, that he thought they would have no hesitation in adopting the principle of the resolution.

Mr. QUAIN seconded the motion.

Mr. TURNER said that they were asked to declare that the principle embodied in the Conjoint Examination Scheme, for licences to practise medicine and surgery, ought to be extended to licences or certificates in State medicine and public health. For the purpose of getting information, he would ask whether the principle of the Conjoint Examination Scheme was before them at all; or, perhaps, he ought to ask whether there was any conjoint examination scheme in existence. (Laughter.) On turning to the programme for the day he found a notice of motion by Dr. Bennett, that the President should be asked whether there was any foundation for the report that the Royal College of Surgeons of England have virtually seceded from the Conjoint Scheme. If the report was true, it would seem that the Conjoint Scheme was not in existence. Therefore, he felt a doubt as to whether they could adopt the resolution, even if they were inclined to do so. But there was another difficulty. Was it to be laid down that the universities of the United Kingdom were not to confer degrees in State medicine if it should please them to do so? ("No.") That certainly was the reading of the motion. Speaking for the University of Edinburgh, he might say that they had passed through the various bodies of that University a scheme for conferring degrees in public health. One candidate had been examined and had passed with honours, and he was now a graduate of the University in that particular department, he having previously graduated in medicine. They did not admit anyone even as a candidate for a degree in public health unless he was a graduate in medicine of a British university.

Dr. STORRAR said that he was not sure that he entirely understood the bearing of Dr. Parkes's proposal. Those who had taken any interest in the Conjoint Scheme knew that what was proposed was that it should apply to the pass-examination in medicine and surgery. The University of London had drawn up a scheme for establishing a certificate in State medicine, and one of the early paragraphs was—"That a special examination be instituted in the subjects which relate to public health, and that a certificate of proficiency in those subjects be granted to candidates who shall have passed this examination; that no bachelor of medicine in this University be admissible to this examination." In this case, therefore, it would be impossible to blend the degree in public health with the conjoint pass-examination.

Dr. ROLLESTON said that the State already required that a person who acted as an officer of health should have a licence to practise. The point was, whether the Council were prepared to give their repeated endorsement to a uniform system. Political philosophers of all kinds said that it was a mistake, and they recommended unlimited competition in all departments. Mr. Robert Lowe had, however, repudiated the application of unlimited competition to examining boards, and had said, "Let us have the greatest freedom in teaching, but do not let us have competition between examining boards. Minimise the number of examining boards; because, when they come to compete one with the other, you get a very low standard of excellence."

Dr. STORRAR: May I ask Dr. Rolleston whether he is prepared to consolidate all the degrees of universities?

Dr. ROLLESTON said that the resolution spoke of qualifications in State medicine, but it did not say anything about degrees at all. It referred simply to putting a "trade-mark" upon a man, and thereby empowering him to deal with the bodies of her Majesty's lieges, and that was a different question from the question of degrees.

Dr. HUMPHRY thought that the proposal in Dr. Parkes's motion was perfectly clear and perfectly correct. It simply said that the principle of the Conjoint Examination Scheme should be extended to licences in State medicine. It had been asked whether there was any such scheme in existence. The answer was that it existed on the minutes of the Council. The principle had been often recognised by this Council, and what was now proposed was that it should be extended to certificates and licences in State medicine and public health. The University of Cambridge had already instituted an examination in State medicine. He believed that it was the only fully established one in England. Cambridge saw no distinct probability of such an examination being established elsewhere at present, and so it had begun by itself. So far as he was able to state, Cambridge would be willing to join with other bodies when they were prepared to adopt an examination in this subject.

Dr. AQUILLA SMITH regarded the words "conjoint examination" as rendering the motion inadmissible. The resolution appeared to be an attempt to get from this Council a vote in favour of a uniform scheme. The Conjoint Scheme had really never been fully confirmed. It was true that there was a draft for a conjoint scheme on the minutes, but it had been departed from to a very great extent. ("No.")

Dr. WOOD thought that the resolution would do harm. One university after another was instituting licences in State medicine *propria motu*, and this resolution if passed would throw a damper upon them. The Conjoint Scheme existed in a very shady state at present, and they did not know that it would be successful. To pledge the Council to a principle which had never been seen in action, and which might be a failure, would not be wise.

Sir WILLIAM GULL would vote for the motion. The object was to ensure that, whatever honours and degrees were given in State medicine, they should indicate that the persons upon whom they were conferred possessed some qualifications over and above those required for the ordinary practice of the profession. There was a tendency amongst bodies to compete downwards, and that tendency would be checked by the conjoint principle.

Sir DOMINIC CORRIGAN hoped that Dr. Parkes would withdraw his motion. It would have been reasonable and proper on the part of the Chairman to ask Dr. Parkes what the Conjoint Scheme was. There was no such scheme before the Council, and none had ever been approved of by them.

Dr. HUMPHRY: The Scheme is not complete.

Sir DOMINIC CORRIGAN: Then, if the Scheme is not complete, it does not exist. That is a sufficient answer.

Dr. PARKES having replied,

The resolution was carried by fourteen against eight.

FEMALE PRACTITIONERS.

The print of the amended report of the Committee appointed to consider Mr. Simon's letter having arrived, the Council was resolved into a committee as yesterday.

The following amended report was then read by Mr. TURNER:—

The Committee, having taken this letter into consideration, recommend the General Medical Council to adopt the following as the reply to be sent to the Lord President of the Privy Council:—

(*a.*) In reply to the communication addressed to them by the Lord President of the Privy Council, the Medical Council have to state that they have felt bound to consider the whole question of the admission of women to the medical profession.

(*b.*) The Medical Council are of opinion that the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties which cannot be safely disregarded.

(*c.*) With regard to Mr. Cowper-Temple's Bill, considered by itself, and apart from its bearings on the "general question whether women ought to be able to look to medical practice, or certain branches of it, as open to them equally with men as a profession and means of livelihood," the Council have found no difficulty in forming an opinion. By the Medical Act, 1858, the Council are precluded from granting admission to the Medical Register to persons holding foreign degrees, and consequently have been compelled repeatedly to refuse to register foreign degrees held by men.

(*d.*) The reason for this is obvious—viz., that the Council have no means of exercising that supervision and control over the education and examination required for foreign degrees to which the licensing bodies of this country, whether universities or corporations, are, by the Act of 1858, subjected. But this privilege, which the Medical Act refuses (and, the Council believe, very properly refuses) to men, Mr. Cowper-Temple's Bill proposes to grant to women. To such a proposal the Council feel bound to offer a respectful but decided protest, as being subversive of the main principle of the Medical Act.

(*e.*) If it should appear to the Government and the Legislature expedient that women who desire to obtain a legal status as medical practitioners in this country should not be debarred from obtaining that status, the Council are of opinion that it should be under some such arrangements as the following:—1. That in the interests of public order, the education and examinations of female students of medicine should be conducted entirely apart from those of male students. 2. That with reference to the "examination-rules or other conditions" which prevent women from accomplishing their wish, the Medical Council have to state that, under the provisions of the Medical Act, those persons only can be placed upon the Medical Register who have been admitted to medical degrees in the

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universities, or who have been admitted fellows, members, or licentiates of one of the medical corporations of the United Kingdom. It appears that most or all of the universities and corporations are unable or unwilling to admit women to their degrees, or to admit them as members of the respective corporations. The Council are of opinion that sufficient provision would be made to enable women to obtain a "legal status as medical practitioners in this country," if an Act of Parliament were passed which should enable the Medical Council to recognise such examination or examinations as the Medical Council may, from time to time, deem sufficient for the purpose of granting admission of women to the Medical Register under the title of "Licensed Practitioners of Medicine." But the Council are of opinion that any course of legislation which would interfere with the free action of the universities and corporations mentioned in Schedule (A), in respect of the medical education, examination, and licensing of women, is undesirable. 3. That the examinations of female candidates for a licence entitling their names to be placed on the Register should be equivalent to those of male candidates. 4. That the education and examination for these licences should be under the supervision of the Medical Council, in the same way as is required for the other licences of this country.

(*f.*) The Council have already had their attention drawn to the importance of securing more efficient instruction for women who engage in the practice of midwifery, and whose services are largely employed, especially by the poor of this country. The Council feel very strongly that it is desirable that some means should be adopted for securing a better education, and granting certificates of competency to women who act as midwives. For, whilst fully admitting that, for the safe and efficient practice of midwifery as a branch of medical science, a full and complete education both in medicine and surgery is required, the Council believe that a much more limited and less expensive education might be afforded to women, who after due examination might, as midwives, render valuable service to the community, and supply a deficiency long felt and expressed. For women thus educated and certificated, it might be desirable that a special register should be provided, and which the Council think might be secured by an alteration in Schedule (D) of the Medical Act.

(*g.*) It is right to observe that the Committee were not unanimous on some of the propositions in this report. WM. TURNER, Chairman.

Moved by Mr. TURNER, and seconded by Mr. QUAIN, that paragraph (*a*) be adopted.

Dr. BENNETT moved, as an amendment, the substitution of the following paragraph in lieu of paragraph (*a*) in the report of the Committee:—"(*a.*) In accordance with the request of the Lord President, as conveyed in your letter of the 8th inst., I have the honour to inform you that I have brought under the consideration of the General Medical Council the Bill which has been introduced in the House of Commons by Mr. Cowper-Temple, 'to amend the Medical Act, 1858, so far as relates to the registration of women who have taken the degree of doctor of medicine in a foreign university.'"

Mr. MACNAMARA seconded the amendment.

Dr. ROLLESTON said that the proposal of Dr. Bennett would involve a large amount of rearrangement without carrying the matter to any real issue.

Dr. BENNETT said that this was not simply a rearrangement. He objected to the words "feel bound to consider," and to the principle underlying the first paragraph of the Committee's reply.

Sir WILLIAM GULL agreed with Dr. Bennett. Mr. Cowper-Temple's Bill was at the bottom of the whole question. Mr. Cowper-Temple would go before the House of Commons and say—"In England a woman can obtain no education in medicine, and no recognition of her knowledge. Therefore, you must enable her to register foreign degrees." And Mr. Cowper-Temple would have good ground for saying it. There were only two courses open to the Council. Either they must admit Mr. Cowper-Temple's Bill and shelve the whole question as regards England, or take up the whole question and take the pith out of Mr. Cowper-Temple's Bill. That Bill came in to remedy what was thought to be a hardship upon the public. The public say—"We wish to have women to practise medicine," and they wish to know whether women are fitted for the practice. The medical corporations and schools in England all said—"We cannot take any part in this matter." Then women went abroad and got a degree, and came back and asked to be put on the Register. It was a very hard thing to say—"You shall not have a degree here, and you shall not register a foreign degree."

Dr. QUAIN did not quite agree with Sir William Gull. It would be more systematic to answer the first question of the letter, and then take up the whole subject afterwards. The Council were quite prepared to go into the main question.

Dr. ANDREW WOOD hoped that they were not about to discuss the whole question upon an amendment as to the mere arrangement of the paragraphs.

Sir DOMINIC CORRIGAN thought that the discussion which had arisen as to the order of the reply was an absurd waste of time.

Mr. MACNAMARA said that he had seconded the amendment because he felt it important that the Council should send to the Privy Council a document which would be worthy of it. The business-like method was to deal with the paragraphs in the order in which they occurred in the letter.

Dr. THOMSON concurred with the last speaker.

The amendment was negatived.

Mr. TURNER then moved the adoption of paragraph (*b*).

Dr. GULL seconded the motion.

Dr. PARKES moved as an amendment that the words "which cannot be safely disregarded" be omitted, and replaced by the words "but the Council are not prepared to say that women ought to be excluded from the profession."

Dr. PYLE seconded the amendment.

Sir WILLIAM GULL said that he saw no objection to the admission of the words in the amendment. So far he should vote for them.

Mr. TURNER could not accept the amendment. There was no statement in the report that women ought to be excluded.

Mr. QUAIN said that such words as those of the amendment were originally in the paragraph, but they were left out to conciliate support.

Dr. PARKES said that the paragraph in the report seemed to imply exclusion.

Dr. SHARPEY said that the amendment exactly expressed his views. He should dissuade women from entering the medical profession; but dissuasion was one thing, and denial was another.

Dr. ANDREW WOOD said that they were now fairly in face of the main question. He rose to give the amendment his opposition, because he thought that women ought to be excluded. He should be prepared to move another amendment when the opportunity arrived. They had been asked to enter upon the question in its entirety, whether women ought to be admitted to the medical profession, either to practise it generally or to practise certain branches of it. From the beginning of the agitation he had always taken up one consistent course, and maintained that women were not adapted to the profession, and the profession was not adapted to them. He had had to stand considerable volleys of abuse from the faction which carried on the agitation for the advancement of "women's rights," on account of his having sturdily stated his opinion. He gave that faction credit for honesty, and he wished that they would accord the same credit to him in return. If we were to judge by the noise and the dust which had been "kicked up" by the agitators, we should be apt to imagine that the whole country, or a large majority, was in favour of the admission of women. He was not prepared to admit that, for he believed that if the population was polled, and especially if the women were polled, it would be found that there was an immense majority against the movement. When he and others who held his views ventured to advocate those views, they were told, "You are putting yourselves in opposition to public opinion." He denied that public opinion was in favour of the admission of women to the profession. Those who advocated it were a mere section, but they were a persistent and noisy section, and they made themselves heard in the press and on the platform, and kept up a forced agitation for the purpose of thrusting women into a position in which they ought never to be placed. Those who advocated the introduction of women into the profession knew nothing about what either the study or the practice of medicine involved. Many of them thought that doctors had nothing to do but to sit at home and write prescriptions and take their guineas. They were unaware of the toils and dangers and perplexities and anxieties attaching to the profession. They were unacquainted with the repulsiveness of the dissecting-room, and the bloody scenes of the operating-room, and the other matters which caused even men to refrain from becoming doctors. In fact, it was a very peculiar race of men that could be induced to enter upon the practice of the profession. He had always thought that it was an axiom that woman had a particular sphere, but those persons who ventured in Edinburgh to speak of woman's sphere were sneered at, and told that woman had no sphere less than that of man. That he held to be utter nonsense. The sphere of woman was the home, and related to the bearing, suckling of children, and the training of the young. If women wanted a new occupation, why did they come to the medical profession? That, of all the professions, was the least adapted to them. Why did she not go to the law or to the church? She would there have no dissecting-room to enter, no blood to encounter, and no necessity for the exercise of an amount of brute strength which women very seldom possessed. Fancy a woman called to reduce a

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dislocation of the hip-joint, or to perform various other operations, which she might be required to take in hand on an emergency! The attempt would be painful both to the operator and to her poor patients. He repudiated with scorn the charge that those who opposed the change did so because they were a trades-union, and their craft was in danger. The medical profession was a noble and unselfish profession, and lavished its labours and skill gratuitously more than any profession in England. There were some persons who disapproved of women entering the profession, and thought that it was the worst occupation they could take up, but who said, "Well, although we think all that, the change is inevitable, and we must bow to the inevitable; and since it must come, is not it far better for us to take measures to make it easy?" If they thought it was the worst profession for women, it was inconsistent to endeavour to help the inevitable, and make it easy. Then another set of persons said, "Oh, don't make such a noise. It is a mere farce. Only a very few women will enter the profession. Nobody will care much about them, and in a few years they will become miserable and uncomfortable, and the thing will die out." He, however, though it wrong to lead them to venture on the ice if he knew that they would be drowned; and he maintained that he was the honestest friend of the women if he opposed them. They had experienced in Edinburgh some of the evils of leading women upon the ice. The city was in a constant turmoil; and he would appeal to the professors and the students as to whether their comfort was increased by the change. One of the most important arguments was that women demanded female doctors, and that it would be cruel to deny them. He disputed the statement, for he had taken the opinions of women of all classes and all ages on the subject, and their almost invariable answer was that they would not employ a female doctor. Women themselves were the most inveterate and sturdy opponents of the movement. He had been in the profession forty years, and he had never found that women shrank from telling him their ailments, and it was the most delicate women who had the least difficulty in making their complaints known. Then it was said that though women might not be equal to all the different departments of medicine and surgery, yet surely it would be natural that they should practise midwifery. But midwifery was just that branch for which they were least fitted. Ninety-nine cases out of a hundred might be managed by anybody, but the critical case might occur first. Who would like to entrust his wife to a woman in a case of embryulcia? Who would like to see a woman using the crochet, or the long forceps, and pulling with all her might with the sweat on her face? Would they like to see a woman in charge of a case in which the blood was gushing in torrents from the womb? And could a woman be expected, in such a case, to have the readiness and nerve which would save the patient from being lost? It was remarkable that, though at the beginning of this century very few women were attended by anyone but female midwives, yet now even the very poorest women in Edinburgh always employed a man. With regard to the argument founded on political economy, and the lack of employment for women, he admitted that every suitable field ought to be opened for the exertions of women. There were now, however, many more modes in which they were employed, compared to the former state of things. They were employed in public offices and in various businesses in which they could sit quietly, without having to encounter those dreadful things which they must meet if they became doctors. Using an *argumentum ad hominem*, he would ask any member of this Council whether he would like to see his sister or his daughter engaged in the medical profession? Would not any of them revolt at the idea? He (Dr. Wood) had seen five or six ladies in a dissecting-room at Edinburgh, dissecting a body, and five or six male students dissecting another body two or three yards off. If they would not like to see their own sisters and daughters undergoing the moiling and discomfort of the profession, ought they to encourage the sisters and daughters of other people to enter into it? If the Council believed that women ought to be doctors, there was no objection to their saying so; but if they believed otherwise, there would be no virtue in compromise. He felt sure that nine-tenths of the profession were against the movement, and when so large a proportion of an honourable profession made an objection there was some reason to think that there must be some truth in it. He hoped that the Council would not take any step which would lead to any entrenchment upon the softness and delicacy of the female sex. He did not wish to disparage women when he declared their unfitness for the profession, but he wished them to remain in that position in which they would command our esteem, our deference, and our love. For that reason he wished to keep them from the delusion, mockery, and snare which was now before them, and to retain them in the condition described by the immortal Scottish poet who addressed them as "ministering angels."

Dr. HUMPHRY said that he regretted that the present question had ever come before them. He had always felt that the profession of medicine was the occupation least suitable for women; but the question was not whether they should be encouraged to enter it, but whether they should be excluded from it. He did not feel that they ought to be absolutely excluded. He had felt, perhaps more than any man, the "disagreeables" and annoyances of medical practice; and not only would he withhold encouragement to his daughter to enter it, but he would hesitate before inducing a son to become a doctor. There were, however, enormous counterbalancing advantages in the way of doing good to one's fellow-men, and he should be unwilling to exclude any class of society or any sex from opportunities of doing good. Allusion had been made to the scenes of the operating-room. But he had never seen an operation at which there was not a woman present; and if women could be there unprofessionally, there was no reason why they should not be there in the way of professional study. If the Council felt that women were mentally and physically disqualified for doctors, it was their duty to negative the amendment. But had they really any mental or physical disqualification? Dr. Wood, who had spoken on this point, was himself an eminent surgeon, and he knew that the reduction of dislocation was now pre-eminently a matter of skill, rather than a matter of force. Then as to the mental disqualifications, Professor Turner had alluded to the size of the brain. Relatively, however, to the size of her body, the brain of a woman was not much below that of a man. The examinations which had taken place at Cambridge indicated in a remarkably clear manner the difference between a woman's faculties and the faculties of a man. In some of the more serious and harder branches of education a woman fell a little below a man; but in many points, such as facility of apprehension, tenacity of memory, readiness of application, and accuracy of statement, the girl was greatly superior to the boy in the early periods of life. Later in life the youth overtook the girl and advanced somewhat in front. He did not, however, believe that there was any real mental disqualification on the part of women. The moral and social view of the question was certainly no unimportant part of the consideration; but it was not easy to say that the practice of medicine by a woman towards a man was a greater moral evil than the practice of medicine by a man towards a woman. He was sure that the latter was not altogether unattended by great moral evils. Dr. Wood had asked whether they would like to see women entering upon the more severe cases of midwifery, and he had instanced embryulcia. But how few men were there whom we could trust on such occasions! Happily, too, such cases were very rare. He was not prepared to say that women were much worse than men in cases of emergency, for he had often been surprised, and even put to shame, by the readiness and courage of women upon such occasions. He felt that, as a matter of public justice, they ought to state seriously their own views, without reference to majorities of any kind; and his own conclusion was, that, as representatives of the medical profession, they ought to hesitate to say that women ought to be excluded.

Sir DOMINIC CORRIGAN said that at the time when the question was discussed in the Senate of the Queen's University, he advocated the admission of women into the profession, but he did so because there was nothing which kept up an agitation so much as permitting a grievance to continue; and he believed that if the barriers were removed, not one woman in ten thousand would enter the profession. He remembered attending a board meeting in Ireland many years ago, when some grievance had existed, and it happened that one of the persons concerned in the agitation lost all command over himself, and he dashed his papers on the table, and said, "Will ye give me nothing to fight about?" If the obstacles in this case were removed, there would be nothing to fight about, and the subject would die out. His experience amongst women accorded with that of Dr. Wood as to their aversion to female doctors. Even the nuns, who constituted the most modest class in the community, had told him that they would never

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consult a female practitioner. If, however, the Council determined to oppose the admission of women, they would be looked upon as a set of jealous obstructives. It might seem inconsistent, but, though he advocated the admission of women, he would never consent to meet one of them in practice.

Mr. MACNAMARA regretted that the question of woman's rights had been thrown upon the Council for solution. If they decided in favour of admitting ladies to the medical profession, it might be contended that they ought to be admitted to the franchise and the House of Commons. He was perfectly sure that they would discharge their duties as members of Parliament quite as well as many male members of the Legislature. From their training at balls and such gatherings they would be able to sit up to a very advanced hour of the morning, and they could easily follow the direction of the whip as to which lobby they should enter. But, though he regretted that the question had come before the Council, he felt coerced to vote for the amendment. It was one of the most guarded propositions which he had ever heard at the Council. The paragraph, as it stood in the report, said there were special difficulties, which could not be obviated, in the way of women entering the profession. The difficulties, however, were not enumerated; and the report went on to lay down a method by which the Government might do that which it was expressly stated they ought not to do. Much had been said about the physical disabilities of women, and about their lack of muscular power. He, however, could produce 20,000 women who could try that question very successfully with any member of the Council. But what force was required to handle a stethoscope or a thermometer? If force was required in operative surgery, there were mechanical appliances which would enable the most delicate women to pull out a man's arm. He should be sorry to allow any person to pass a catheter into his bladder if the process was to depend upon the muscular force of the operator. It had been said that women had not solved any great scientific problems. Their answer would be, "We have not had the opportunity. Our studies have not been directed to that quarter." But, for his own part, if he were ill he would sooner trust his case to a practical physician who devoted himself to his profession, than to one who occupied himself with solving great scientific problems. He did not think that the practice of medicine would lower the moral tone of a lady. The nursing in the Dublin hospitals was performed by the sisters of charity, who were a most tender, cultured, and admirable class of ladies, and, if they escaped moral harm, why might not female doctors? He thought that the *argumentum ad hominem* was most unfair. There were many unquestionable occupations in which, nevertheless, members of the Council would be reluctant to allow their own sons and daughters to engage. There was one branch of the profession about which no cavil could be made, and that was the pharmaceutical. Women might earn an honourable income in dispensing medicines and compounding prescriptions.

Dr. STOKES, in illustration of the physical force which was sometimes required in operative surgery, related the case of a lady who had suffered from peritonitis, and in whom a large ovarian tumour affecting both ovaries was diagnosed. She was operated on by an eminent practitioner, and so strong were the adhesions due to the peritonitis, that it required the whole force of the operator to tear away the tumour. He was so exhausted by the exertion that he remained in a fainting condition for some time. The patient, however, recovered. It could not be anticipated that female surgeons could meet such emergencies as that. In obstetrics there were conditions in which the full force of the most muscular man was absolutely necessary. As to the moral side of the question, he believed that the condition of the female mind would be damaged by having to attend to matters which were antagonistic to the delicacy of a woman. He agreed with Dr. Wood in the opinion that the feelings of women were altogether opposed to the change. Those ladies with whom he had conversed had invariably treated the attempt to transfer any portion of operative surgery to women as a grand mistake.

Dr. BENNETT objected to the amendment. It would go to the extent of implying that the Council were in favour of breaking down the barriers which now existed to the introduction of women to the profession. There were, he thought, serious reasons to justify the Council in endeavouring to maintain those barriers. The admission of females to medical practice was undesirable in the interests of the profession as a scientific profession, in the interests of the women themselves, and in the interests of the community at large, independently of any question of mental or physical qualifications.

Mr. TURNER wished to say that he should have been glad to accept the amendment to avoid dividing the Council, but he was unable to do so.

Dr. QUAIN said that he wished to point out the great gravity of the present question. If they pronounced in favour of the introduction of women into a profession so arduous and difficult as that of medicine and surgery, the leaders of the agitation would turn round and ask whether there was any position in social or professional life from which women ought to be excluded. Thus the relation of the sexes would be disturbed, and women would be withdrawn from that domestic sphere which they had filled from the Creation.

On the motion of Dr. ANDREW WOOD, the debate on this topic was then adjourned until the next day.

The Council then resumed for other business.

THE PHARMACOPŒIA.

The following report of the Pharmacopœia Committee was then presented by Dr. Quain, and unanimously adopted:—

Report.

The Pharmacopœia Committee have to report that 2097 copies of the reprint of the Pharmacopœia have been disposed of since its publication. That 10,000 copies of the Additions, which was the entire number of the original issue, have been sold, and that it has been found necessary to reprint 5000 copies. The whole outlay and return are exhibited in a table of expenditure and receipts, together with a statement of the stock in hand.

The Committee have had under consideration the important question of issuing a new edition of the Pharmacopœia, inasmuch as it would be necessary, if this step were decided on, to take immediate steps for the preparation of the work. The Committee, however, after much consideration, and after conference with the editor of the existing edition of the Pharmacopœia, have come to the conclusion that there is no necessity, and that it would not be desirable to issue a new edition for some time to come. In this conclusion the Committee are strengthened by the consideration that the publication of the Additions last year has been sufficient to meet the requirements of the profession, by the introduction of all the more important new remedies and preparations.

The Committee further report that there are no outstanding liabilities on account of the Pharmacopœia, and that there is, at present, no outlay required.

The Committee recommend that a Pharmacopœia Committee be reappointed.

June 23, 1875. RICHARD QUAIN, M.D.

VISITATIONS OF EXAMINATIONS.

A lengthy report of the Committee on the Visitations of Examinations in 1873-74, and on the remarks of the licensing bodies on the reports of the visitors, was presented by Dr. PARKES, and adopted.

The Council then adjourned until noon of the next day.

NINTH DAY.—SATURDAY, JUNE 26.

The adjourned debate upon paragraph (*b*) of the report of the Committee on Mr. Simon's letter was continued, the Council resolving itself into a committee of the whole house for the more convenient discussion of the matter.

Dr. ROLLESTON said the speeches which they heard yesterday from Dr. Andrew Wood and Dr. Humphry, for directness, straightforwardness, sincerity, and also for true eloquence, left nothing to be desired. He was greatly struck with the directness with which everybody discussed the question; and while he thought there was no need whatever for Dr. Andrew Wood to vindicate his honesty of purpose, he felt there was some little need for him to vindicate the study of anatomy. If things were done decently and properly there need be nothing repulsive or loathsome about it, and if students covered themselves with gore and blood the more shame for them. Dissection could be practised like everything else connected with surgery—in a coarse, vulgar way, or quite the reverse; and he always protested against students dissecting in a slovenly manner. If that were an argument in favour of men, it would equally apply to women. There seemed to him to be a large number of ladies, some of them wishing to be doctors, and others wishing to have doctors of their own sex, and he did not see any reason why they should be excluded. It had been said that the very refined and delicate people were quite content with the men, but he had had the advantage of seeing more than his own fair share of cultivated women, and could testify that many of them objected to men from a feeling of sensitiveness as to the relations of the two sexes being continued in matters peculiar to women. He was not connected with any female doctors, but a great number of women were, he knew, strongly in favour of the enactment. He believed many of the few women who attempted it would succeed. It would not be, as in other professions, that many would attempt and few succeed. One point had not been touched upon, and that was that the people of England were

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responsible for the government of a great part of the world, and it would be a great thing to send forth female doctors who might go into places where males were not admitted. Was it better that those women should be educated, or were they to go forth without any preparation whatever? Others had said, Let the women try, they will fail; but he would say, Let them try, for many will succeed. Have not we Mary Somerville, Harriet Martineau, and Garrett Anderson? They were persons of whose intelligence he should be glad to have a small portion. They had been told by Dr. Andrew Wood and others, just as they were told about the disabilities of Dissenters, that they were in the midst of a great revolution and a great change. He would, before he sat down, tell them a sort of parable or apologue, which had been often used by others. A man was taken by his enemies, and, having been blindfolded and led out, a rope was put into his hands; he was then swung into the air, and told to hold on to the rope because there was an abyss beneath him. He held on for many hours, his muscles became cramped, and his ligaments stretched, till he, in fact, really tasted the bitterness of death; the bandage was then removed from his eyes, and he found his feet within two inches of the ground. (Applause).

Dr. THOMSON said that in the letter sent to the Medical Council by Mr. Simon there were three questions for them to discuss—first, as to the suitability of women for the medical profession; secondly, whether they are more suited to one branch of it than to another; and, thirdly, what were the circumstances connected with the examination rules which at present prevented those who might wish it from accomplishing their object. Their answer ought to embrace the whole of those three topics; and on the first question, as to the suitability of women to the profession, he entirely agreed with the observations which had fallen from Dr. Sharpey, expressed as they had been with the greatest wisdom, simplicity, and clearness, for they seemed to embody almost all that the Council should do in the matter. In considering the right of women to enter the medical profession, and in saying that he did not think them altogether unsuitable for it, he did not shut his eyes to the difficulties which presented themselves, and was not influenced by any consideration of what had been called the rights of women, but simply by a sense of justice and what was right and proper under the circumstances. It seemed incontrovertible that attendance by females on females was more decent and appropriate than attendance by men on women, and he felt, with Dr. Rolleston, that there were a great number of cultivated and refined women who would prefer rather to be attended by women than men. He was quite sure that when the time came for women to be educated professionally it would be found that the most superior women in this country would be glad to avail themselves of their services; but he certainly did not share in the fears which had been expressed, that a large number of females would immediately rush into the profession. There was not the slightest fear that those who did so would attend principally upon men. He believed they would devote themselves more especially to childbirth and to attendance upon women and children. If they were properly educated, could there be a doubt that, with all their care and gentleness, and their knowledge of the habits of infants and children, they would be better attendants upon children in illness than men could be? At the same time, he must say he had no special liking for the measure. He had no desire to see any of those connected with himself entering the medical profession, but still the right to do so should not be denied to any person who feels that it is her mission, or that she is fitted for the work. With reference to the course of training there were very great objections to males and females being taught together, especially in the subject of anatomy. (Hear, hear.) So strong were his opinions that he should certainly protest against it in the educational institution with which he was connected. On the other hand, if the measure were passed, and the body which he represented thought it right after full consideration to confer their licence upon females, he should think it his duty to make the best of it, and to instruct those females in the manner most advantageous to themselves and the public. He should have no difficulty in doing so, provided he were not called upon to instruct them in the subject of anatomy along with males. If the general question were conceded, it was quite obvious that females might practise in any branch of the profession; but it would be readily admitted that there was one branch of the profession which was more suitable for them—viz., the care of childbirth, and the diseases of women and children. But, returning to the general question, he would ask whether any difficulty or impropriety had arisen from nurses attending upon men. He thought none had occurred. With regard to the improvement of nursing, a great deal was due to Miss Nightingale for the advancement of knowledge upon that subject; and everyone present, he thought, could testify what a prodigious advantage it was to have to practise in a hospital where there were women properly trained to their duty. If that was true with regard to nurses, would it not be more true with regard to women who entered the profession. Could there be a doubt that, if a delicate, well-informed, well-educated, and accomplished woman acquired under proper regulations that skill and knowledge necessary for the practice of the profession, her presence in the profession would be anything but an advantage? It would not only be a great benefit in the individual instances in which she might be employed, but would be the means of introducing more delicacy into the profession than, he was afraid, existed in it at the present time. As to the third question, with regard to the examination rules which should regulate their admission, it was scarcely necessary to offer any observation, because the Council would see the propriety of the suggestion made in the Committee, that, supposing measures are taken to make it possible for women to be entered on the Register, there should be a full reservation of the rights of the universities and licensing bodies with respect to their powers to grant such licences. As to the form of the answer to be sent to the Lord President, he thought it was not exactly the one that ought to be adopted, but at the same time it was perhaps the most suitable answer that could be given; and while the whole of this discussion was most useful for the formation of the opinions of the Council, and their decision on the matter, he hoped the President would, according to the ordinary rules of official business, be allowed to write his reply to the letter, embodying the opinions which had been expressed.

Sir WILLIAM GULL said, before Professor Turner replied, he should like to say a word or two. He thought the question as to the relation of the sexes had occupied too much of their attention. Dr. Andrew Wood's admirable address made just reference to the difficulties, inconveniences, doubts, disgusts, and so on which beset the question as a sex question, but he would ask Dr. Andrew Wood to remember that they were not recommending to the Government a conscription of women. They were not to be taken *nolens volens*, and made to daub their hands wth blood. It was entirely a personal question for themselves, whether they were fit or had a mind to become doctors. The Medical Council were not now passing an opinion as to whether women should enter the profession. If so, he should certainly vote against it. They were simply expressing an opinion that there were certain things in the medical profession as to which it would be better for women to deal with women. There were certain sex relations which could be avoided in that way. They all knew that there was a sort of smouldering scandal going on in certain quarters about women's diseases which probably would be got rid of by introducing high-minded, well-trained women into the profession. It must not be overlooked that the question was narrowed to a very small issue. In advising the Government about this matter, they were leaving it entirely open. It was really a permissive opinion that they were giving, and that opinion must be given with a slight *caveat* that the entrance of women is rather dangerous,—and so it is. If the history of this woman's question in America were looked at, it would be seen that a considerable social evil had sprung up in reference to women of a low tone entering the profession. There was in the *Lancet*, a short time ago, a letter giving the social history of about 150 women who had become doctors, and it was not credible to them. It should, therefore, be stated that there are social dangers as well as physical dangers besetting the question, and he thought a slight *caveat* would become this Council. Therefore he hoped the first clause would be adopted as it stood. Dr. Parkes's proposition was not really an amendment, because if he looked at the report of the Committee he would see that what he speaks of is admitted in the subsequent part, and it would only be a fair concession to the strong views that were entertained if a sort of *caveat* were entered in that first sentence.

Mr. QUAIN said that a proviso that women should not be debarred from the study and practice of medicine and surgery was contained in the draft report which was agreed to, but there was so much difference of opinion on the point that it

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was thought advisable that those words should be omitted. Though he was in favour of the words, he certainly would not advise any female connected with himself in any way to enter the medical profession; and he must confess, also, that, agreeing entirely with Dr. Humphry, he would dissuade any male member of his family from entering it. Still, he would not hinder either male or female if they had fully made up their minds to it, but would assist them by every means in his power.

Mr. Turner said as Dr. Parkes represented the female side of the question, he ought, perhaps, to have the last word. (Laughter.) He wished, in the first place, to point out that Dr. Parkes's amendment on paragraph (*b*) in the report contained both a subtraction and an addition. He thought the words which were proposed to be omitted were words of great importance, and that it was right that the Council should put before the Government the special difficulties which surrounded the question; and if it was surrounded with difficulties, "they could not safely be disregarded." He felt very strongly indeed that it would not be right to consent to the elision of those words. Then, with regard to the words proposed to be added, "but the Council are not prepared to say that women ought to be excluded from the profession," he thought it advisable in reading the terms of the proposition that one should not read and think over the words themselves, but that one should read between the lines as it were. Words often signify more than at first sight they seem to do, because different persons would put different constructions upon the meaning of those words. He should like to know not merely what the interpretation of the members of the Council was, but what the interpretation of people outside the Council would be. He submitted that it would be an interpretation of this kind: that the Council are prepared to say that women ought to be allowed to enter the profession. (Hear, hear.) Many arguments in favour of the admission of women would in the light of that interpretation be based upon those words, and he therefore contended that those words ought not to be inserted.

Dr. Parkes said when a lady had the last word in an argument she was always considered as having gained the day, and he hoped that would be the result on the present occasion. With regard to his amendment, its object and purport had been most fully explained in the speeches which had been delivered, especially in the admirable speech of Dr. Humphry. That speech pointed out the exact reason why those words had been introduced, and also why other words were omitted. The object of the amendment was to show that they did not invite, they did not recommend, but that they did not wish to exclude women from the profession. People who wanted to know the reasons why the Council did not wish women excluded from the profession, he would refer to a report of the present discussion, where they would find the reasons and the justification for them. With regard to keeping in those words on which Mr. Turner had spoken so strongly—viz., "which cannot be safely disregarded,"—and leaving out the word which he proposed should be inserted in their place, the effect would be simply that the clause would be a direct negative of women entering the profession. (No, no.) He could read it in no other light. It was unnecessary to say more than that he believed no wider question had ever been raised before the Council, and that it was of the greatest importance that the Council should rise above all party and petty considerations, and judge for themselves on the broad principles of right and justice. On those principles he thought they could not do otherwise than support the amendment which he moved.

Sir William Gull suggested that the words Dr. Parkes proposed might be added at the end of the paragraph.

Dr. Parkes said he had no objection if his supporters wished him to do so.

Dr. Bennett thought it was scarcely fair to make such a suggestion after the discussion had been closed.

After some discussion,

The Chairman left it to the Committee to say whether Sir William Gull's suggestion or the amendment of Dr. Parkes in its original form should be adopted.

After some discussion, the former alternative was carried by a considerable majority.

The altered amendment of Dr. Parkes, viz.:—"That after the words 'which cannot be safely disregarded,' the words 'but the Council are not prepared to say that women ought to be excluded from the profession,' should be added," was put and carried, the numbers being fourteen for the amendment, and seven against.

On being put as a substantive motion,

Dr. Andrew Wood moved as an amendment that the following be substituted in place of paragraph (*b*):—"With regard to this question of the admission of women to the medical profession, the Council, after mature deliberation, have to express their opinion that, considering the nature of the studies requisite to be gone through in order to attain that knowledge of the various branches of medicine and surgery necessary to constitute a safe and efficient practitioner, and considering that the practice of the medical profession infers, even in men, peculiar moral and physical qualities, as: bodily strength, nerve, and endurance to face much toil, anxiety, responsibility, perplexity, and danger, and that by nature women have not been so constituted as to fit them for such a profession, it is expedient to encourage and give facilities to women for entering the medical profession. The Medical Council therefore do not recommend legislation with the view of removing the difficulties in the way of women entering the medical profession." He would ask what it was the Council were called upon to affirm? They were called upon to affirm that they are of opinion "that the study and practice of medicine, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties which cannot be safely disregarded;" and then the report went on to say practically that they should be admitted—for, saying that they were not prepared to exclude them meant that they were prepared to admit them. It would be so read by the women doctors, of that he was quite sure. He raised now the general question for the purpose of giving himself and those who agreed with him that women are not fitted for the medical profession, an opportunity of giving their votes and having their names recorded. He maintained that the last sentence of his amendment was the proper logical conclusion from Dr. Parkes's motion.

Dr. Quain had great pleasure in seconding the amendment, and if he wanted any reasons for doing so he would appeal to the arguments of those gentlemen who voted in favour of Dr. Parkes's amendment. He never heard stronger arguments in favour of it than those offered by some of the members present. When he voted for the rescinding of the first paragraph of the report it was with the hope that something much stronger would be inserted, and he believed that was the opinion of all those who voted for it. (Laughter.) The report of the Committee was most cleverly withdrawn, and he should be very sorry if something stronger were not put into its place.

Dr. Aquilla Smith said he could not support Dr. Wood's motion, because it appeared to him that by the last sentence of it the Council were asked to ignore the question altogether.

Dr. Fleming objected to the amendment on the ground that the question had really been decided upon the amendment moved by Dr. Parkes.

The Chairman said he had foreseen the objection being raised that it was not a proper amendment, and had considered the matter somewhat. He entirely agreed with Dr. Fleming that it raised the question *de novo*, and gave an opportunity for a decisive vote, either for or against, over again, but under the circumstances he felt the Council would not wish that any technical objection should hinder the amendment being put.

The amendment was then put and negatived by a large majority.

The Chairman then put Dr. Parkes's motion, which was carried.

Mr. Turner then moved, after some verbal alteration had been made, that paragraphs (*c*) and (*d*) in the report of the Committee be adopted. They were as follows:—"(*c*.) With regard to Mr. Cowper-Temple's Bill, considered by itself, and apart from its bearings on the 'general question whether women ought to be able to look to medical practice, or certain branches of it, as open to them equally with men as a profession and means of livelihood,' the Council have found no difficulty in forming an opinion. By the Medical Act, 1858, the Council are precluded from registering persons holding foreign degrees, and, consequently, have been compelled repeatedly to refuse to register foreign degrees held by men. (*d*.) The reason for this is obvious—viz., that the Council have no means of exercising that supervision and control over the education and examination required for foreign degrees, to which the licensing bodies of this country, whether universities or corporations, are by the Act of 1858 subjected. But this privilege, which the Medical Act refuses (and, the Council believe, very properly refuses) to men, Mr. Cowper-Temple's Bill proposes to grant to women. Against such a proposal the

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Council feel bound to offer a protest, as being subversive of the main principle of the Medical Act."

Mr. TURNER then proposed that paragraph (*e*)—which was as follows:—"(*e.*) If it should appear to the Government and the Legislature expedient that women who desire to obtain a legal status as medical practitioners in this country should not be debarred from obtaining that status, the Council are of opinion that it should be under some such arrangements as the following: "— should be adopted.

Mr. QUAIN seconded the motion.

Dr. BENNETT said he should not be consistent if he did not offer a very decided protest against their proceeding to lay down rules and regulations which might never be required. If they had positively recommended that women should be placed on the Medical Register, then it would not be very inconsistent in proceeding to show how such a thing might be brought about; but they had not done so. Whether it would be desirable to introduce anything in place of paragraph (*e*) he would not say, but would protest against the introduction of rules and regulations as to the education and examination of women, who, as he thought, were not competent for the work. He would therefore move an amendment, —"That the whole of paragraph (*e*) be omitted."

Sir DOMINIC CORRIGAN seconded the motion, and for this reason: that the Government had not asked directly or indirectly what were the rules and regulations under which women ought to be admitted. Nothing could be more unwise than to answer questions which had not been asked. In the second clause it was stated that "the Council are of opinion that sufficient provision would be made to enable women to obtain a legal status as medical practitioners in this country if an Act of Parliament were passed which should enable the Medical Council to recognise such examination or examinations as the Medical Council may from time to time deem sufficient for the purpose of granting admission of women to the Medical Register under the title of licensed practitioners of medicine." If they were to pass such a clause as that they would at once have all the universities in arms against them for presuming to interfere so far with their privileges, but, further than that, they had already passed a paragraph that the regulations of universities and corporations should not be interfered with.

After some remarks from Dr. Rolleston, Dr. Aquilla Smith, Dr. Humphry, and Dr. Apjohn, the amendment of Dr. Bennett was put and lost.

The original motion that the first clause of paragraph (*e*) be adopted, was then put and carried.

Mr. TURNER then moved that Section 1 of paragraph (*e*) be adopted—"That, in the interests of public order, the education and examinations of female students of medicine should be conducted entirely apart from those of male students."

Mr. QUAIN seconded the motion.

Sir DOMINIC CORRIGAN proposed that the words "in the interests of public order" should be omitted, as it was not necessary that their reasons should be given.

Mr. MACNAMARA having seconded the amendment, it was put and negatived.

The original motion was then put and carried *nem. con.*

Dr. THOMSON then suggested that Sections 3 and 4 should take the place of Section 2; and, after a considerable discussion, in which Mr. Macnamara, Dr. Rolleston, Dr. Bennett, Sir Dominic Corrigan, and others took part, Clause 4 was incorporated in Clause 2 and the paragraph was passed in the following form:—"That with reference to the "examination-rules or other conditions" which prevent women from accomplishing their wish, the Medical Council have to state that, under the provisions of the Medical Act, those persons only can be placed upon the Medical Register who have been admitted to medical degrees in the universities, or who have been admitted fellows, members, or licentiates of one of the medical corporations of the United Kingdom. Should the universities and corporations be unable or unwilling to admit women to their degrees, or to admit them as licentiates or members of the respective corporations, the Council are of opinion that sufficient provision would be made to enable women to obtain a 'legal status as medical practitioners in this country,' if an Act of Parliament were passed which should enable the Medical Council to recognise such examination or examinations as the Medical Council may, from time to time, deem sufficient, for the purpose of granting admission of women to the Medical Register under the title of 'Licensed Practitioners of Medicine.' The education and examinations for these licences should be under the supervision of the Medical Council in the same way as is required for the other licences of this country. The Council are of opinion that any course of legislation which would interfere with the free action of the universities and corporations mentioned in schedule (A), in respect of the medical education, examination, and licensing of women, is undesirable."

Mr. TURNER then moved, and Mr. QUAIN seconded, the adoption of Clause 3—"That the examinations of female candidates for a licence entitling their names to be placed on the Register should be equivalent to those of male candidates."

Dr. BENNETT opposed the motion on the ground that it was not necessary, for in the clause just passed it was provided that the Council should be enabled to recognise such examination as from time to time might be deemed sufficient.

Sir WILLIAM GULL supported the motion, and it was put and carried.

Clause (*f*) was then put, and passed in the following form:—"(*f.*) The Council have already had their attention drawn to the importance of securing more efficient instruction for women who engage in the practice of midwifery, and whose services are largely employed, especially by the poor of this country. The Council feel very strongly that it is desirable that some means should be adopted for securing a better education, and granting certificates of competency to women who act as midwives. For, whilst fully admitting that, for the safe and efficient practice of midwifery as a branch of medical science, a full and complete education both in medicine and surgery is necessary, the Council believe that a much more limited and less expensive education might be afforded to women, who after due examination might, as midwives, render valuable service to the community, and supply a deficiency long felt and expressed. For women thus educated and certificated, it might be desirable that a special register should be provided."

On the motion of Mr. TURNER, seconded by Mr. QUAIN, it was resolved that paragraph (*g*)—"It is right to observe, that the Committee were not unanimous on some of the propositions in this report"—should be omitted.

The Council then resumed the debate, and it was resolved that the report as amended in Committee of the whole Council be received, entered on the minutes, and adopted.

It was further resolved that a copy thereof should be sent to the Lord President of the Privy Council, together with the minutes of the proceedings of the Council relating to Mr. Simon's letter.

The draft reply of Dr. Bennett of June 24 to the letter of Mr. Simon was directed to be placed on the minutes, and sent, together with the other minutes, to the Lord President.

CONCLUDING BUSINESS.

On the motion of Dr. PARKES, seconded by Dr. BEGBIE, it was resolved—"That the Report of the Committee on the Visitations of Examinations, and on the remarks on such visitations, be considered next session, in connexion with the reports which have now been sent down for the consideration of the licensing bodies."

Sir DOMINIC CORRIGAN having withdrawn a motion which he had given notice to move, that, in the event of the visitations of examinations being continued, the Executive Committee should be requested to issue a table of instructions,

Dr. BENNETT moved—"That the President be asked to inform the Council whether he is able to state in what position the Joint Scheme for England now is, and whether there is reason to believe that there is any foundation for the report that the Royal College of Surgeons of England have virtually seceded from the Conjoint Scheme agreed on by the English licensing bodies, as submitted to this Council, inasmuch as it is currently reported that certain resolutions have been come to by the Council of that College respecting the appointment of examiners under the Conjoint Scheme in question, which resolutions are in direct contravention of certain principles of the Scheme as approved by this Council."

The PRESIDENT made the following reply: In answer to Dr. Bennett's question I must observe that no full information can be officially given, without communication with the Committee of Reference, of which Sir James Paget is chairman, and with the bodies who have sent representatives to that Committee. The scheme cannot be completed till Sir John Lubbock's Bill is law. As to the College of Surgeons having withdrawn from the Scheme, that is a report as to the truth of which I have no evidence, nor have I any reason for believing it. There seems to be no ground for supposing that the College of Surgeons, which has taken much pains with a Bill that

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has already passed the third reading in the House of Commons, will do other than act in the same spirit as that which induced them to obtain the Bill. The College of Surgeons had, I believe, always maintained or implied their right to secure the nomination of a certain proportion of the examiners in surgery and in anatomy. If this right be now insisted on, the consent of the co-operating bodies and of the Medical Council to the arrangements proposed by the College of Surgeons is obviously necessary. These circumstances show that the negotiation is one which, in its very nature, requires time, but they do not indicate that the scheme will come to an end.

On the motion of Dr. APJOHN, seconded by Dr. STOKES, it was resolved—"That the President be requested to ask the representative of the Royal College of Surgeons in Ireland whether the Council of the Royal College still adheres to the Scheme of Conjoint Examinations as adopted by the King and Queen's College of Physicians, and agreed to by the other licensing bodies in Ireland, with the exception of the Queen's University, and sanctioned by the Medical Council (March 31, 1873)."

Mr. MACNAMARA, the representative of the Royal College of Surgeons in Ireland, replied that "the Council of the Royal College of Surgeons of Ireland have not withdrawn from the Conjoint Scheme of Examination for Ireland. The fellows, the year before last, by a large majority, decided that they could not approve of the Scheme then submitted for their consideration, but did not express themselves as being hostile to the principle of a conjoint examination. The Council, nevertheless, remained pledged to the Scheme approved of by this Council, but during the past year the question has fallen into abeyance. The present feeling in Ireland would seem to be that we should be very much influenced by the steps which may be taken in England and Scotland in this direction."

A letter from certain lecturers on materia medica and therapeutics in the medical schools of London was then read and directed to be entered on the minutes.

Dr. PARKES then moved, and Dr. AQUILLA SMITH seconded—"That the recommendation of the Committee on Professional education (Minutes, vol. ix. p. 48) that the teaching of pharmacy should be an early, and the teaching of therapeutics a late course in the curriculum, and which recommendation was adopted by the Council (Minutes, vol. ix. p. 49, July 10, 1871), be included in the 'Recommendations and Opinions of the General Medical Council' which are sent to the licensing bodies, and that a copy of the above letter be forwarded to each of the bodies enumerated in schedule (A) of the Medical Act."

The motion was put and carried.

A memorial from certain medical practitioners in the county of Durham was then read by Dr. PYLE, and directed to be acknowledged and entered on the minutes.

It was then resolved, on the motion of Dr. ANDREW WOOD, seconded by Dr. STORRAR—"That the Committee on the recommendations of the Council be continued, and that they be directed to bring up their report to the next session of the Council."

Dr. AQUILLA SMITH proposed, and Dr. BEGBIE seconded—"That the powers and duties heretofore delegated to the Executive Committee shall be vested in the said Committee until the next meeting of the General Medical Council,"—which was agreed to.

Votes of thanks to Dr. Andrew Wood (the Chairman of the Business Committee), to Dr. Bennett, Dr. Quain (the Treasurers), and to Dr. Acland (the President) having been passed, the proceedings of the present session terminated.

M. DUBRUEIL.—This gentleman, an *agrégé* of the Paris Faculty, has just been chosen by the Faculty of Medicine of Montpellier to fill the vacant chair of Clinical Surgery.

L'INSTITUT ANTHROPOLOGIQUE.—"It is only a few days since, through the initiation of some members of the Anthropological Society, as active as they are generous, and with the concurrence of the Society itself, that the Anthropological Institute was founded. Here anthropology—this science so new, and we may with pride call it of French origin—will become the object of special teaching. The Institute, which will open its doors to the public in January, 1876, is in the possession of a very large habitation, of five professorial chairs, of a laboratory, of a valuable collection, and of a library."—*Gaz. Méd.*, June 26.

ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page 696, vol. i., 1875.*)

The Gephyrea.—These are marine vermiform animals without distinct external segmentation or parapodial appendages. The ectoderm has a chitinous cuticle, and is often provided with tubercles, hooks, or setæ of chitin. In one genus (*Sternaspis*), two shield-shaped plates, fringed with setæ, are developed upon the hinder part of the ventral surface of the body. There are external circular, and internal longitudinal muscular fibres beneath the ectoderm. The oral end of the body may have the form of a retractile proboscis (*Priapulus*), or be provided with tentacular appendages. These may be arranged in a circle round the mouth, and short (*Sipunculus*) or long (*Phoronis*), or there may be a single long, sometimes bifurcated and ciliated, tentacular appendage (*Bonellia*). Filamentous appendages, which are probably branchiæ, are given off at the hinder end of the body in *Sternaspis* and *Priapulus*. The intestine is straight in most genera, but is coiled and bent upon itself, so as to terminate in the middle of the body, in *Sipunculus*. In *Phoronis* the anus is close to the mouth. The anal aperture is always situated upon the dorsal aspect of the body. There is a spacious perivisceral cavity undivided by mesenteries, which in some cases (*Priapulus*) opens externally by a terminal pore. In some (*Echiurus*, *Bonellia*, *Thalassema*), a pair of tubular organs, which are ciliated internally, and appear to represent the water-vessels of the *Rotifera*, open into the rectum.

A pseudhæmal system exists in several genera (*Sternaspis*, *Bonellia*, *Echiurus*, and *Phoronis*), and consists of two longitudinal trunks—one dorsal and supra-intestinal, the other ventral, with their terminal and lateral communications. In *Sipunculus*, the cavities of the tentacles communicate with a circular vessel provided with cæcal appendages; and this circular vessel is said to open into the pseudhæmal vessels.

The nervous system consists of a ganglionated collar, which surrounds the œsophagus, and from which a simple or ganglionated cord proceeds backwards in the ventral median line.

The sexes are distinct, and the reproductive elements are developed either from the parietes of the perivisceral cavity or in simple cæcal glands.

The actively locomotive embryo of *Sipunculus* is surrounded by a circular band of cilia placed immediately behind the mouth, and resembles a Rotifer or a mesotrochal Annelidan larva. It loses this wheel-organ, and passes gradually into the adult form. In *Phoronis* the embryo is also mesotrochal, but it has two ciliated bands—one circular, round the anus; and the other immediately behind the mouth. This post-oral band of cilia is produced into numerous tentaculiform lobes, and fringes the free edge of a broad concave lobe of the dorsal side of the body, which arches over the mouth. In this state the embryo is the so-called *Actinotrocha*. An invagination of the ventral integument of the larva connects itself with the middle of the intestine, and then, becoming evaginated, pulls the intestine in the form of a loop into the ventral process thus formed, which gives rise to the body of the *Phoronis*, while the tentacles of the larva grow into those of the adult. Schneider has suggested that the bell-shaped larva, with long setæ, termed *Mitraria* by Müller, is the embryo of *Sternaspis*.

The affinities of the Gephyrea with the Turbellaria, the Annelids, and especially the Rotifera (*Bonellia* is in many respects comparable to a colossal Rotifer), are unmistakable. Their usually assumed connexion with the Echinodermata is more questionable.

The circular canal which communicates with the cavities of the tentacles in *Sipunculus* has been compared to the ambulacral system of the Echinoderms, but the manner of its development is not yet sufficiently understood to justify the expression of an opinion on this subject. Krohn has described a bilobed

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organ on the ventral face of the gullet of the larva of Sipunculus, which opens externally in front of the ciliated band by a narrow ciliated duct.(a) It has a striking similarity to the "water-vessel" of the larva of *Balanoglossus*, which, however, lies on the opposite side of the body.

The Chætognatha.—The genus *Sagitta*, which is the only member of this group, comprises several species of small animals which are found swimming at the surface of the ocean in all parts of the world. Although the whole structure and course of development of *Sagitta* are now very well known, its true affinities are not definitively settled. Anatomically, it comes nearer the Nematoid worms and the oligochætous Annelids than any other group; but its development presents peculiarities of which no trace has yet been discovered among the preceding forms, though they occur among the Brachiopoda and the Echinodermata.

The body of *Sagitta*, rarely more than an inch long, is elongated, subcylindrical and unsegmented; it is enlarged at one end into a rounded head, while at the other it tapers to a point. There are no parapodial appendages, but the chitinous cuticle is produced into a finely striated lateral fin on each side of the body and tail, and into delicate setæ. On each side of the head there are a number of long, curved, claw-like setæ, which can be laterally divaricated and approximated, and serve as jaws. Between them is the mouth, and at the sides of the mouth are four sets of shorter setæ. The mouth leads into a simple straight intestine, which opens by an anus situated on the ventral face of the body, where the tapering caudal region commences. A dorsal and a ventral mesenteric band connect the intestine with the wall of the body, and divide the perivisceral cavity into two chambers. Beneath the ectoderm lies a layer of longitudinal, striated, muscular fibres. The nervous system consists of a single oval ganglion, which lies in the middle of the ventral wall of the body, and sends off anteriorly two commissural cords, which unite with a supra-œsophageal ganglion. Among other branches this gives off two to the dorsal side of the head, which dilate at their extremities into spheroidal ganglia on which the eyes rest. The ovaries are elongated tubular organs, which lie one on each side of the body, and their ciliated ducts open close to the vent. There are receptacula seminis. Behind the anus the mesenteric laminæ unite and form a vertical partition, which divides the cavity of the caudal part of the body into two chambers. On the lateral walls of these, cellular masses are developed, which become detached, and, floating freely in the perivisceral fluid, are developed into spermatozoa. These escape by spout-like lateral ducts, the dilated bases of which may be regarded as vesiculæ seminales.

Thus far, although the organisation of *Sagitta* is very peculiar, it may be reduced without much difficulty to the type of the Nematoidea and Annelida. But its development, as described by Kowalewsky,(b) is unlike anything at present known in either of these groups. Yelk-division takes place, as usual, and converts the egg into a vesicular morula, with a large cleavage cavity, or blastocœle. One face of the vesicle thus constituted now becomes invaginated, with the effect of gradually obliterating the blastocœle, and converting the spherical single-walled sac into a hemispherical, double-walled, cup-shaped gastrula. The cavity of the cup is the future digestive cavity; the layer of invaginated blastodermic cells which lines this cavity is the hypoblast, which will become the endoderm; and the outer layer of cells is the epiblast, which will become the ectoderm.

In this condition the embryo resembles that of the Leech in its early state. The embryo elongates, and the aperture of invagination eventually ceases to be discernible. Whether it becomes the anus, or whether the anal aperture is formed anew, is not certain. The nervous ganglia result from the modification of the cells of the ectoderm. The anterior end of the alimentary cavity is at first closed. It soon sends out a cæcal prolongation forwards on each side, so that the cavity is divided into a central and two lateral divisions. The central division opens externally and anteriorly by the development of the oral aperture, and as the body elongates it becomes the tubular intestine. The lateral diverticula at first communicate with it, but they eventually become shut off, and constitute the right and left perivisceral cavities, their walls becoming converted into the cellular and muscular lining of those cavities. It results, from the mode of development of the perivisceral cavity of Sagitta, that this cavity is an enterocœle, comparable to that of the Hydrozoa and Actinozoa; but which, instead of remaining in communication with the alimentary cavity, is shut off from it, its wall becoming the mesoderm, and its cavity the perivisceral cavity.

Nothing of this kind is known to occur in the Turbellaria, Annelida, Nematoidea, and Rotifera, but when a perivisceral cavity exists in these animals, it appears always to result from the excavation of the, at first, solid mesoderm. The perivisceral cavity thus developed I have termed a *schizocœle*.

But whether there is any fundamental difference between an *enterocœle* and a *schizocœle* is a matter for further inquiry. There seems no doubt that in the Oligochœta and Hirudinea the mesoblast is a product of the hypoblast, which, however, contains no continuation of the alimentary cavity, but eventually splits into a visceral and a parietal layer, the interval between which is the perivisceral cavity; and there is much probability in Kowalewsky's suggestion that the longitudinal bands (*Keimstreifen*) in which the mesoblast makes its appearance may be homologous with the diverticula of the alimentary cavity of Sagitta.

In this case the schizocœle will be an advance upon the enterocœle, and the development of the perivisceral cavity in Sagitta may represent the primitive mode of development of all invertebrate perivisceral cavities. On the other hand, it must be remembered that between the endoderm and the ectoderm in the disc of a Medusa, or in the body of a Ctenophoran or Turbellarian, there is a gelatinous mesoderm which occupies the position of the primitive blastocœle. Now, this mesoderm may be, and probably is, a product of the endoderm; but any cavities which appear in it, such, for example, as the water-vascular canals of the Turbellaria, can have nothing to do with the enterocœle.

Again, in the Ascidians, as we shall see, there is a so-called "perivisceral cavity," which is formed by an invagination of the ectoderm. So that what is called a "perivisceral cavity" may be one of four things.

1. A cavity within the mesoblast, more or less representing the primitive blastocœle.
2. A diverticulum of the digestive cavity, which has become shut off from that cavity (enterocœle).
3. A solid outgrowth, representing such a diverticulum, in which the cavity appears only late (modified enterocœle.)
4. A cavity formed by invagination of the ectoderm (epicœle).

And whether any given perivisceral cavity belongs to one or other of these types can only be determined by working out its development.

(*To be continued.*)

(a) "Ueber die Larve des Sipunculus nudus," Müller's *Archiv*, 1851.
(b) "Mémoires de l'Académie Impériale des Sciences de St. Petersbourg," 1871.

ORIGINAL COMMUNICATIONS.

CASE OF

PROGRESSIVE PARALYSIS OF CRANIAL NERVES, DUE TO SYPHILIS.

By JOHN LEWTAS, M.B. Lond.,
Honorary Medical Officer, Liverpool North Dispensary.

O. A., a young man, aged twenty-two, came under my observation, complaining of intense pain on the right side of his head and in the right cheek, and of inability to walk steadily. The right cheek was swollen, the corresponding angle of the lips lower than the left, and saliva dribbled from his mouth. He had been using remedies for toothache. His teeth were sound. He spoke thickly and indistinctly, as though his tongue were too large for his mouth. There were present the signs of paralysis of the right facial nerve: inability to blow or whistle, flapping of the cheek, and loss of control over the right eyelids, his friends reporting that he sleeps with one eye open. With twenty cells of a Foveaux's (Smee's) battery very slight contraction was produced of the muscles supplied by the right facial nerve; a comparative trial on the left side induced vigorous grimaces, and was attended with more pain than on the right side.

As before mentioned, he staggered in walking. This did not seem owing to loss of power in the legs, for, when lying on his back, he could flex and extend both legs with good and equal force. This unsteadiness appeared rather to arise from

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giddiness, attended also, he said, with buzzing in the right ear. When walking he had the habit of putting a hand to his head.

His condition remained much as just described for twelve days after I first saw him. At the end of this time obstinate vomiting set in, and during two days was almost incessant. He would retch violently for ten or fifteen minutes at a time, then fall back exhausted, only to begin again after a short interval. At the end of five days this vomiting had almost ceased.

One of our hospital physicians now saw the case with me, and we noted the following additional symptoms:—The tongue when protruded was distinctly deflected to the right; the vision of the right eye was impaired, possibly owing to exposure, it being bloodshot and in a constant state of lachrymation. The intense pain on the right side of the head and in the ear still continues. Although no history of syphilis was obtainable, and no indications of it discernible, it was agreed to give him iodide of potassium.

A week later his condition had undergone no improvement; it seemed to be growing, indeed, more serious. Vomiting had returned, though not with the severity of ten days ago. He complained of deafness on the right side, and pain at the epigastrium. On the evening of this, the twenty-third day counting from that on which I first saw him, I was sent for, and found him writhing and groaning with pain in the left side of the neck, the left shoulder, and down the left side of the chest. His left arm and leg were in a rigid semi-convulsed state. He breathed superficially and quickly, emitting a sort of grunt with each expiration. A subcutaneous injection of one-third of a grain of morphia gave him considerable relief. The next day this pain returned, and during its continuance the following notes were made:—Respirations 32 per minute; pulse 92; little or no air is heard to enter the left lung; crepitation is heard over the right apex, and here there is impaired resonance on percussion. Abundant muco-purulent sputum. He is still sick several times each day. Morphia was repeated at night. It was determined to combine one-sixteenth of a grain of bichloride of mercury with the iodide of potassium. A few days later there was a marked improvement in his condition. He was almost free from pain, both in the head and in the neck and shoulder. Crepitant râles are no longer heard over the right apex, but the respiration heard there is harsh and bronchial. Curiously enough, subcrepitant rales are audible now over the *left* apex, whereas a few days ago no moist sounds were detectable in that situation. He could now partially close the right eye. (It must be stated here that the constant current had been applied twice a week to the right facial nerve.)

A week later the report was:—Steady improvement in the nerve-symptoms; pain in the head has quite gone; the mouth does not yet resume its normal shape; some of the white of the right eye can be seen when he closes his eyes; tongue appears to be protruded straight forwards; crepitation is heard over the greater part of the posterior surface of the left lung, also in front, but less distinctly; no morbid phenomena in right lung.

A week later, exactly six weeks from the day he first came to me, he felt himself sufficiently well to resume his duties, nothing remaining but slight deformity of the mouth, and a muco-purulent expectoration, more especially in the morning.

Remarks.—In a case presenting such a crowd of symptoms, the question arises whether some of them be accidental complications, or whether all are causally descended from an identical lesion. The latter is probably the true explanation in the present instance, and for the following reasons:—1. The order in which the symptoms appeared agrees with what would be expected from successive implication of the facial, auditory, pneumogastric, and hypoglossal nerves. 2. The disappearance of one and all under a single plan of treatment would tend to show that they owned a common origin. Sufficient resemblance exists between this history and those recorded in the *Clinical Transactions* by Drs. Broadbent and Moxon to lead to the expectation of a similar morbid anatomy. Space will not allow of a detailed discussion of the grounds of the diagnosis, and of the probable seat and nature of the disease. As regards the treatment adopted, it is noteworthy that improvement rapidly followed the exhibition of mercury along with the iodide. This accords with the experience of Dr. Owen Rees as given in *Guy's Hospital Reports for* 1872 in a paper on "Cerebral Disease having its Origin in Syphilis."

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Medical Times and Gazette.

SATURDAY, JULY 3, 1875.

GENERAL MEDICAL COUNCIL.

It will have been seen, from the report we published last week of the proceedings of the Council, that on Monday it was agreed, without discussion, that "a copy of the Report of the Visitors of the Examinations of the King and Queen's College of Physicians in Ireland be forwarded to that College for their consideration and remarks"; but when a like resolution was proposed with regard to the Visitors' Report of the Examinations of the Apothecaries' Hall, Dublin, a long discussion followed, in the course of which Sir Dominic Corrigan greatly entertained the Council by a description of the manner in which the so-called competitive appointment of the examiners was made—the competition being in reality, he stated, a competition for the purchase of a share in the company; and some deficiencies in the examinations were severely criticised. Sir William Gull moved, and Dr. Rolleston seconded, to add to the resolution the words—"Attention is specially desired to the defects in the anatomical and physiological parts of the examination, and also to important deficiencies in the clinical examination." But the Council would none of it; they had been amused and put into good humour by the discussion, and all feeling of severity had been given vent in words, so the original resolution was passed without addition. This excited some discussion on the proceedings of the Committee, Dr. Rolleston asking if the result was that the reports were to be sent down to the several bodies concerned without comment, and no more time spent in discussing them till answers to them had been received; and he proposed to rescind the resolution "That the reports of the licensing bodies be taken into consideration." Sir William Gull also thought that it would be the merest waste of the time of the members of the Council to attend and discuss the reports, and then find that nothing came of it. Dr. Andrew Wood could not at all agree in this view, but thought that, on the contrary, "the discussions which had taken place, when reported in the public journals, were calculated to be of the utmost importance." He much regretted

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indeed that the motions with regard to deficiencies had not been carried, but believed that "the great power of public opinion would react" on the licensing bodies, and therefore the discussion would do great good. In the end, Dr. Rolleston withdrew his motion. We take leave to doubt if the public will form a high opinion of the value of the discussions, when the Council shrink from giving effect to them by any special resolutions.

The consideration of the Reports of the Examinations of Trinity College, Dublin, and of the University of Durham, which occupied a considerable time on Wednesday, also ended in the adoption of the ordinary resolutions respecting them. These were the last of the visitors' reports, and the Council adopted the resolutions which had been passed regarding them by the Council in committee.

The last matter dealt with on Monday was a motion by Dr. Humphry, to the effect that "the visitations of examinations should be continued, so as to effect the visitations of examinations in part or in whole of some of the examinations in a year," and to refer to a committee the consideration of how this could best be done, and to report thereon at the next meeting of the Council. The Report of the Committee on the Visitations of Examinations in 1873-74, and on the Remarks of the Licensing Bodies on the Reports of the Visitors, was brought before the Council on Saturday, but the consideration of it was deferred to next year, when the remarks of the licensing bodies on the reports sent to them this year would also be before the Council.

It will have been noticed that on Tuesday a long and very desultory and irregular discussion, or conversation, was excited by a motion, by Dr. Parkes, to inquire what steps the various licensing bodies had taken to carry out certain recommendations of the Council with regard to professional examinations; in the course of which Dr. Rolleston expressed a strong opinion in favour of free-trade in education. The Council had no right, he said, to interfere with the methods of teaching, except indirectly by examination: if a candidate showed that he possessed the required knowledge, it made no difference how he came by it. This view was supported also by Sir William Gull and by Sir Dominic Corrigan, who held that it was no affair of the Council's as to where information was obtained. This is a question which will, no doubt, be again raised; but if so, it is to be hoped that it will be brought forward as a separate question, and in such a form that it may be fully and worthily discussed.

On Friday the Council took into consideration Dr. Shuttleworth's letter on behalf of registered practitioners who are graduates in medicine of foreign universities, in which he suggested that it would be expedient and just that it should be lawful for the Council "to register, *as additional qualification*, well-attested foreign degrees in the case of persons previously admitted to registration as qualified by British diplomas to practise medicine"; and it was agreed, on the motion of Dr. Sharpey and Dr. Rolleston, that "it is desirable" that the Council should, at a future meeting, consider whether it may be advantageous to make it lawful for the Council to insert in the Medical Register, in the case of a registered practitioner, "the appropriate title indicative of a medical degree obtained after study and examination in a foreign or colonial university, approved for this purpose by her Majesty's Privy Council on the recommendation of the Medical Council." The communication from the University of Oxford relative to qualifications in State Medicine was also considered, and the Council resolved that it is desirable that "the principle embodied in the Conjoint Examination Scheme for licences to practise medicine and surgery should be extended to any licences or certificates in State Medicine or Public Health."

The whole of Thursday and the greater part of Friday were taken up by the consideration of what reply should be made to Mr. Simon's letter, and the debate, being still unfinished, had to be adjourned to Saturday. A rather formidable-looking amount of business besides also remained unfinished; but the Council had bravely determined that the session should, if possible, end on Saturday, and so met at twelve o'clock instead of two. The first business was again the report of the Committee on Mr. Simon's letter, which was not finished till late in the afternoon; but it was at last concluded, and the report, as amended in committee of the whole Council, was adopted by the Council, and the President directed to transmit it to the Lord President of the Privy Council. But even then the matter was not done with, for not a little "costly" time was consumed in conversing on the desirability and propriety of sending "the minutes of the Council, and of the Committee of the Council relating to Mr. Simon's letter," to Mr. Simon for the information of the Lord President; and of placing Dr. Bennett's letter of June 24 on the minutes of Saturday's meeting, and forwarding it also to Mr. Simon. Both these things were at last agreed on, and the matter of the letter done with. We have spoken of, and commented on, the debate on this subject in another article, and need note only very shortly the remaining business of the session.

Dr. Bennett asked the President to inform the Council, if possible, of the present position of the Joint Scheme for England, especially with reference to the rumour that the Royal College of Surgeons of England had virtually seceded from the scheme. In reply, the President stated that no full information could officially be given without communication with the Committee of Reference, and with the bodies who had sent representatives to that Committee; and that the scheme could not be completed till the College of Surgeons' enabling Bill became law. That he had no evidence as to the truth of the report about the withdrawal of the College of Surgeons from the scheme; and had no reason for believing it. That the College had taken much pains to obtain an enabling Bill; and there seemed to be no ground for supposing that the College would not continue to act in the same spirit as that which had led them to obtain that Bill. That he believed that they (the College) had always maintained or implied their right to secure the nomination of a certain proportion of the examiners in surgery and anatomy; that if this right should be still insisted on, the consent of the co-operating bodies and of the Medical Council would obviously be necessary; and that, under those circumstances, the negotiation was one which required time; but that they did not indicate that the scheme will come to an end. The diplomatic caution of the President's reply is no doubt admirable, but it contrasts rather curiously with the triumphant tone adopted last year with regard to the English Conjoint Scheme; and one is rather tempted to wonder if it would not have been quite possible for the President to have obtained from the Committee of Reference and the co-operating bodies the information which would have enabled him to reply officially and fully.

The President, by request, asked the representative of the Royal College of Surgeons in Ireland whether the Council of that College still adheres to the Conjoint Scheme agreed to by the Irish Licensing Bodies with the exception of the Queen's University; and a reply was obtained to the effect that the Council of the College remained pledged to the scheme, but that during the past year the question had fallen into abeyance.

The letter received from nine lecturers on materia medica and therapeutics in the medical schools of London, calling the attention of the Council to "the unsatisfactory condition under which, owing to certain existing regulations, they are compelled to teach the above-named subjects," expressing their opinion that pharmacy and therapeutics ought to be taught at different periods of the medical curriculum, and asking the aid of the Council in the matter, was directed to

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be sent to the licensing bodies, together with the recommendations passed by the Council on the subject of it in 1871.

Some formal resolutions were passed, and the session of 1875 was brought to a close, after a very long sitting, on the ninth day.

THE ADMISSION OF WOMEN TO THE MEDICAL PROFESSION.

The subject of the debate which was commenced in the Medical Council on Thursday, the 24th ult., was the most important of the many subjects brought before the Council during the session. It will be remembered that Mr. Simon had, by direction of the Lord President of the Privy Council, addressed a letter to the Medical Council, asking for their opinion on Mr. Cowper-Temple's Bill to provide for the registration of women who have taken foreign degrees in medicine, and on the general question of the admission of women to the profession and practice of medicine. That letter was referred to a committee, "to report on the whole subject," and on Thursday the report of the Committee, which was signed by Mr. Turner as chairman, was presented. It will be seen from our detailed account of the debate that the Committee were not unanimous on some of the propositions in the reply which they recommended to be sent to Mr. Simon's communication, and that Sir Dominic Corrigan, one of the members of the Committee, presented a distinctly different reply, which was, in fact, an alternative report; while Dr. Andrew Wood, another member, presented a second alternative report, based on that recommended by the Committee, but with some omissions and additions not greatly altering its signification; and the matter was still further complicated by a third alternative report being placed on the table by Dr. Risdon Bennett, and by a notice of motion by Dr. Storrar that the Council were not authorised "to represent to the Government the views of the profession on the large social question of the expediency or otherwise of admitting women to practise medicine." Mr. Turner, on moving that the report of the Committee be received and entered on the minutes, spoke at some length in explanation and support of it. He observed that the Committee had had no difficulty as to their right to take Mr. Cowper-Temple's Bill into consideration, or in arriving at a unanimous conclusion on it. But with respect to the second matter before them—the general question of the admission of women to the profession—some of the Committee thought, with Dr. Storrar, that the matter did not come within the province of the Council; but the majority were of opinion that, though this was technically correct, yet, as the Council had been directly asked by a department of the Government to take the matter into consideration, they were bound to say something on it. Then, alluding to Sir Dominic Corrigan's motion, he said the Committee felt that to refer the matter to the licensing bodies would be practically to shelve it for a year; and, moreover, the opinion of the Council, not that of the profession, had been asked for. The next point considered was, Should women be admissible to the profession? After much deliberation, the Committee had agreed to recommend the paragraph beginning "After due deliberation," and ending "must be assumed." Speaking for himself, he thought that some facts had been too much ignored in connexion with this question. He desired not to say a word to offend or depreciate the opposite sex, but it was idle to talk as if man and woman were alike. Woman was less strong physically than man; the average difference in weight of the brain in the sexes was 10 per cent. in favour of the male; and this implied less capacity for concentration of thought and prolonged exertion; and in woman the emotions preponderated over the judgment. Woman was therefore less fitted for the duties of the medical profession, which called for the exercise of the logical faculties. He then referred to the recommendations of the Committee as to the way in which women should be admitted to the profession, supposing that Government should decide in favour of admitting them. The Council having decided to receive the report, it was proposed that they should resolve themselves into a committee for its consideration; and then Dr. Storrar moved as an amendment that the discussion of the question was beyond the functions of the Council. His opinion as to the proper functions of women did not differ essentially from Mr. Turner's, but he opposed the report because he held that the Council had no authority to discuss any question outside registration and education, and the formation of a British Pharmacopœia; he thought also that the question was a thorny one to meddle with. If the Council decided for the admission of women, they would give offence to the examining boards: while if they decided against it, they would be accused of trades-unionism. Dr. Rolleston said that between 1858 and 1875 the licensing bodies had taken no step at all in this matter, while during that time the subject had been forced by powerful writers on the attention of the Legislature, and public opinion had been declaring itself. The Legislature was being incited to move, and the Government had wisely come to the Council for advice; and he thought the Council ought to give it. He held it would be a slur on the Council if they failed to consider the question and give their opinion respecting it. He warned the Council against practising the art of "how not to do it," and would remind the representative there, and the members of the University of London, that, had not the older universities insisted on practising that art, the London University would not be in existence. It had been established because the older universities refused to do justice to one-half of the males of this country, and now some persons were refusing to do justice to one-half of the human species. He then proceeded to speak on the question of the fitness of women for this profession and other professions, though this question was not then immediately before the Council. "The question had been tried elsewhere. We had had such persons as Queen Elizabeth and Queen Caroline; he meant the first, not the second. And now we had at this time Queen Victoria on the throne of this country. Nevertheless, women were totally unfit! Their brains were smaller (Professor Turner had omitted to add that their bodies also were smaller) than those of men. We knew that there was a good deal of relation between the size of the body and the size of the brain."

We fear that severe critics may call some of this "tall talk," and object at any rate that it would have been more fittingly produced at a later period in the debate. But we have heard that the fairer sex have a special gift, or knack, of wandering away from any subject they may have before them, and talking about something else; and how could their champion pay them a more delicate and subtle compliment than by the adoption of one of their characteristics? Besides, most men, since Adam, have had more or less of the woman in them.

Sir William Gull was strongly opposed to the amendment. He thought Dr. Storrar had taken too narrow a view of his duties as a representative—a view which, as Dr. Rolleston had said, made him rather a delegate than a representative; but the members of the Council were sent there to give counsel to the whole country with reference to medicine and medical practice; and they had not only to form and keep the Register, but to determine its extent, and the conditions under which people should be placed upon it. If the public said, "We wish to consult women," the Council were bound to say under what conditions women might be consulted safely.

Dr. Quain agreed with every word Dr. Storrar had said as to the matter being *ultra vires*, but he must vote against him, because it was expedient that they should answer the question

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put to them by the Government; while Dr. Andrew Wood would vote against Dr. Storrar's amendment because he disagreed with every word Dr. Storrar had said. He was no delegate, but was at perfect liberty to deliberate on all matters brought before the Council. They were a representative body, and were all medical men sent in the interests of the public, in order that the public might get the best medical advice that could be got on public questions. These be "prave 'orts"; and by a large majority the Council adopted them, and rejected Dr. Storrar's motion.

Sir Dominic Corrigan then moved his amendment, which proposed an alternative form of the reply to be made to Mr. Simon's letter, and which would in effect delay any real answer while the licensing bodies were being consulted with regard to the main question. Dr. Andrew Wood, in opposing the amendment, observed that nothing had excited so much attention for many years as the subject of female doctors; and held that they would be stultifying themselves if they told the Privy Council that they had not had time to consider a question which, in fact, they had been considering for years. Sir William Gull said the question was a question for the public, the Medical Council, and the Government, not for the corporations or the universities; and the amendment was negatived.

Dr. Andrew Wood saying that he should not then propose the amendment which stood in his name, the Council went into committee on the report, and, after not a little time had been spent in comparing certain parts of it with the corresponding passages in the alternative replies, and in making verbal alterations, Mr. Turner moved, and Sir William Gull seconded, the adoption of the paragraphs marked (*a*), (*b*), and (*c*), which express chiefly the opinion of the Council that there are certain peculiar hindrances, moral and physical, to the successful pursuit of medicine by women. Dr. Parkes and Dr. Bennett moved the omission of the paragraphs, and, after a long discussion, their amendment was carried; but when it came to be considered as a substantive motion, the Council decided that the report should be remitted to the Committee, and added Dr. Bennett to the Committee.

It may be observed here that there was no difference of opinion in the Council as to the reply to be made about Mr. Cowper-Temple's Bill; and we need say no more about the paragraphs of the report referring to that subject save to remark that, in the amended report brought up by the Committee on Friday, the position occupied in it by those paragraphs had been altered, and that they were agreed to. But on paragraphs (*a*), (*b*), and (*c*) of the original report great difference of opinion prevailed, and on the subject they referred to—viz., the fitness, or otherwise, of women for the pursuit of the medical profession—the fight was long and sturdy: while the fact that the gage thrown down by the Professor of Anatomy in the University of Edinburgh was taken up by the Linacre Professor of Anatomy in the University of Oxford is highly suggestive of tolerance of opinion on the subject.

When the whole Council met in committee on Friday again to consider the amended report, paragraph (*a*), which simply declared that the Council "had felt bound to consider the whole question of the admission of women to the medical profession," and in which some verbal alterations only had been made, was proposed for adoption; and after some discussion, and the rejection of an amendment to substitute for it a paragraph on Mr. Cowper-Temple's Bill, agreed to. Paragraph (*b*) had been toned down to conciliate opposition. It still stated that "the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties which cannot be safely disregarded"; but the words "and some of which cannot be obviated" were omitted. While paragraph (*c*), which expressed a belief in the existence of "peculiar hindrances, moral and physical, to the successful pursuit of medicine by women," had disappeared altogether. Still, after Mr. Turner and Sir William Gull had moved the adoption of paragraph (*b*), a long discussion followed. Dr. Parkes and Dr. Pyle moved that the words "which cannot be safely disregarded" should be left out, and the words "but the Council are not prepared to say the women ought to be excluded from the profession" should be inserted in their place.

Dr. Sharpey welcomed Dr. Parkes's amendment as exactly expressing his views; he would dissuade women from entering the profession; but dissuasion was one thing, and denial another.

Dr. Andrew Wood forcibly and eloquently represented the views of those who are most positively opposed to the admission of women to the profession. He admitted that every suitable field of exertion ought to be open to women, but he held that they ought to be excluded from this particular field; it is unsuitable to them, and they are peculiarly unfitted for it. He had always thought that it was an axiom that woman had a particular sphere, but those who in Edinburgh ventured to speak of woman's sphere were sneered at, and told that woman had no sphere less than that of man. That he held to be utter nonsense. He disputed the statement that women demanded female doctors; and believed that of all the professions, that of medicine was the least adapted to them. Believing that, he held it would be wrong to encourage or help them to enter it, and wished to keep them from the delusion, mockery, and snare now before them.

Dr. Humphry, in a very able and admirable speech, supported the amendment. He had always felt that the profession of medicine was the occupation least suitable for women; but the question was not whether they should be encouraged to enter it, but whether they should be excluded from it. He spoke feelingly of the "disagreeables" and annoyances of medical practice, and said that he should hesitate much before inducing even a son to become a doctor; but he should be unwilling to exclude any class or any sex from opportunities of doing good. He did not believe, however, that there was any real mental disqualification on the part of women for medical practice, and thought it was not easy to say that the practice of medicine by a woman towards a man was a greater moral evil than the practice of medicine by a man towards a woman. He felt that, as a matter of public justice, they ought to state seriously their own views, without reference to majorities of any kind; and his own conclusion was, that, as representatives of the medical profession, they ought to hesitate to say that women ought to be excluded.

Sir Dominic Corrigan advocated the admission of women for a very Irish reason. He remembered "attending a board meeting in Ireland many years ago, when some grievance had existed, and it happened that one of the persons concerned in the agitation lost all command over himself, and he dashed his papers on the table, and said, 'Will ye give me nothing to fight about?' If the obstacles in this case were removed, there would be nothing to fight about, and the subject would die out." And, Irish-like, he added that "it might seem inconsistent, but though he advocated the admission of women, he would never consent to meet one of them in practice."

The debate was shortly after adjourned.

When it was resumed, on Saturday, Dr. Rolleston judiciously alluded in terms of high praise to "the directness with which everybody had discussed the question," and especially to the straightforwardness and true eloquence of the speeches made the day before by Dr. Andrew Wood and Dr. Humphry; and then he argued warmly in advocacy of "female doctors," and desired those who talked of difficulties and disabilities, and of our being in the midst of a great revolution and a great

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change, to meditate on the following parable or apologue:—"A man was taken by his enemies, and, having been blindfolded and led out, a rope was put into his hands; he was then swung into the air, and told to hold on to the rope because there was an abyss beneath him. He held on for many hours, his muscles became cramped, and his ligaments stretched, till he, in fact, really tasted the bitterness of death; the bandage was then removed from his eyes, and he found his feet within two inches of the ground."

Dr. Thomson spoke at considerable length in favour of women being allowed to enter the profession, as so many desired it, though personally he did not much like it, and did not shut his eyes to the difficulties which presented themselves.

Sir William Gull observed that it was entirely a personal question for women themselves, whether they were fit, or had a mind to become doctors. They were not expressing an opinion as to whether women should enter the profession; if so, he should vote against it; but they were only expressing an opinion that there were certain things in the medical profession as to which it would be better for women to deal with women. It was only a permissive opinion that they were giving, and that opinion must be given with a slight *caveat* that the entrance of women is rather dangerous. The history of this question, as seen in America, taught us something about that, and he therefore hoped the paragraph would be accepted as it stood.

Mr. Turner thought the words proposed to be admitted were of great importance; if the question was surrounded with special difficulties, "these could not be safely disregarded," and the Council ought to point this out to the Government.

Dr. Parkes also spoke in reply; and then Sir William Gull suggested that the words Dr. Parkes proposed might be added to the end of the paragraph as it stood. This proposition, after some discussion, was accepted, and the paragraph with the added words was carried by fourteen votes to seven. But when it was put as a substantive motion, Dr. Andrew Wood moved to substitute for it a long paragraph speaking of the toils, anxieties, perplexities, responsibilities, and dangers attendant on medical practice; of the unfitness of women to face these; and stating that the Council did not recommend that the difficulties in the way of their entering the profession should be removed. Dr. Quain seconded the amendment, but it was negatived by a large majority, and Dr. Parkes's motion was carried.

The remainder of the report was adopted without any very serious opposition or prolonged discussion; though some amendments were moved and rejected, some verbal alterations were made, some clauses were re-arranged, and a good deal of time was consumed in this way. But the end was arrived at, and the report, as amended, was adopted by the Council.

Mr. Lowe, on a late convivial occasion, when returning thanks for the House of Commons, spoke of the wonderful fidelity and accuracy with which that body represents the opinions of the country at large, even when his own party is in the cold shade of the Opposition; and we cannot but think that on the occasion of this debate on the admission of women to the medical profession, the Medical Council, though not elected by, and only indirectly representing, the profession at large, have with great truth and accuracy represented their opinion on the question. We believe that the majority of the profession would agree "that the study of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties, which cannot be safely disregarded; but that they are not prepared to say that women ought to be excluded from the profession"; and that they also would stipulate that, if women are to be admitted to the profession, they shall be thoroughly educated for it, and educated apart from males.

THE WEEK.

TOPICS OF THE DAY.

Delay in the holding of inquests is an evil likely to be attended with serious results. There can be no doubt that the sooner an inquest is held after death, the better, and it is manifestly the duty of a coroner to make arrangements by which unnecessary delay should be avoided. At an inquest held on Monday at the Royal Free Hospital on the body of a man who died from injuries received on the previous Wednesday morning, the body was very much decomposed. Mr. Deputy Tegg, who was on the jury, inquired why so long a delay had occurred in the holding of the inquest. The only explanation given was by Mr. Murray, the coroner's officer, who stated that the lists were full up to Monday, and he could not appoint an earlier day. This may be all very correct, but it is far from satisfactory. What is the use of a deputy coroner unless he officiates in cases of emergency? His appointment was not allowed by the Lord Chancellor merely for the purpose of being a convenience to the coroner. Under these circumstances we trust we shall hear no more of unnecessarily delayed inquests. The Coroner's Court must not become a focus of disease. We are glad to perceive that Mr. Tegg, who is one of the oldest governors of the Hospital, will bring the subject before the notice of the next meeting of the committee of the Hospital.

The soldiers' huts on Woolwich-common, in which diphtheria was a short time ago so prevalent and fatal, are to be pulled down, and six blocks of model residences for married soldiers are to be erected on the site. The six blocks will provide accommodation for ninety-six families—almost as many as were removed from the huts to arrest the spread of the diphtheria epidemic. By only the most stringent measures has the epidemic been overcome since the removal of the families to the Red Barracks. Isolation of the patients has been strictly enforced. The large wards, which usually contained sixty or eighty hospital beds, are now occupied each by one family only.

At a general meeting of the subscribers to the Glasgow Royal Infirmary, held on the 22nd ult., the managers were authorised to apply to the Crown for alterations of the charter of the institution, and for additional powers. Amongst other objects, they desire to obtain the power to establish a school of medicine in connexion with the Infirmary, the lectureships in which shall be thrown open to all who may have the ability and inclination to teach. Four gentlemen have already received the sanction of the managers to deliver lectures during the ensuing winter, on practice of medicine, surgery, forensic medicine, and pathology. The lecturers are to receive no endowment.

The annual meeting of the trustees of Anderson's University was held on the 22nd ult., at which it was intimated that a legacy of £1000 had been bequeathed to the managers, for the foundation of three bursaries in connexion with anatomy, botany, and natural philosophy. A very satisfactory report was made regarding the attendance at the various classes of the institution, the number of enrolled students having been as large as 2275.

The energetic steps taken to establish a system of teaching swimming among the working classes on an extensive scale will, we hope, be successful. There are many other than its hygienic advantages to recommend it to public approval. Sir Charles Reed, the Chairman of the London School Board, presided at a public meeting held at the Mansion House on the 25th ult., on the subject, at which resolutions were unanimously adopted that swimming ought to be taught in all our public schools, and that funds should be raised for carrying out the objects of the meeting.

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We have been assured of the truth of the report, which we confess is scarcely credible, that the *employés* of the Nine Elms goods station of the London and South-Western Railway are terribly overworked, and not even paid extra for it. It appears that the men have sometimes to labour as many as eighty-seven hours and a half in six days, and that no allowance is made for the extra twenty-seven and a half hours' work. Most of this labour is performed during the night, by artificial light, the men going on duty at five o'clock in the evening, and working until five, six, and sometimes seven o'clock next morning. The long hours of labour and the short hours of broken sleep during the day must speedily tell upon the health of the men. We are not surprised to learn that a movement is on foot among them to obtain, if possible, a reduction in the working time. Four of the great railway companies lately adopted a system, according to which a day consists of ten hours' ordinary work, nine hours' night work, or eight hours' extra work; but the London and South-Western Company are said to have refused to make a similar arrangement with their *employés*. It is much to be hoped that the directors will, in the interest of themselves and of the public, as well as of the men, reconsider their decision, and grant a request which must be considered perfectly reasonable.

The Commissioners appointed to inquire into the subject of vivisection, and to report what measures, if any, it may be necessary to take in respect of any such practice, are—Viscount Cardwell, Baron Winmarleigh, Right Hon. W. E. Forster, Sir J. B. Karslake, T. H. Huxley, John E. Erichsen, and Richard Holt Hutton, Esqs.

STATE MEDICINE.

THE concluding lecture of Surgeon-Major de Chaumont's course on this subject was delivered at Apothecaries' Hall on Saturday, June 19. The topics considered were—the prevention and propagation of disease; epidemics; and the value and importance of statistics bearing on the public health. It is obvious, said the lecturer, that the efficacy of the methods employed for the prevention of disease depends upon our knowledge of its origin and modes of propagation; and, failing such knowledge, upon the view or theory which is held. Thus, a disbeliever in contagion would probably think isolation unnecessary; while a man who rejected the possibility of water conveying disease would look with indifference upon the pollution of the water-supply. On the whole, however, we find that, whatever view may be held about the actual *modus operandi* of disease, all persons are substantially agreed that general unhygienic conditions are favourable to it; and it must be admitted that if such conditions can be avoided, more than half the battle will be won. But there is still something beyond, and we must view the possibility of the introduction of morbific poison, even when purity and plenty are attained in the matter of air and water. Let it be granted that there is such a thing as a communicable *materies morbi*, and the question is then reducible into disinfection and isolation.

The object of disinfection is to destroy the morbific poison, or to suspend its action if its destruction cannot be accomplished. The destruction may be effected by airing, by certain chemical agents, or by wet or dry heat. The first method—that of exposure to currents of air—is slow and uncertain. The chemical agents used in disinfecting are chlorine, nitrous acid, sulphurous acid, chromic acid, and the permanganates, the first three being available for fumigation. However, the best method of destroying morbific poison is exposure to heat. Boiling is very efficacious, but steam under pressure, or a gas disinfecting chamber, is still better. A dry heat of 230° Fahr. effects the object without charring clothes. A disinfecting chamber ought to be provided, and made readily accessible in every district or town, so that there might be no excuse for allowing infected bedding to lie about. The activity of morbific poisons may be suspended by extreme cold, or by carbolic acid and certain other vegetable products; but these agents do not destroy the poison. Minute organisms, such as monads and bacteria, cease to move or reproduce in the presence of such substances; and there is a singular absence of life in tarry water. The most important application of this fact is the well-known antiseptic method of Professor Bristowe.

Thorough cleansing and fumigation ought to be carried out even in the case of diseases not looked upon as contagious. Care should be taken to provide as few resting-places as possible for morbific poisons; yet so little is this considered, that we often find bed and window curtains even in hospitals. Stools ought to be disinfected, and the sick-room carefully dusted, for the emanations from the skin in small-pox, scarlatina, and measles may be disturbed and find a new and appropriate nidus after a considerable period of rest.

As to isolation, it is next to impossible in ordinary dwellings; and, therefore, adequate means for securing it ought to be provided by the sanitary authority. The importation of a single case of disease is often enough to light up an epidemic. The question of quarantine is a difficult one; but, no doubt, if quarantine could be effectually carried out, it would check the spread of disease.

There is one special branch of isolation of great interest and importance, and that is the prevention of venereal disease under the Contagious Diseases Acts, which apply to seaport and garrison towns. Similar measures have been in operation on the Continent for many years, the result being that syphilis was much less frequent there than in our own country before the passing of the Acts. In Malta, an Act of the same kind has been long in vogue under our own government. A temporary suspension of the Act in Malta took place some sixteen years ago, and this suspension was followed by an increase of the disease. A similar Act has been enforced in Calcutta with excellent results, although its application was a matter of great difficulty. In spite of what has been written against the Acts in this country, it can be safely asserted that their operation has been decidedly beneficial. It is only necessary to turn to the army and navy returns to see the necessity for legislative measures on the subject. Returns compiled by Dr. Stuart Balfour show that before the passing of the Acts about one-fourth of all the cases of disease admitted consisted of primary venereal sores and gonorrhœa. The returns for Portsmouth showed 503 cases per 1000 admissions in 1860, and 485 in 1861. Reckoning the value of a soldier's services at £100 a year, the loss of service from enthetic diseases amounts to about £221,000 a year, without including the loss from diseases aggravated or influenced by the venereal class. The testimony of the deadhouse at Netley is grimly significant, hardly a body being opened there which does not show traces of syphilitic influence. The diseases influenced or aggravated by this means are chiefly those of the heart and great vessels, and of the cerebro-spinal system, phthisis, rheumatism, ophthalmia, and skin diseases. Could we stamp out syphilis we should reduce sickness in the army and navy by one-half. In the Crimea, where the possibility of venereal disease was eliminated, sickness almost entirely disappeared.

The lecturer then dealt at considerable length with the objections which are generally urged against the Acts. In answer to the statement that the activity of the legislation tended even to increase the prevalence of the disease, he compared two groups of stations of about the same numerical strength, in only one of which the Acts had been enforced. In that group where the Act had operated there had been a well-marked decline in the number of cases since 1866, when the second and more complete law was passed, as compared with the previous period, although there had been fluctuations, as

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there always must be as long as the disease exists. In the group which had never been under the Act there appeared to be no tendency whatever of the disease to die out. As to the assumed immorality of the Act, he contended that prostitution is no more provided for now than it was formerly; but the Legislature, having recognised the existence of an evil, has taken means to check it, and thus to avert from the community the burden which would be entailed by the infirmity of the sufferers themselves, and the vitiation of their innocent offspring. Those who object to the requisite examination must be very innocent or very disingenuous if they really think that it can have a demoralising effect upon the loose women who are the associates of soldiers and sailors. In answer to those who say that the disease is sent as a punishment for sin, and therefore ought to be left to take its course, the lecturer pertinently asked, in the words of the Great Master, "Were those on whom the tower in Siloam fell sinners above all others?"

As to the origin of disease in general, we are still as far as ever from any real knowledge of it. The vexed question of the existence of germs of disease, or the propagation of disease *de novo*, deserves attention. The majority of observers are in favour of the view that there is a special poison which produces a particular disease, and the evidence supports this idea. Again, it has been urged that the doctrine of evolution may be applied to material organisms; but at no time does the doctrine of evolution ever contemplate the direct change of one organism into another. And another important part of the doctrine is, that when organisms become determinate in a particular direction, and reach a high state of perfection, their chances of evolution become lessened, if not nullified. It would seem, on the other hand, that when the limit of integration is reached, the type tends to decay. It may be thus with the germs of disease, and, probably, from their low type of life, the limit is soon reached. Thus it is not improbable that some diseases will disappear altogether from sheer decay, before we are able to discover their nature; or we may stamp them out before they have had time to decay.

The theory of the spontaneous origin of disease supposes that a disease may be produced from organic germs different from itself, and that these germs may arise directly from combinations of inorganic matter. The advocates of this view, however, among whom Bastian is one of the most noted, can hardly have understood the tremendous nature of the postulates they demand. The simplest process of chemistry, such as the formation of a drop of water from its constituent gases, requires as much force as would furnish a flash of lightning; and yet we have people who ask us to believe that creatures as high in the scale as paramecia, and even acari, can arise spontaneously.

In treating of the subject of epidemics, the lecturer mentioned the recent paper of Dr. Tripe, in which he states that his investigations as to scarlatina seem to point to the existence of periodic waves of disease. If, as Dr. Tripe concludes, scarlatina, like other diseases, is controlled by influences which are not within the scope of ordinary hygienic means, we cannot hope to stamp it out, but must only expect to modify it by care. It may be, however, that the apparent periodicity of certain diseases arises from the fact of a severe epidemic exhausting the supply of susceptible individuals. The scientific history of epidemics is still to be written, but good work is being done in that direction. The science of statistics must be at the base of all inquiries on the subject, and ought to be more generally taught. A proper attention to it would prevent crude generalisations from insufficient data. When facts are honestly collected and sufficiently numerous, averages give a very fair approximation to the truth.

In concluding his discourse, the lecturer expressed a hope that he had been successful, however imperfectly, in putting before his hearers reasons for believing that there was a great future for sanitation, and that, if the State did its duty, this subject must be hereafter one of its chief cares.

THE POLLUTION OF RIVERS BILL.

It would seem as though the Marquis of Salisbury had been utterly taken by surprise at the immense amount of consternation sown broadcast over the country by his Bill for preserving the rivers from pollution; and yet the tone adopted by all the deputations which have waited upon him must have impressed upon his mind the absolute necessity which has long been felt amongst all classes for legislation of some sort on this subject. It is with somewhat mixed feelings, therefore, that we now learn from the Marquis's speech of the other evening that a portion of the Bill is to be abandoned; it is satisfactory, however, to find that there is every prospect of the measure being passed this session, even if it be in only a modified form, and we shall be much astonished if steps are not taken to enlarge its provisions in subsequent sessions. The reason given by the Marquis for curtailing his Bill is the pressure of business which exists in the other House, and which would jeopardise its passing before the rising of Parliament, unless considerably reduced in its proportions. With respect to the necessity for keeping solid matters out of rivers, the noble lord said that very little difference of opinion existed, and the Government had been urged to proceed at least with that portion of the measure. With regard to the question of sewage, it was not one of such great difficulty or complication; but there were corporations and other large bodies to deal with, and the offence complained of sometimes arose from injudicious attempts to improve the public health. The requirements of the Bill, however, would be continued, and it would be provided that the casting of sewage into rivers should, after a limited time, cease, and that proper means should be taken to purify it. The third portion of the Bill, which relates to the pollution of rivers from mining and manufacturing districts, is the most difficult question to deal with, and it is this portion which it is now contemplated to abandon, at least for the present. The terrible pollution cast into our rivers can only be corrected by special schemes adapted to each river and each drainage area, carried out by some authority, upon whom would be placed the same obligation which was imposed some years ago upon the Metropolitan Board of Works—of providing a general plan for the purification of the rivers under their charge. Meanwhile it would be made unlawful to send mining or manufacturing pollutions into rivers through any new channels; and had such prohibition been passed twenty years ago, much of the evil now existing would have been entirely avoided. The Marquis also specially announced that, so far from wishing to convey the idea that those who now polluted rivers were to be allowed to do so with impunity, he desired to guard against any argument in the future that vested interests had been accepted by Parliament and could not be touched. It was proposed to place on record a special protest against any contention of that nature. His lordship concluded his observations by observing that he was sure that any diminution of the present evil, even though small and limited in amount, would be an appreciable good to the people, and one which Parliament ought not to despise; and with these sentiments we cordially concur.

ROYAL COLLEGE OF SURGEONS.

The annual election of Fellows into the Council of the College took place yesterday, the 1st inst. There were three vacancies caused by the following retiring members, who offered themselves for re-election—viz., Messrs. Prescott Hewett, Surgeon-Extraordinary to her Majesty, Vice-President of the College, and Surgeon to St. George's Hospital; Henry Spencer Smith, Senior Surgeon and Lecturer at St. Mary's Hospital, and a

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member of the Court of Examiners of the College; and John Birkett, also a member of the Court, and Consulting-Surgeon to Guy's Hospital. The new candidates were Messrs. John Cooper Forster, Senior Surgeon and Lecturer at Guy's Hospital; Edward Law Hussey, Senior Surgeon to the Radcliffe Infirmary, Oxford: and Alfred Smee, F.R.S., Surgeon to the Bank of England. The election, which was by ballot, was not brought to a close until half-past four, when the President, Mr. Le Gros Clark, F.R.S., declared that the choice of the Fellows had fallen on Messrs. Hewett, Forster, and Birkett. The numbers polled by the respective candidates were as follows:—Mr. Prescott G. Hewett, 127, including 5 plumpers; Mr. John C. Forster, 110, 5 plumpers; Mr. John Birkett, 109, 1 plumper (Mr. Birkett did not vote); Mr. Henry S. Smith, 97, 32 plumpers; Mr. Alfred Smee, 30, 13 plumpers; Mr. Edward L. Hussey, 29, 3 plumpers. In the evening the Fellows dined together at the Albion Tavern, Surgeon-General Longmore in the chair, supported by several distinguished guests. As showing the increasing interest taken in the election, it may be mentioned that Fellows attended from distant provincial towns, as Messrs. Green, Bristol; Wiblin, Southampton; Archer, Birmingham; Barrow, Ryde; Bartrum, Bath; Benfield, Leicester; Carr, Gomersal; Carter, Pewsey; Cattlin and Rugg, Brighton; Ceily, Aylesbury; Crosse, Norwich; Fletcher, Manchester; Hawkins and Hitchman, Cheltenham; Horsfall and Jessop, Leeds; Hutchins, Rochester Lee, Salisbury; Longmore, Southampton; Lund, Manchester; Lush, Weymouth; Manby, Wolverhampton; Maurice, Marlborough (2); May, Reading; Nankivell, Chatham; Orsborn, Southampton; Owen, Oxford; Pentall, St. Leonard's; Raven, Litcham; Scott, Aughnaclay, co. Tyrone; Shaw, Bedford; Taylor, Birmingham; Thomson, Clifton; White, Oxford; Wood, Shrewsbury; Woodman, Ramsgate; etc.

THE SUMMER DRILLS AT ALDERSHOT.

The forces selected to take part in the summer drills at Aldershot were assembled in camp by the 26th ult., and the standing orders for their guidance have been made public. From these it would appear that the instructions to medical officers are as follows:—1. Regiments about to take part in the manœuvres to be carefully inspected, so that none but robust men take the field. 2. The station-hospitals at Aldershot will be used as base hospitals for the sick of the whole force. 3. Two light field-hospitals on the following plan will be provided for each division. For one hospital, four bell tents (with high walls) for sick; one bell tent for medical officers; one for surgery, etc.; one for hospital servants and Army Service Corps men; four ambulance waggons, eight horses; one Army Service Corps waggon, four horses; one water-cart, two horses; total fourteen horses. 4. A surgeon-major to be appointed as principal medical officer of each division. One surgeon to be attached to each hospital. One non-commissioned officer and six privates of the Army Hospital Corps will do duty under each principal medical officer. 5. The hospitals of each division to be entirely under the control of the principal medical officer of the division. 6. Sick to be sent into station-hospitals, Camp Aldershot, without delay, and not to be retained in the field longer than absolutely necessary. It is also ordered that medical officers attached to field-hospitals are to wear forage caps and patrol jackets; and their instrument cases are to be carried and worn over the left shoulder, in order that they may be at once distinguished, in the event of their services being required.

UNITED HOSPITALS ATHLETIC SPORTS.

The annual competition for the Challenge Shield and prizes offered by the United Hospitals Athletic Club, took place on Saturday last at the Lillie-bridge Grounds, West Brompton. The weather was very fine, and a large number of spectators were present, among them being many ladies. All the events were well contested, but in some the entries were not so numerous as on former occasions. The first contest was for the One Hundred Yards Challenge Cup, which was won by G. R. Sanders, of St. Bartholomew's; time, 10¾ seconds. The One Hundred and Twenty Yards Hurdle Race was won by G. R. Turner, of St. George's, in 18½ seconds; Reader, of Guy's, taking second honours. The latter took the first prize in the High Jump, clearing 5 feet 1½ inches; Chapman, also of Guy's, being second with 5 feet 1 inch. The Mile Race fell to King's, whose representative, C. B. Lewis, won easily in 4 minutes 53 seconds. The Half-Mile Race was a splendid struggle between Jefferson, of King's, and Jennings, of St. George's, the former winning by 3 yards, in 2 minutes 12 seconds. In Putting the Shot, Guy's got first and second places, Stevenson doing 33 feet 3½ inches, and Gray 33 feet 1 inch. The Quarter-Mile Race was finely contested, E. H. Howlett taking first place, and G. R. Turner, of St. George's, second. The Long Jump fell to Brumell, of St. Bartholomew's, who cleared 19 feet; Gravely, of Guy's, being second with 18 feet 10 inches. The Two-Mile Race was won easily by L. W. Swabey, of St. George's; and the same hospital scored another victory in the Two Hundred and Fifty Yards Race, E. F. Wright beating Howlett in the final heat by just half a yard. St. George's Hospital having thus scored the largest number of events, was declared the winner of the Champion Challenge Shield, which it will hold until next year's meeting. Since the shield was first contested for, Guy's Hospital has won it three times, King's three times, St. George's twice, and St. Bartholomew's once.

THE ARMY MEDICAL DEPARTMENT.

The Session of 1875 is hurrying on very rapidly to its close, and still Mr. Hardy is considering the case of the Medical Officers of the Army. Some time ago we ventured to predict that, with all his Parliamentary duties to attend to, the Secretary of State for War would find it difficult to arrange the various grievances under which the Medical Department is labouring, and we fear that this question, so important to a large body of officers, will have to be postponed for a settlement until the forthcoming recess. This, if unavoidable, is to be regretted, as the next examination for appointments in the Medical Department of the Army is advertised to take place in August; and, with the uncertainty which hangs over the future of the army medical officer, it is hardly likely that many candidates will be found willing to come forward until something definite is promulgated by the authorities on the subject. It must, however, be cheerfully conceded by the most impatient that if the delay on Mr. Hardy's part proceeds from a desire to settle the affairs of the Department on an equitable and lasting basis, there would be no gain in hasty legislation; and that some ameliorative and beneficial alterations are intended, which take time to mature, we think can scarcely be doubted.

SALUBRITY OF RICHMOND.

Dr. Letheby, in his evidence given at the Richmond water inquiry on February 12 last, stated that, assuming the population of Richmond to be 16,000, the average number of deaths for the year 1873-74, according to Dr. Rowland's figures, would be 283·5, equivalent to 17·7 per 1000, whilst the death-rate in all England was 22·5 per 1000, in London 24·5 per 1000, in the chief towns of England 24·8, and in the sub-districts (the healthiest parts) 19·7. The proportion of zymotic diseases (fever, cholera, diarrhœa, dysentery, etc.) in Richmond was 2·5 per 1000 of the population; in all England, 5·086. The proportion of zymotic deaths to other deaths in Richmond

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was 144·8 per 1000, whilst in all England it was 240·286, in London 242, and in seventeen of the chief towns in England 247. So that the mortality of Richmond was considerably below that of England generally.

DR. FLEETWOOD CHURCHILL, OF DUBLIN.

Our distinguished Irish *confrère* has retired from the active practice of his profession, to which he has so long been an ornament. He seeks for the repose which many years of unceasing toil have earned, in a country home far from "the busy haunts of men"—Ardtrea Rectory, Stewartstown, co. Tyrone. Dr. Churchill's retirement was graced by a generous gift to the King and Queen's College of Physicians, on his own part, and on that of his son, Dr. Fleetwood Churchill, jun., of the valuable obstetrical library he had collected during his lifetime. The President and Fellows, recognising the value of the gift and the generosity of the donors, have resolved to place a portrait of their ex-President and Fellow in the College Hall, Kildare-street, Dublin.

SANITARY MEASURES IN MARYLEBONE.

Dr. Whitmore, Medical Officer of Health for Marylebone, in his last monthly report observes that "there are two difficulties which not unfrequently interpose in the management of epidemic infectious diseases. The first, and perhaps the most formidable, arises from the careless and reckless habits of the poor and destitute; and the next, from the selfishness of a certain class of persons who, in providing for the recovery of their own sick and infected children, utterly disregard the safety of the public at large; for this latter reason, I am thankful to the Vestry for having sanctioned the distribution of posters and handbills throughout the parish, calling attention to the provisions of the 'Sanitary Act,' which prohibits the removal of infected persons in public conveyances, and the otherwise exposure of such persons, together with the removal of infected bedding, clothes, etc. After this notice, should any one of the provisions of this Act be infringed, and the offender discovered, I trust the Vestry will prosecute him with all the rigour which the offence merits."

CHARING-CROSS HOSPITAL.

The annual distribution of prizes at this medical school took place on Thursday, the 24th ult. Admiral Strange occupied the chair, and there was a fashionable attendance of the friends of the school, and others. In the Dean's report mention was specially made of the large additions to the Hospital and medical school. Fifty new students had been enrolled during the academical year. The Llewellyn Scholarship was gained by Mr. T. B. Conolly, the Governors' Clinical Gold Medal by Mr. Walter J. Brookes, and the Entrance Scholarships by Mr. Rowbotham and Mr. H. Hoole. The chairman, having awarded the prizes, delivered an address to the students full of counsel and encouragement. Dr. Fayrer, who seven-and-twenty years ago was a student at Charing-cross Hospital, then proposed a vote of thanks to the chairman, and the proceedings terminated.

ARTISANS' DWELLINGS.

A very satisfactory report was presented to the thirty-first annual meeting of the Society for Improving the Dwellings of the Labouring Classes. The Artisans' Dwellings Bill of the Government was described as an important step in the right direction. The Society had eight properties in different parts of the metropolis, all of which were well let, and the rents kept duly paid, producing a rental of upwards of £5000. The mortality amongst the tenants during the past year had been twenty-three per 1000, which was less than the average mortality of the metropolis.

DUBLIN REGISTRATION DISTRICT.

We believe that the Registrar-General for Ireland has lately subdivided one of the South Dublin City Dispensary Districts for registration purposes. The district in question had some time ago been subdivided for medical and sanitary purposes, and this fact lends importance to the present change, which will do away with the last remnant of divided responsibility on the part of the medical officers. It is to be hoped that this improvement, which is likely to be equally advantageous to the public and to the medical officers, will shortly be extended to the other districts of Dublin. If it be so, the working of the machinery for medical, sanitary, and registration purposes will be much more satisfactory, one competent medical man being head of the organisation in each sub-district of the city.

IRISH LONGEVITY.

The Irish mortality returns, made up for the year 1872, record the deaths of 368 males and 481 females registered as ninety-five years old or upwards when they died. Of these, 303 were persons stated to have reached the age of one hundred years and upwards—135 males and 168 females. Seventy-seven of the men and 100 of the women in every 10,000 are stated in the returns to have been over ninety-five years of age. The sanitary condition of several of the districts is extremely defective, notwithstanding these instances of longevity.

NEW SICK ASYLUM.

Sir Sydney Waterlow, M.P., opened, on the 24th ult., the new asylum for the sick poor erected on the site of the old Strand Union Workhouse in Cleveland-street, Fitzroy-square, at a cost of upwards of £32,000. The building will accommodate 281 patients, and is the second built by the managers of the Central London Sick Asylum District. Patients will be received from the following Unions, viz.:—Westminster, the Strand, St. Giles's and St. George's, Bloomsbury, and St. Pancras.

DISCUSSION ON PUERPERAL FEVER AT THE OBSTETRICAL SOCIETY.

This debate will be resumed and concluded on Wednesday next. We believe that Dr. Fordyce Barker, of New York, will speak in favour of the specificity of puerperal fever, and that Mr. Spencer Wells will reply on the whole discussion. It is expected that Dr. Newman, of Stamford, will show the uterus of a woman on whom he performed Cæsarian section some years ago with successful result.

PARLIAMENTARY.—POLLUTION OF RIVERS—PUBLIC HEALTH.

In the House of Lords, on Thursday, June 24,

The Marquis of Salisbury opened the discussion in committee on the Rivers Pollution Bill. He feared that, in consequence of the complicated nature of some of the provisions of the present Bill, it would be impossible to pass it at such a late period of the session. Other provisions were of such importance that it was desirable to legislate upon them without further delay. He proposed to discuss the Bill under three heads. First, the question of keeping solid pollution out of rivers. Persons in all parts of the country were strongly in favour of having that portion of the measure proceeded with. A great part of the solids was not absolutely thrown into the rivers, but, having been placed on the banks, was swept into them by the floods. This evil would not be remedied by the Bill. The second question was that of sewage, which was more complicated, as corporations invested with special powers would have to be dealt with. He proposed that they should cease to pollute the rivers after a limited period, or take means to purify their sewage. He hoped so much of the Bill would become law this session. The third question was how to deal with the mining and manufacturing interests, the first proposals of the Government on this head having been almost universally condemned. As a body, the manufacturers created the evil; and, as a body, they must correct it by conveying the polluted water by special sewers to some distant place. In some places, dye-works, etc., obtained their

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water directly or indirectly from the river, depriving the owners lower down of the natural force of the stream; so that it would be necessary to have a separate system of contract for each river. He therefore proposed to defer this portion of the Bill till next session. Where the pollution came by a channel newly created this year, it should be unlawful. He thought the county court was capable of dealing with questions as to sewage.

Earl Granville thought the noble marquis had done right in giving up the attempt to pass the Bill in its present shape through both Houses of Parliament, and he suggested that before the measure was reprinted the amendments should be carefully reconsidered, in order that the passing of it by that House might not be followed, as was sometimes the case, by abandonment immediately afterwards in another place.

On Monday, June 28,

The Duke of Richmond moved the second reading of the Public Health Bill. He wished at the outset to divest the minds of their lordships of the idea that it professed to be a permanent settlement of sanitary legislation; it merely proposed to amend and consolidate the existing laws. It contained 340 clauses. He referred to the various Acts which had been passed relating to public health, especially referring to the confusion arising in consequence of the defective rendering of these Acts in different localities. In some districts the board of guardians was the authority for the removal of nuisances, and the vestries for sewers and the supply of water. It was also found difficult to distinguish between the functions of urban and rural sanitary authorities. The salient points of the Bill related to sewerage, drainage, scavenging, cleansing, water supply, nuisances, offensive trades, infectious diseases, and the prevention of epidemics. Part 4 related to highways, streets, buildings, public pleasure-gardens, markets, slaughter-houses, and police regulations. Part 5 related to contracts, purchase of land, by-laws, officers, and mode of conducting business; Part 6 to rating and borrowing; Part 7 to legal proceedings; and Part 8 to alteration of area and union of districts for constituting the sanitary authority.

After a brief discussion, the Bill was read a second time.

The Commons' amendments to the Lords' amendments of the Artisans' Dwellings Bill were considered and agreed to.

In the House of Commons, on Monday, June 28,

Mr. Sclater-Booth, replying to Mr. Dillwyn, said the salary of £2000 was secured to the Medical Officer of the Local Government Board by Act of Parliament, he having enjoyed that as Medical Officer to the Privy Council, and he still performed some duties there.

After a short conversation the vote was agreed to.

On Tuesday, June 29,

The Lord Advocate, replying to Mr. Holms, said that in 1867 he introduced a Bill for the purpose of consolidating the laws relating to public health in Scotland. The Bill passed into law, and had been in operation since that time, and its working had, he believed, given very considerable satisfaction. It was, therefore, quite unnecessary to propose another Consolidation Bill. The Chancellor of the Exchequer had authorised him to introduce a Bill containing a single clause, enabling local authorities in Scotland to borrow money from the Public Works Loan Commissioners for sanitary purposes at as low a rate of interest as could be obtained by local authorities in England and Ireland.

THE Hospital Sunday collection in Victoria, in April last, amounted to £5400.

THE PEMBROKE TOWNSHIP, DUBLIN.—On Friday, June 25, Captain Robinson, one of the Inspectors of the Local Government Board (Ireland), held an inquiry with respect to a memorial presented to the Board by a number of the residents of Sandymount—a low-lying and populous suburb of Dublin, situated close to the sea, and in the above-named wealthy township. The memorial complained of an open sewer which received the drainage of a large district, and ran for a considerable distance beside the Kingstown Railway line, near Sydney Parade Station. Several witnesses were examined in support of the memorial, including Dr. Grimshaw, Diplomate of State Medicine, University of Dublin, who gave very strong testimony as to the nuisance and its possibly hurtful influence on health. Captain Robinson announced that the evidence would be forwarded, with his report, to the Local Government Board, who would adjudicate upon it.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JUNE 2.

W. O. PRIESTLEY, M.D., F.R.C.P., President, in the Chair.

THE following are the proceedings of this meeting, apart from the discussion on Puerperal Fever already published:—

The gentlemen recently admitted Fellows of the Society are—Edwin Hollings, L.R.C.P., Thomas Bailey, M.R.C.S. (Godston), R. B. Cole, M.D. (San Francisco), Robert Cory, M.D., W. H. Drew, M.R.C.S., A. T. Gibbings, M.D., James Gray, M.D. (Glasgow), and E. M. Sheldon, M.R.C.S. (Liverpool).

Specimens of Hindoo Pelves and Fœtal Heads were shown and presented to the Society by Dr. Short, of Madras.

SUPPURATING TUMOUR OF LEFT OVARY.

Dr. J. W. J. OSWALD related the particulars of a case where, from the rapidity of its growth, the emaciation of the patient, and lung-complication, tubercular peritonitis was supposed to exist. The patient had been under Dr. Routh's care in the Samaritan Hospital, and died suddenly about a week after her return home.

Dr. ROUTH remarked that the chief point of interest was the rapidity of the growth of the tumour, which led to the supposition of its being a cancerous growth. There was amphoric breathing over the right chest.

Dr. WILLIAMS asked if any microscopic examination had been made. He had witnessed a similar case.

Dr. OSWALD replied that the microscope proved it to be tuberculous.

SPECIMEN OF EXTRA-UTERINE FŒTATION, IN WHICH A COMMUNICATION EXISTED BETWEEN THE CYST AND THE UTERUS.

Dr. GALABIN exhibited an interesting specimen of this nature. In February, when the patient—a multipara—considered herself eight months pregnant, severe abdominal pain and hæmorrhage from the vagina occurred, the fœtal movements ceasing from this date; the breasts also enlarged. She was admitted into Guy's Hospital in May, and attempts were made to deliver the fœtus, but the patient died collapsed. At the post-mortem a greenish semi-sloughing membrane was exposed, which formed an entire cyst, enclosing the fœtus. There was a round opening from the cyst into the uterus.

The PRESIDENT referred the specimen to Dr. Playfair and Dr. Williams, in conjunction with Dr. Galabin, for further investigation.

INTRAMURAL CALCAREOUS TUMOUR IMPEDING LABOUR.

Dr. A. WYNN WILLIAMS exhibited a specimen and related the history of the case. Dr. Kirby having called him in consultation to a primipara aged forty-five, craniotomy was performed, and, delivery being still impossible, cephalotripsy was about to be resorted to, when the hard mass was discovered to be movable within the uterus. The cephalotribe was applied, and a portion of the mass broken off. Delivery of the body of the fœtus was then effected, and subsequently the tumour, which proved to be an intramural calcareous tumour, was extracted. The patient made a good recovery.

CASE OF EXTREME DROPSY: FATTY DEGENERATION AND FRIABILITY OF THE PLACENTA.

Dr. JOHN BRUNTON exhibited what had been an enormous placenta, but had unfortunately become much shrivelled up by being kept in spirits of wine. The patient, a primipara, was very stout. Labour was premature—about the sixth month; the right hand and left foot presented; the child died immediately after birth. A very large placenta was first expelled, and subsequently three other separate portions. The patient was in an advanced state of dropsy; the urine highly albuminous. She recovered perfectly.

CASE OF MONSTROSITY.

Dr. FREDERICK WALLACE exhibited a fœtus, attached to the head of which was a large fluid tumour, supposed during labour to be hydrocephalus. One eye was wanting, and the other only rudimentary; and there was no tongue.

Dr. WALLACE also exhibited an enormous uterus removed post-mortem from a patient aged fifty-five, who had been tapped over a dozen times for supposed ovarian tumour.

Dr. HAYES thought the case worthy of further examination.

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The President requested Drs. Aveling, Hayes, and Wallace to examine and report upon both specimens.

Placental Polypus.

Dr. T. C. Hayes exhibited a specimen removed from a patient on the eighth day after delivery, whose labour had been natural and easy, though followed by a smart hæmorrhage. Symptoms of septicæmia ensued, and a portion of placenta was extracted, the lochia being horribly offensive. Injections of Condy's fluid were employed, and the patient made an excellent recovery.

The discussion on Puerperal Fever was then continued.

OBITUARY.

OSWALD HOME BELL, M.D.

On the 24th ult., at St. Andrews, died Dr. Oswald Home Bell, Professor of Anatomy and Medicine in St. Andrews University. About four months ago he was seized with an attack of pleurisy, which developed into a complication of diseases that baffled medical treatment. He was appointed to the medical chair in 1863 by the University Court. He had an extensive practice, and was much respected. The patronage rests with the University Court.

MEDICAL NEWS.

University of Dublin.—School of Physic in Ireland.—Trinity Term, 1875.—At the examination for the degree of Bachelor of Medicine, held on Monday, Tuesday, and Wednesday, June 7, 8, and 9, the candidates passed in the following order of merit:—

Robert S. Cochrane, Kendal M. St. John Franks (Sch.), Thomas Carson Fisher, Nicholas John Halpin, John J. Power, John G. Lane, William H. Hart, Arthur W. W. Baker, John Russell West, Arthur H. C. Dane; Edward H. Burne and William B. Smith, equal; William Clibborn, Archibald H. Montfort, Francis G. Goodman, and Martin O'Carroll.

At the examination for the degree of Master of Surgery, held on Monday and Tuesday, June 14 and 15, the following were the successful candidates:—

Thomas Carson Fisher; William Lovell Hunter and Nicholas John Halpin, equal; William H. Hart, De Burgh Griffith; Alexander S. Bleakley, John J. Power, and Arthur W. W. Baker, equal; Alfred Banks, James J. Moran; George M. Nixon and Edward H. Burne, equal.

Prizes and Exhibitions.—Medical Travelling Prize—Robert S. Cochrane. Surgical Travelling Prize—Thomas Carson Fisher. Senior Medical Exhibitions—Robert S. Cochrane, Thomas Carson Fisher.

Queen's University in Ireland.—At a meeting of the University, held on Monday, June 21, in the Council Chamber, Dublin Castle, the Chancellor (his Grace the Duke of Leinster) conferred the following degrees and diplomas:—

The degree of Doctor in Medicine upon—

John James Adams, Belfast; William Armstrong Burges, Cork; William F. Carmody, Cork; Robert Erskine, Belfast; Robert Ealer, Belfast; John Coady Flood, Galway; James J. Gorham, B.A., Galway; Henry Hamilton, B.A., Belfast; William R. Huggard, Galway; Robert Moore, M.A., Belfast; Joseph O'Sullivan, Cork; Christopher Pearson, M.A., Cork; David Robertson, Belfast.

The degree of Master in Surgery upon—

John J. Blackhall, M.D., Cork; Thomas Clarke, M.D., Belfast; William Davis, M.D., Galway; Gerald H. Fitzgerald, M.D., Cork; Samuel Edgar Martin, M.A., M.D., Belfast; H. Charles Wilson, M.D., Belfast; William Armstrong, Burges, Cork; William Francis Carmody, Cork; Robert Ealer, Belfast; John Coady Flood, Galway; James J. Gorham, B.A., Galway; Henry Hamilton, B.A., Belfast; William R. Huggard, Galway; Robert Moore, M.A., Belfast; Joseph O'Sullivan, Cork; Christopher Pearson, M.A., Cork.

The diploma in Midwifery upon—

Thomas Clarke, M.D., Belfast; William Irvine Faulkiner, M.D., Belfast (in absence); Samuel Edgar Martin, M.A., M.D., Belfast; William Armstrong Burges, Cork; Robert Ealer, Belfast; John Coady Flood, Galway; James J. Gorham, B.A., Galway; Henry Hamilton, B.A., Belfast; Robert Moore, M.A., Belfast; Christopher Pearson, M.A., Cork.

Royal College of Surgeons of England.—The following gentlemen having undergone the necessary examinations, were admitted Licentiates in Dental Surgery at a meeting of the Board on the 29th ult., viz:—

Allworth, Alfred, Lyndhurst-road, S.E.
Bennett, William Charles Storer, George-street, Hanover-square.
Bödecker, Theodore Abraham, Newark-on-Trent.
Canton, Frederick, M.R.C.S., Marlborough-street.
Carteighe, John, Stratford-place.
Clifford-Eskell, Herbert Hyeman, Sandymount, Dublin.
Cook, Augustus, Upper Norwood.
Corbett, Joseph John Francis, South Mall, Cork.
Foss, Alfred, Stockton-on-Tees.
Fox, Walter Henry, Gloucester.
Gaddes, Thomas, Barkham-terrace, S.E.
Harding, George Hilditch, Acton, near Stafford.
Hart, Alfred Abraham, Newington-green.
King, Thomas Edward, York.
Lipscombe, John Moore, Alresford, Hants.
Morris, William Graves, Winchester-street, S.W.
Pearman, George Benjamin, Lincoln-street, Chelsea.
Phillips, Edward James Montagu, M.R.C.S., Rodney-street, Liverpool.
Robertson, James Lewis, Cheltenham.
Rowney, Thomas, Hull.
Stocken, James, Euston-square.
Whatford, Jack Henry, Brighton.
White, Charles Edward, Belgrave-road.
Williams, James, Walsall.
Williams, George Arthur, Cavendish-place.
Woodhouse, Robert Hall, M.R.C.S., Hanover-square.
Youngman, Francis, Thornton-heath.

Three candidates having failed to acquit themselves to the satisfaction of the Board, were referred to their studies for the usual period.

Apothecaries' Hall.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Thursday, June 24:—

Martin, John Michael Harding, St. Helen's, Lancashire.

The following gentlemen also on the same day passed their primary professional examination:—

Dobbie, Robert John Algernon, London Hospital.
Haines, William John, St. Bartholomew's Hospital.

NAVAL APPOINTMENTS.

Admiralty.—Francis H. Moor, Fleet Surgeon to the *Valiant*; James A. Dick, Fleet Surgeon to Haulbowline Hospital.

BIRTHS.

Gayton.—On June 28, at the Homerton Small-pox Hospital, the wife of W. Gayton, L.R.C.P., M.R.C.S., Medical Superintendent, of a daughter.

Kingsford.—On June 27, at Upper Clapton, the wife of C. D. Kingsford, M.D., of a daughter.

Parsons.—On June 26, at Sunnyside, Wimbledon, the wife of T. E. Parsons, M.R.C.S. Eng., L.S.A., of a daughter.

Westcott.—On June 25, at Bijou Cottage, Martock, Somerset, the wife of W. W. Westcott, M.B., M.R.C.S., of a son.

MARRIAGES.

Burke—Cruickshank.—On June 29, at St. Stephen's Church, Bayswater, John Francis Burke, C. E., of Stratford-on-Avon, to Kate Marlow, eldest daughter of the late Wm. Cruickshank, Esq., Deputy Inspector-General of Hospitals.

Elliott—Sole.—On June 23, at Christ Church, Wellington, Shropshire, the Rev. J. R. Underwood Elliott, M.A., Head Master of Gainsborough Grammar School, son of the late J. H. Elliott, Esq., of Eaton Socon, Beds, to Mary, younger daughter of the late W. Sole, F.R.C.S., of St. Neots, Hunts.

Fletcher—Conway-Hughes.—On June 24, at the British Consulate, and afterwards at Holy Trinity Church, Corfu, William Bainbrigge Fletcher, M.R.C.S. Eng., Surgeon R.N. of H.M.S. *Wisard*, eldest son of the Rev. William Fletcher, D.D., Rector of Minterne, Dorset, to Christine Adriana Sidney, third daughter of the Rev. J. W. Conway-Hughes, M.A., Consular Chaplain of Corfu.

Goodwin—Cooper.—On June 29, at Holme parish church, Dorset, the Rev. E. H. Goodwin, South Camp, Aldershot, eldest son of the Rev. Wm. Goodwin, Killiney, co. Dublin, to Mary Mildred Troughton, second daughter of the late Wm. Cooper, M.D., Norwich.

Ryan—Brabazon.—On June 24, at St. Mary's Church, Chester, George Ryan, L.R.C.P., L.R.C.S. Edin., Surgeon 19th Regiment, to Louisa C., daughter of the late Major Colthurst Brabazon, of Wilville, co. Louth.

Smith—Baker.—On June 22, at Ifield, Sussex, Thomas Smith, M.R.C.S., to Florence Mary, eldest daughter of the late John Baker, Esq., Russell-square, London.

DEATH.

Bell, Oswald Home, M.D., F.R.C.S.E., Professor of Medicine University of St. Andrews, at The Scores, St. Andrews, on June 24, in his 39th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Addebury, Oxon.—Medical Officer to the Poor. Candidates must be duly qualified. Applications, with testimonials, to Lieut.-Col. Cobbe, West Adderbury House, Banbury, on or before July 20.

Bootle Borough Hospital, Liverpool.—House-Surgeon. Candidates must be duly qualified and unmarried. Applications, with testimonials, to T. P. Danson, Esq., Honorary Secretary, on or before July 3.

Dental Hospital of London, Leicester-square.—Assistant Dental Surgeon. Candidates must hold the dental diploma of the Royal College of Surgeons of England. Applications, with testimonials, on or before July 12.

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EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, RATCLIFF CROSS, E.—Resident Medical Officer. Applications, with testimonials, to the Secretary, on or before July 15.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.—Surgeon-Dentist. Candidates must be F. or M.R.C.S. Eng. Applications, with testimonials, to the Secretary, before July 15.

KILBURN DISPENSARY.—Assistant Resident Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Honorary Secretary, 33, Boundary-road, Finchley-road, N.W., on or before July 10.

METROPOLITAN FREE HOSPITAL, DEVONSHIRE-SQUARE, E. — Assistant House-Surgeon. Applications to the Committee of Management.

PORTSEA ISLAND UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Mr. T. P. Mills, Clerk of the Union, 34, Lion-terrace, Portsea, before July 7.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before July 31.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Teacher of Physiological Chemistry. Applications to Dr. Wadham, at the Hospital.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bury Union.—Mr. T. Batt has resigned the Radcliffe District; area 7682; population 26,598; salary £60 per annum.

Chertsey Union.—Mr. Samuel M. Ward has resigned the Chobham District; area 13,746; population 3622; salary £70 per annum.

Chesterfield Union.—The Whittington District is vacant; area 2946; population 7981; salary £20 per annum.

Leek Union.—Mr. Samuel Goddard has resigned the Norton District; area 4000; population 6897; salary £20 per annum.

APPOINTMENTS.

Central London Sick Asylum District.—Charles L. Wattie, B.M. & M.C. Aber., as Assistant Medical Officer and Dispenser at the Cleveland-street Asylum.

Hay Union.—Thos. S. H. Hincks, B.M. & M.C. Edin., to the Workhouse.

Louth Union.—Henry George, M.R.C.S. Eng., L.S.A., to the Tetney District.

Saffron Walden Union.—Francis F. Welsh, M.R.C.S. Eng., L.S.A., to the Fifth District.

Stourbridge Union.—Edwin Turner, M.R.C.S. Eng., L.S.A., to the First Kingswinford District.

SUPERANNUATION ALLOWANCE.

Holborn Union.—Mr. W. P. Cullen, who has held the office of District Medical Officer since the year 1859, has been awarded an annual allowance of £70 on retiring from office on account of bodily infirmity.

CONTAGIOUS DISEASES IN NEW SOUTH WALES.—Advices from New South Wales state that on April 16 last, after a warm discussion in the House of Assembly, a resolution affirming the desirability of introducing a Contagious Diseases Bill was carried.

NUMBER OF MEDICAL DEGREES CONFERRED IN FRANCE.—The Minister of Public Instruction has recently published a document showing that in the seventy years 1803-73 there have been conferred 28,807 diplomas on doctors of medicine and 15,671 on *officiers de santé*—in all, 44,478 practitioners.

HEALTH OF LONDON.—In London, last week, 1413 deaths were registered, which showed an excess on the average of 72. The death-rate was 21·4 per 1000, a slight increase on the two previous weeks. Two deaths occurred from small-pox, both cases unvaccinated; 25 deaths from measles; 62 from scarlet fever, being 23 beyond the average; 62 from whooping-cough; and 77 from diarrhœa, showing an increase on the latter in the past fortnight from 31 to 77, and a rise on the average, at this period of the year, of 17.

DEATH OF M. DEMARQUAY.—To the great astonishment of those who knew his apparently robust frame, M. Demarquay has just died in his sixty-first year, his complaint a cancer of the stomach, which ran an unusually rapid course. Sprung from a very common origin, by indefatigable labour he worked his way to a high position, having died very rich, and holding various distinguished posts. Remembering the struggles of his own early career, he always felt the highest gratitude to those who aided him in surmounting his difficulties, and was most generous in his aid to young men exposed to similar trials. He was a complete master of the art of getting on, and well appreciated the powerful aid the press could furnish him: while one of the aids to his more recent progress has been the attachment he had formed for M. Ricord, whose *alter ego* he had become, serving under him in the ambulances during the sieges of Paris, accompanying him in his various excursions to this and other countries, and continually meeting him in consultation. In his public capacity he was best known as the senior surgeon of the Municipal Maison de Santé, and as a frequent contributor of interesting memoirs to the medical societies.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Senex.—August 2, 1858.

Adolphus.—Dr. Horner is the medical officer on board the *Pandora* in the new Arctic Expedition. He will also take upon himself all the meteorological duties of the Expedition.

N. F. H.—Sir John Richardson, M.D., C.B., R.N., was last officially connected with the Haslar Hospital from 1849 to 1855, when, being passed over by the Government on the plea of age, he retired from the service, in which he had spent nearly half a century.

O. N., Deptford.—Nitrogen or azote was discovered by Dr. Rutherford, of Edinburgh, and described in his "De Aëre Mephitico," published in 1772. Dr. Priestley, who termed it "phlogisticated air," also described it in the *Philosophical Transactions* for 1772.

S. N., Chatham.—Air-beds were invented in the eighteenth century, and the hydrostatic or water-bed by Dr. Arnott in 1832.

B. M.—Professor Cleland will preside over the Department of Anatomy and Physiology of the British Association at the Bristol meeting.

Harry Weighton.—1. September, 1862. 2. The statue of Dr. Jenner was inaugurated at Boulogne on September 11, 1865.

Antiquarian.—The comedy was called "The Husband's Relief; or the Female Bone-setter, and the Worm Doctor." Mrs. Mapp, the famous bone-setter at Epsom, attended the first performance at the Lincoln's-inn-fields Theatre. A song in her praise was sung, of which we give two verses as a specimen:—

> "You surgeons of London, who puzzle your pates,
> To ride in your coaches and purchase estates,
> Give over for shame, for your pride has a fall,
> And the Doctress of Epsom has outdone you all.
>
> "Dame Nature has given her a doctor's degree,
> She gets all the patients and pockets the fee;
> So if you don't instantly prove it a cheat,
> She'll loll in a chariot whilst you walk the street."

Hahnemann, Exeter.—What is homœopathy? A system of doing nothing, and taking a long time to do it.

M., St. Bartholomew's.—Sir James Paget, Bart., F.R.S., will be elected President of the Royal College of Surgeons on the 6th inst.

Oculist, Moorfields.—It is stated that Mr. Robert Brudenell Carter, F.R.C.S., was the only candidate nominated for the Professorship of Surgery and Pathology. The election will take place at the quarterly meeting of the Council on the 8th inst.

Curier, Belgravia.—The additions about to be made to the museum of the Royal College of Surgeons will remain on view in the theatre of the College during the ensuing week, and will well repay a visit. We shall publish an account of them as soon as possible.

Alexander M.—"The Hunterian Medical Society" of Edinburgh was founded in 1824.

Ernest Y.—The date of the eighth decennial census of the people taken throughout the kingdom was April 3, 1871.

J. F. B., Folkestone.—By the Act passed on the 14th ult., 38 Vict., cap. 23, the new excise duty on vendors of patent medicines is 5*s.* per year.

G. G., Coventry.—Dr. O'Reardon died at Killarney, March 14, 1866, aged ninety. He was first cousin to, and once the physician of, Daniel O'Connell. He was the oldest member of the Irish College of Physicians, and though he had retired from practice for some years, he continued active almost to the last.

RUMSEY TESTIMONIAL FUND.

In addition to the amounts previously acknowledged (£573 6*s.* 6*d.*), the following subscriptions have been received:—

	£	s.	d.
J. Heywood, Esq.	5	5	0
W. Rendle, F.R.C.S. ...	2	2	0
J. W. Tripe, M.D.	1	1	0
S.W. Duckworth Williams, M.D.	1	1	0
John Beddoe, M.D., Clifton	1	1	0
E. L. Fox, M.D., Clifton...	1	1	0
J. G. Swayne, M.D., Clifton	1	1	0
W. Martin, F.R.C.S. ...	1	0	0
A. J. Beresford Hope, M.P.	10	0	0
George Elder, M.B., C.M., Nottingham	2	2	0
George Godwin, F.R.S. ...	3	3	0
Rev. F. T. Bayly, B.A. ...	5	0	0
Leonard Armstrong, Esq., Newton Abbot	3	3	0
J. B. Sanderson, M.D., F.R.S.	5	5	0
H. Jephson, M.D., J.P., Leamington	20	0	0
C. B. Skinner, Esq., Ipswich	10	10	0
James Wyatt, Esq.	1	1	0
W. Cadge, F.R.C.S., Norwich	2	2	0
W. Fergus, M.D., Marlborough	2	2	0
Capt. R. P. Beamish ...	5	0	0
M.W. Taylor, M.D., Penrith	2	0	0
H. Bullock, Esq.	5	0	0
W. Beamish, M.D., Cork...	2	0	0
H. Camps, Esq.	5	0	0
Prescott G. Hewett, F.R.C.S.	10	10	0
E. Ballard, M.D.	3	3	0
W. J. Harris, Esq., Worthing	2	2	0
R. B. Grantham, Esq. (Mem. Inst. C.E.) ...	2	2	0
Peter Eade, M.D., Norwich	1	1	0
West Sussex District, S.E. Branch, British Medical Association	2	0	0

Subscriptions may be forwarded to Dr. Buchanan, New Government Offices, Whitehall; to the Honorary Secretary; or to Messrs. Robarts, Lubbock, and Co., bankers, 15, Lombard-street, E.C. Cheques should be made payable to the Rumsey Testimonial Fund or bearer, and crossed "Robarts, Lubbock, and Co." Post-office orders should be drawn on the Curzon-street Post-office, and forwarded to the Honorary Secretary, W. H. Corfield, M.A., M.D., 10, Bolton-row, Mayfair, W.

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Poor Student.—You will find it far better to get one for yourself. You may get a good foreign one for a few pounds.

Dr. Charles Bell Taylor.—We shall be most happy to comply with your suggestion.

A Subscriber.—The first society instituted for the investigation of physical science was that established at Naples in the year 1560, with the name of "Academia Secretorum Naturæ."

W. N. C.—Dr. Wollaston's first contribution to the *Philosophical Transactions* was in June, 1797, the subject being a paper "On Gouty and Urinary Concretions." From this period until his decease he was a constant contributor to the *Transactions*, as well as to various scientific journals.

H. T. F.—Jenner conclusively established the principles of vaccination on May 14, 1796.

Gregory H.—Sir William Read, originally a tailor or a cobbler, became a quack doctor, and was knighted by Queen Anne. Queen Anne and George I. honoured Read with the care of their eyes. Dr. Radcliffe mentioned this worthy as "Read the mountebank, who has assurance enough to come to our table upstairs at Garraway's, swears he'll stake his coach and six horses, his two blacks, and as many silver trumpets, against a dinner at Pontack's." Read died at Rochester, May 24, 1715.

Leo.—Sir William Snow Harris, a surgeon, residing at that time in Plymouth, was knighted in 1847 for inventing lightning-conductors for vessels of war.

COMMUNICATIONS have been received from—

The Registrar of Apothecaries' Hall, London; Mr. J. Chatto, London; Professor Huxley, Edinburgh; The Registrar-General, Edinburgh; Mr. R. Young, Hong-Kong; Dr. Grimshaw, Gravesend; Our Paris Correspondent; Dr. Pavy, London; Dr. C. Bell Taylor, Nottingham; Dr. A. Inglis, Worcester; The Secretary of St. Thomas's Hospital; Dr. Gray, London; The Secretary of the Obstetrical Society of London; Dr. Wiltshire, London; The Librarian of Charing-cross Hospital; The Honorary Secretary of the Rumsey Testimonial Fund; Mr. C. T. Cullingworth, Manchester; Our Dublin Correspondent; Mr. G. Brown, London; Mr. T. M. Stone, London; Poor Student; The Secretary of the Royal Institution; Mr. Taylor, London.

BOOKS AND PAMPHLETS RECEIVED—

Second Supplement to Watts's Dictionary of Chemistry—Taylor on Poisons, third edition—Semple's Manual of Diseases of the Heart—Griffith's Lessons on Prescriptions and Prescribing—Ormsby on Deformities of the Human Body—The Surgeon's Pocket-Book, by Surgeon-Major Porter—Richardson's Lectures on Alcohol—Ganot's Popular Philosophy, translated and edited by Dr. E. Atkinson, second edition—The Skull and Brain and their Indications of Character, by N. Morgan.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—The London Mirror—New York Druggist.

APPOINTMENTS FOR THE WEEK.

July 3. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m. Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

5. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Royal Institution, 2 p.m. General Monthly Meeting.

6. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

7. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Some interesting Specimens will be exhibited at the beginning of the meeting, after which the Discussion on Puerperal Fever will be resumed.

8. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

9. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, June 26.

BIRTHS.

Births of Boys, 1251; Girls, 1119; Total, 2370.
Average of 10 corresponding years 1865-74, 2051·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	760	653	1413
Average of the ten years 1865-74	655·6	597·4	1253·0
Average corrected to increased population	...	...	1341
Deaths of people aged 80 and upwards	...	...	33

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	14	2	7	...	2	...	12
North	751729	...	6	12	5	11	2	6	3	23
Central ...	334369	...	1	1	...	5	...	1	...	9
East	639111	...	7	10	2	19	1	...	4	18
South	967692	2	9	25	3	20	2	5	1	15
Total	3254260	2	25	62	12	62	5	14	8	77

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·867 in.
Mean temperature	58·6°
Highest point of thermometer	78·0°
Lowest point of thermometer	44·5°
Mean dew-point temperature	51·0°
General direction of wind	Variable.
Whole amount of rain in the week	0·08 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, June 26, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending June 26.	Deaths Registered during the week ending June 26.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2370	1413	78·0	44·5	58·6	14·78	0·08	0·20
Portsmouth ...	122632	27·3	77	37	...	...	...	...	...	...
Norwich	82842	11·1	53	26	82·0	43·0	58·0	14·44	0·12	0·30
Bristol	196186	44·1	127	81	71·7	39·5	56·7	13·72	0·45	1·14
Wolverhampton ...	71718	21·1	49	27	77·9	43·8	59·4	15·22	0·02	0·05
Birmingham ...	366325	43·6	279	151	73·4	44·2	58·5	14·72	0·06	0·15
Leicester	109830	34·3	70	41	75·0	44·5	59·8	15·45	0·00	0·00
Nottingham ...	92251	46·2	71	43	74·1	40·3	58·1	14·50	0·09	0·23
Liverpool	516063	99·1	374	242	...	...	...	...	...	...
Manchester ...	356626	83·1	249	170	...	...	...	...	...	...
Salford	135720	26·3	110	63	73·6	42·9	56·8	13·78	0·05	0·13
Oldham	87437	18·7	73	46	...	...	...	...	...	...
Bradford	168305	23·3	126	68	72·9	47·2	58·6	14·78	0·02	0·05
Leeds	285118	13·2	231	126	75·0	46·0	59·5	15·28	0·09	0·23
Sheffield	267881	13·6	237	112	76·0	44·0	58·8	14·89	0·00	0·00
Hull	133932	36·8	109	77	78·0	41·0	58·1	14·50	0·09	0·23
Sunderland ...	106342	32·2	82	41	...	...	...	...	...	...
Newcastle-on-Tyne	137665	25·6	117	65	...	...	...	...	...	...
Edinburgh	211626	50·5	157	107	...	...	...	...	...	...
Glasgow	534564	88·6	432	280	64·5	44·8	55·4	13·00	1·22	3·10
Dublin	314666	31·3	176	125	74·4	40·2	56·6	13·67	0·51	1·30
Total of 21 Towns in United Kingdm	7742889	37·0	5569	3346	82·0	39·5	58·1	14·50	0·20	0·51

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·87 in. The lowest was 29·59 in. on Monday morning, and the highest 30·05 in. on Thursday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

THE HARVEIAN ORATION, 1875.

By WILLIAM A. GUY, M.B., F.R.S., F.R.C.P.

More than two centuries ago (it was some time in the month of July, 1656, nine years therefore before the Great Plague, and ten before the Great Fire of London), the old College of Physicians, at Amen Corner, was the scene of a most touching ceremony. In the library of the "noble building" which he had erected at his own cost, furnished, supplied with books, objects of curiosity, and surgical instruments, and three years previously presented to the College, William Harvey met the Fellows, his colleagues, friends, and pupils, for the last time. Bent beneath the weight of nearly fourscore years, worn by repeated attacks of a painful malady, "not only far stricken in years," but "afflicted with more and more indifferent health," conscious that his life must be drawing to a close (he died in less than a year afterwards), Harvey formally resigned the chair he had held for upwards of forty years; and, as the crowning act of many a deed of princely munificence, made over to the College his paternal estate.

Harvey's object in so doing was to incite other Fellows and Members of the College to like deeds of liberality, "to search and study out the secrets of nature by way of experiment," and to cultivate mutual love and affection among themselves—his means to these ends, an Oration to be delivered annually within the College.

Such, in brief, is the origin of this day's ceremony,—a ceremony which, for upwards of two centuries, has been the occasion of gathering together, year by year, the *élite* of the medical profession, with many a worthy representative of every department of learning and literature, art and science.

The appointment of the Harveian Orator rests, as is well known, with the President of our College. Were it not so, if I were a volunteer, self-chosen for the duty I have this day to perform, I should begin my address by words of self-depreciation; but these, under the circumstances, would be obviously out of place. Assuming, then, a certain undefined and wholly undefinable degree of competence, I address myself earnestly to the task of justifying the President's choice, fulfilling your reasonable expectations, and approaching, as near as my powers permit, to my own ideal of what is due to the dignity of this College, and the memory of its brightest ornament and greatest benefactor.

The lapse of time and altered circumstances have, as you are aware, brought about deviations from the original design of the Harveian Oration. In lieu of the Latin tongue, once the written and spoken language of the learned, we now use our own native English, which promises some day to be to the whole world, what Latin was to the educated section of a small part of it; and, by a sort of general understanding and consent, we meet on this occasion to do honour to Harvey himself, as the man who, above and beyond all others, has "approved" himself "a benefactor to the College," and our greatest contributor "to the sum of medical science."

In saying this, I think that I rightly represent your feelings and expectations; but on referring to the published orations of my predecessors, I find them grouping themselves into two equal classes, the one devoted to Harvey and his labours, the other to some topic connected with modern discovery and research.

Among those who have chosen to discourse of Harvey, some (like my immediate predecessor, Dr. West) have set him before us in "his habit as he lived"; others (among whom Dr. Rolleston deserves special mention, as having made an important discovery bearing on the question of Harvey's originality) have maintained Harvey's claim to be considered the real discoverer of the circulation; and one (I speak of my friend and former colleague, Dr. Arthur Farre), handling a subject of which he is an acknowledged master, showed us how Harvey, in his treatise on Generation, displayed the same ability as in that great discovery with which his name is more generally associated.

It is with this class of Harveian Orators that I elect to associate myself; and the more willingly, as certain physiological questions connected with the circulation were the first of a strictly scientific character which attracted my own attention.

Harvey entered on his work of discovery with some considerable advantages. He came of a wealthy family, and had independent means of his own, so that he could command the very best education England or Italy could give, and either purchase, or secure through royal favour, whatever he needed for purposes of experiment and illustration. And these his easy circumstances took from him all motive and temptation to a hasty or premature announcement of his views; and though (as his writings attest) he had good opportunities of experience as physician, surgeon, and accoucheur (for in Harvey's day the three faculties were united), and turned them to excellent account, he was not overwhelmed by the cares and incessant demands of practice, and was even withdrawn more than once by command of the Court from the usual duties of his profession.

Harvey, in being spared the drawbacks of poverty, must have lost with them the proverbial stimulus of necessity. But happily he found, in the stirring circumstances of his times, and the example of great thinkers and discoverers (his contemporaries or immediate predecessors), that spur to exertion to which generous minds yield so ready a response. For Harvey lived in an age of excitement, political and theological, breathing an atmosphere of civil strife, a witness, and a sufferer by, one of the fiercest struggles between throne and people, between power and prescription on the one side and aggressive liberty on the other, that the world has ever seen. And this state of excitement, be it recollected, was but the carrying forward of the agitation of men's minds that had arisen out of the events of the Renaissance and the Reformation.

Harvey, as I have said, had for contemporaries many great thinkers and discoverers. He might have known both Shakespeare and Milton; for he was thirty-eight years old when Shakespeare died, and thirty when Milton was born. He was well acquainted with Lord Bacon, who died when Harvey was forty-eight years of age. Lord Napier, the inventor of logarithms; Hobbes of Malmesbury, author of the "Leviathan"; Robert Boyle, Dryden, Cowley, and rare Ben Jonson, were among his contemporaries. The Marquis of Worcester was busy with his water-compelling engine, and "Century of Inventions"; Sir Hugh Myddelton was at work with the New River; John Woodall, author of "The Surgeon's Mate," was commending lemon-juice as preventive and cure of scurvy; and Sydenham (thirty-three years of age when Harvey died) was collecting materials for his immortal works, when Harvey was demonstrating the circulation of the blood. It is worthy of note that the "Novum Organon," and Harvey's great work, "De Motu Cordis et Sanguinis," appeared within a few years of each other. Need I add that Harvey, surviving the execution of his royal master and patron, died in the same year with Oliver Cromwell?

As to foreign contemporaries, Harvey was only by seven years the junior of Kepler, and by fourteen of Galileo, and the senior by several years both of Descartes and of Spinoza; so that Harvey was of an age to have shared that Italian journey of Milton's, during which, as Milton tells us in his "Areopagitica," "he found and visited the famous Galileo, grown old, a prisoner to the Inquisition, for thinking in astronomy otherwise than the Franciscan and Dominican licensers thought." And here I am reminded of another advantage Harvey had in dealing with his great discovery. The views he might form and promulgate were not likely to clash with the preconceived notions of those who drew their science equally with their theology from the same source—from that Bible of which the authorised version was first published when Harvey was thirty-three years of age; and which, laying hold of the minds of men by the sustained dignity of its language, its lofty poetry, its vivid and life-like narratives, and stirring them to their very depths by awful threats and precious promises, must have greatly added to the excitement and exaltation of the popular mind.

Harvey, then, as I have just stated, took in hand the work of discovery with some obvious advantages. And, on the other hand, he had only to contend with the obstacles which beset all such paths as he was about to tread. He would arouse that spirit of opposition and detraction which springs up quite naturally in the minds of those who, having imbibed certain views, at the cost of much study, and from the lips of men whom they hold in respect, are asked to abandon not only the views themselves, but all that, in course of time, has grown up and clustered round them. To root up these weeds and keep them under, to select and sow the better seeds,

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to reap and gather in the harvest, is a work demanding both industry and patience.

Such a work Harvey took in hand when he set himself to discover the circulation of the blood; and such industry and patience he continued to display to the end of his long life. For it should be well understood, and constantly borne in mind, that the discovery of the circulation was not a something that lay on the surface, and which any man of common discernment might pick up and appropriate. It was not like a new remedy which, having come into repute among the common people, waited only for some patient and intelligent collector of facts to affix to it the stamp of authority. It was not such a discovery as John Woodall made, when he inferred the efficacy of lemon-juice, as others since his day have done of oranges, or fruits, or vegetables, or even of a mixed diet, from the happy accident of two ships' crews, one smitten with scurvy, the other free from it, differing in the possession of the one article of diet, and in nothing else. Nor was it a mere simple and natural inference from occurrences numerous and uniform, as was the severity of the natural small-pox, and the mildness of the inoculated form of it, as all the world of Constantinople saw them, when Lady Montague made herself the organ and interpreter of a universal belief. It was not even so simple a matter as Jenner had to deal with when he (more observant, more logical, more persevering than his neighbours, and with the precedent of inoculation to help him), converted the neglected gossip of the dairy into a life-preserving principle; or (to give but one other example), the discovery of the circulation was not such a simple correction of ancient and authoritative error as Ambrose Paré made when, with a mind prepared by a wholesome scepticism, he found the soldiers wounded by gunshot, and treated by the orthodox method of boiling oil, suffering pain and inflammation, from which those he had been forced, by lack of material, to dress with a cold slimy mixture, were comparatively free.

Harvey's work was of a different order. It demanded observations and experiments of a novel kind, and a keen, penetrating, refined logic to bring into perfection. As we think of what it was, we are forcibly reminded of the modern researches of Sir Charles Bell, and at the same time of that famous Essay on Dew, by Dr. Wells, to which logicians accord such high praise, or that other not less remarkable inquiry by which Sir George Baker, a former President of this College, compassed the discovery of the true cause of the colic of Devonshire.

To put the matter somewhat differently—between the discoveries of a more simple and obvious kind, and that of Harvey, there is the same sort of difference as between the merit of discerning the use of a tool never seen before, and that of a man who, having the parts of a complex machine, such as a watch, a clock, or a steam-engine placed before him, should find out their uses, discover its motive force, and (being a work of human hands) succeed in putting it together, and setting it in motion.

You will observe that I take it for granted that Harvey did really discover the circulation of the blood; that neither he himself, nor his contemporaries, who, whether they opposed or supported him, at least took him at his word, were mistaken about the matter. Harvey—who had come from Padua laden with university honours, bearing with him all the learning of the ancients, and the best fruits of modern teaching; intelligent, well-informed, candid, honest—doubtless spoke the simple truth when he said to the President of the Royal College of Physicians, other learned physicians, and his esteemed colleagues, concerning the great work he dedicated to them, "This book alone declares the blood to course and revolve by a new route"; and equally when, in his old age, he says, with allowable self-complacency, "The admirable circulation of the blood, originally discovered by me, I have lived to see admitted by almost all." Harvey, fancying himself a discoverer, and all the great anatomists and physiologists of Europe sharing his belief, would be a delusion for which, with all our experience of human credulity, we are scarcely prepared!

To understand Harvey and his work aright, to appreciate thoroughly what he did, to form a just estimate of the ability with which he exposed fallacious arguments, his acuteness of observation and corresponding clearness of description, the ingenuity with which he devised experiments, and his skill in performing them, we must study not only his great work, the "Exercitatio Anatomica de Motu Cordis et Sanguinis," but also his anatomical disquisitions addressed to Riolan of Paris, and his letters to Hofmann, Siegel, Nardi, and others. Having, as in duty bound, and in accordance with the plan I had sketched out for myself, read these productions with care and attention, I venture to submit to you a brief analytical sketch of the circulation of the blood as Harvey understood it.

I may premise that nowhere, unless I am greatly mistaken, does Harvey tell us when and where (whether while a student at the University of Padua, or while studying for his degree at Cambridge, or after settling here in London) those doubts and misgivings entered his mind, without which, in his case as in others, there could have been neither motive nor stimulus to inquiry. The first glimpse we get of him is when, seeking to discover the motions and uses of the heart by actual inspection of the living animal, and not from the writings of others, he stands perplexed and bewildered by the rapid alternation of dilatation and contraction, coming and going in the twinkling of an eye, like a flash of lightning; not surprised that Andreas Laurentius found these motions as perplexing as did Aristotle the flux and reflux of Euripus (that narrow sea between Bœotia and Eubœa which ebbed and flowed seven times a day or oftener), and almost tempted, with Fracastorius, to think "that the motion of the heart was only to be comprehended by God." He is, as it were, in a labyrinth, from which he can only extricate himself by using greater and daily diligence, by performing frequent vivi-sections of a variety of animals, and by the collation of numerous observations. Having by these means discovered "both the motion and use of the heart and arteries," he proceeds to enlighten not only his friends, but the public also, in his anatomical lectures, after the manner of the Academy of old.

But Harvey, though he does not tell us when he first began to suspect the true state of things, lets us into the secret of the process of thought by which he attained to his grand inference. He surveys his mass of evidence drawn from vivi-sections, and his reflections on them, on the structure of the heart and of its ventricles, on the symmetry and size of the conduits which enter into and issue from them, on the arrangement and intimate structure of the valves, with many things besides: and then, frequently and seriously revolving in his mind what might be the quantity of blood transmitted, in what time, and the like, and deeming it impossible that this quantity could be supplied by the juices of the ingested aliment, without draining the veins on the one hand or rupturing the arteries on the other, unless the blood should somehow find its way from the arteries into the veins, and so return to the right side of the heart, "I began," he says, "to think whether there might not be a motion as it were in a circle. Now this I afterwards found to be true."

I proceed with my analysis. Harvey begins by telling us what he saw on exposing to view the heart of a living animal, especially such "colder animals" as frogs, serpents, small fishes, snails, and the like, or such warm-blooded animals as dogs and hogs, when the heart begins to flag. There is a time when the heart moves, and a time when it is motionless; and when it moves it grows hard and tense, when it does not move it is soft and flaccid. This difference may be both seen and felt in the heart of an eel taken out of the body; and, in all colder-blooded animals, the heart, which grows pale as it moves, takes a deep-red colour when it becomes quiescent—pale in the one case, because this motion is a muscular contraction which squeezes out the blood; red in the other, because the muscular walls relax, and the blood flows into the cavity. That this is so is plain from the fact that if the ventricle be pierced the blood spurts out each time the heart moves and grows tense; and, when the heart as a whole has ceased to beat, but the auricles still contract, if the finger be placed on the ventricles, each contraction is felt as a pulse, and, if the point of the heart be cut off with a pair of scissors, blood flows with each beat.

Putting together all his many observations and experiments on this division of his subject, Harvey concluded that the heart moves in two times and four places; that the auricles first contract together, then the ventricles; and that (speaking of the ventricles alone as the heart) these things happen in our bodies at the same instant: the tension of the heart, the pulse at its apex, felt striking against the ribs; the thickening of its walls; and the forcible expulsion of the blood it contains by the contraction of the ventricles.

Harvey has completely mastered the heart's motions. He knows all about them, as well as we do now; and, in discovering the truth, sweeps away these errors—that the heart, dilating, draws blood into its ventricles; that when it strikes the breast, its ventricles are distended with blood; that its

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fibres contract (as Vesalius thought they did) like a bundle of twigs bulging in the centre, whereas the fibres, acting together, constringe the heart and make it tense; and that (as Bauhin and Riolan asserted) it has four motions distinct in time and place—two proper to the auricles, two to the ventricles.

I must not stop to notice the multitude of curious facts by which Harvey illustrates this division of his subject; nor what use he makes of the magnifying-glass to watch the heart's beat in such creatures as slugs and snails, crabs, wasps and flies, and that convenient transparent shrimp taken in the Thames and in the sea, in which the heart is seen as through a window; nor again, those observations, so minute and exact, relating to the first appearance in the embryo of the "pulsating drop of blood," and gradual development of the heart.

From the motions of the heart Harvey leads us on to those of the arteries, as seen in living animals. He tells us that at the moment the heart contracts and strikes the breast (the heart's systole) the arteries are dilated, and yield a pulse (their diastole); and that this happens with the right ventricle and pulmonary artery equally with the left ventricle and aorta; also that the contraction of the left ventricle and the pulse in the arteries are cause and effect. If the one ceases, the other stops; as the one is strong or weak, so is the other. The pulse is small and weak in aneurism, of which Harvey gives a case, for then the blood is diverted into the tumour, and so intercepted. Again, when an artery is punctured or divided, the blood is seen to spout forth with violence the instant the ventricle contracts. This is true of all arteries—of the pulmonary artery; of the vessel which leads from the heart of a fish to its gills.

Here again Harvey finds an error to correct. It was the commonly received opinion that the arteries are filled by expanding like bellows. He illustrates the true state of the case by the analogy of blowing into a glove. At the same time he takes occasion to give Aristotle his due, who says that "the blood of all animals palpitates within their veins (meaning the arteries), and by the pulse is sent everywhere simultaneously"; that these vessels "all depend upon the heart," and move with it.

Passing now from the motions of the heart to the large vessels that enter and leave it, Harvey takes in hand the circulation through the lungs; and finds himself freed from the doubts and difficulties which perplexed other men, by enlisting on his side that comparative anatomy and those vivisections which they had neglected. For he tells them that they do amiss when they (as most anatomists do) limit their researches to the human body, and that when it is dead.

First, then, he tells us that in fishes, which have no lungs to embarrass the inquiry, but a sac like an auricle, a single ventricle, and a vessel analogous to an artery, the blood may be seen to be driven into the vessel at each beat of the heart, and, if the vessel be divided, to issue in jets. Again, in toads, frogs, serpents, and lizards, which have lungs in a certain sense, and a voice, the blood is transferred, as in the higher animals, from veins to arteries by the action of the heart, their case being, to all intents and purposes, that of a man in whom the septum of the heart should be perforated or removed, or one ventricle made out of two—a state of things which does really exist in the embryos of those animals that have lungs, as Harvey proceeds to prove in the course of a luminous description of the fœtal heart and large vessels, both in man and in animals.

And here, again, Harvey has to correct the errors of others—of those who alleged that the large fœtal vessels which are closed after birth, when the lungs take on their proper function, exist only for the nutrition of the lungs; and of others who asserted that the heart of the embryo does not pulsate. This last assertion is plainly false, for he, and Aristotle before him, saw the reverse in the incubated egg, and in embryos just removed from the womb.

In most animals, then, and in all up to the period of their birth, the blood passes from veins to arteries by the action of the heart; and it is obvious that, in creatures which have no lungs, one ventricle (the left) would suffice to distribute the blood over the body; but (and here Harvey, as is his wont, personifies Nature), when she ordained that the same blood should percolate the lungs, she saw herself compelled to add another ventricle (the right), which should force the blood from the vena cava through the lungs into the left ventricle. The right ventricle, therefore, may be said to be made for the sake of the lungs, and for the transmission of the blood through them, not for their nutrition: for it were unreasonable to suppose that the lungs require more blood for this purpose, and that blood more pure and spirituous (as coming direct from the heart) than the brain, or the eye, or the heart itself.

Some there were in Harvey's day who denied that the whole mass of the blood could pass through the substance of the lungs; and to these he opposes admitted facts relating to the skin, kidneys, and liver, especially the kidneys and liver, which have so dense a texture when compared with the light, spongy lungs. Drink swallowed by the gallon will pass off from the body in an hour or two, and yet it must first traverse the liver and the kidneys to reach the bladder. The liver is a special case in point, for there there is no propelling power, while in the lungs there is the force of the right ventricle and the movements of respiration to help the onward course of the blood. Columbus, then, was right when he inferred from the size and structure of the pulmonary vessels, and their constant state of repletion, that there was a passage for the blood through the lungs; and Galen might be quoted to the same purport, and especially as insisting on the function of the valves of the heart and great arteries permitting an onward course of the blood, but preventing all regurgitation.

Having satisfied himself respecting the lesser circulation through the lungs, and taken note, also, of that other circuit by which the heart itself is nourished, Harvey proceeds to the greater circulation throughout the body, and has something so novel and unheard of to say about the quantity and source of the blood which passes from the veins into the arteries, that he fears to give it expression, lest he should stir up the envy of a few, and excite the enmity of mankind at large, in whom custom has become a second nature, doctrines once sown have struck deep root, and antiquity inspired respect. Still, the die is cast, and Harvey, placing his trust in his own love of truth and the candour inherent in cultivated minds, proceeds to pass in review his stores of knowledge in terms I have already quoted; and laying special stress on his subtle and profound argument, based on the obvious impossibility of the circulatory system—heart, veins, and arteries,—holding together, unless there were "a motion as it were in a circle," indulges in a lofty flight of poetic expressions. He compares the blood—forced by the left ventricle into the arteries, and so distributed to every part of the body; then finding its way through the veins and vena cava round to the right ventricle, which, in its turn, sends it through the pulmonary artery to the lungs, to return by the pulmonary veins to the left side of the heart,—to what Aristotle says of the air and rain emulating the circular motion of the superior bodies. As the vapours drawn upwards from the moist earth, warmed by the sun, descend as rain to moisten the earth again, so it is with the blood. Cooled, coagulated, and rendered effete by contact with the various parts of the body, it is brought back again to its sovereign, the heart, as to its source or inmost home, there to recover its excellent and perfect state, to resume its due fluidity and natural heat (powerful, fervid, a kind of treasury of life), to be impregnated with spirits, as it were with balsam, and so sent back on the old errand of nourishing, cherishing, and quickening every part of the frame. The heart, consequently, is the beginning of life; the sun of the microcosm, even as the sun might be called the heart of the world; for by the virtue and pulse of the heart the blood is moved, perfected, made apt to nourish, and preserved from corruption and coagulation. It is the household divinity which nourishes, cherishes, quickens the whole body—the foundation of life, the source of all action.

I stop for a moment to remark that, at the time Harvey wrote, nearly a century and a half was yet to elapse ere the chemical discoveries of Priestley superseded poetry by fact, and transferred to the laboratory of the lungs those life-giving changes which Harvey and his contemporaries thought they saw carried on in the workshop of the heart.

The consideration that inspired this poetic outburst of Harvey's was this—that the quantity of blood, circling through the body in some given short space of time, is far too large to be supplied by the ingesta, or used up in the process of nutrition. Harvey had gauged the left ventricle of the heart, and found it to hold upwards of two ounces of blood; and, reducing his estimate of the quantity sent out at each contraction, and prevented from returning by the action of the valves, to the absurdly low figure of one drachm (and all the world, he says, allows that with every systole something is projected), he calculates thus:—In half an hour the heart beats more than 2000 times, and so sends forth in that short space of time more blood than the whole body contains. Say that, in the sheep or dog, a single scruple of blood passes

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with each stroke of the heart; then, in one half-hour about three pounds and a half of blood would be injected into the aorta. This approaches the whole quantity which their bodies contain; for Harvey ascertained that in the sheep this does not amount to more than four pounds.

But if anyone should object that the nutritive fluid derived from the food might quickly pass through the body in the guise of some abundant secretion, such as the milk, Harvey meets the objection by first naming the quantity of milk which an animal will yield in twenty-four hours, and then affirming that the heart by computation sends forth as much or more blood in an hour or two.

Passing over certain details relating to the quantity of blood in the body, and also to the causes which determine the frequency of the pulse, we come upon certain corroborative facts drawn from the phenomena of hæmorrhage. Divide but a small artery, and the whole blood of the body will drain away in some half-hour or less; and the same thing occurs very rapidly in amputations and the removal of tumours. When a butcher, again, cuts the throat of an ox, the whole mass of blood will escape in less than a quarter of an hour; and when an artery only is divided, the same thing happens, the blood spurting forth abundantly, impetuously, as if propelled by a syringe. But if the butcher did not cut the ox's throat after he had stunned it, till the heart had ceased to beat, he could not bleed the carcase effectually.

That the arteries receive blood from the veins no otherwise than by transmission through the heart, is proved by the simple experiment of tying the aorta at the base of the heart, when, if the carotid or any other artery be opened, it will be found empty, while the veins are full. And now we see why, after death, the veins contain so much, and the arteries so little blood,—the right ventricle so much, the left so little,—facts which probably led the ancients to believe that the arteries (as their name implies) contained, during life, nothing but spirits. Harvey surmises that this is due to the fact that the action of the heart outlives the movements of respiration, so that blood is sent to the body, while none is received from the lungs.

At this point Harvey makes a direct appeal to the evidence of the senses. He says: If a live snake be laid open, the heart will be seen beating quietly and distinctly for more than an hour, propelling its contents, becoming pale during systole, of a deeper tint during diastole. Now seize the vein with a forceps, or pinch it between finger and thumb; and the part between the point of pressure and the heart immediately becomes empty, while the heart itself grows paler and smaller, beats more slowly, and at length seems about to die. But remove the impediment, and the heart resumes both colour and size. Now compress or tie the artery instead of the vein, and the part between the obstacle and the heart, and the heart itself, become inordinately distended, take on a deep purple colour, and at length are oppressed and even choked with blood. But remove the obstacle, and all things at once resume their pristine state—the heart regains its colour, size, and stroke. All this "may be observed more clearly than the noon-day sun," and we have before us illustrations of "two kinds of death—extinction from deficiency, and suffocation from excess." The last of these forms of death Harvey recognised several times within two hours of death, and before the colour had left the face, in the bodies of men who had been hanged; and he had shown to many witnesses the right auricle and lungs distended with blood, and the auricle in particular as large as a man's fist, and so full that it looked as if it would burst.

Referring to this vivisection of a snake in his second dissertation, addressed to Riolan, Harvey describes the vivisection of a fallow deer, at which many of the nobility and his Most Serene Majesty the King, his master, were present. The internal jugular vein was exposed and divided, when only a few drops of blood were observed to escape from the lower orifice, while "a round torrent of blood" gushed forth from the upper orifice, coming down from the head.

And here, as lending an incidental interest to the life of Harvey, I may remind you of the many occasions on which our great anatomist and physiologist bears testimony to the personal interest the King, Queen, and Court took in his inquiries. Harvey, as is well known, was allowed to make what use he pleased of the Royal herds of deer, in his studies both of the circulation and generation; and he tells us how he often showed the King the uterus of the doe in the early stages of conception, and the punctum saliens beating "beautifully distinct" in the sun's light; and once also to the King and Queen what he describes as "a most agreeable natural spectacle" derived from the same source. When he comes across a most curious specimen of a perfect egg within a perfect egg, he forthwith makes the King partaker of his delight. And when people tell his Serene Majesty King Charles of a certain young nobleman who, in consequence of a fracture of the ribs of the left side, had come to have a large opening there, and a sort of sac, within which, as had been supposed, the lung protruded, Harvey is sent on an errand of inspection; and having discovered that it was not the lung, but the heart that had been thus strangely exposed to sight and touch, Harvey, instead of taking to the King a verbal answer, takes the young man himself, "that his Majesty might with his own eyes behold this wonderful case,"—this "man alive and well," in whom he might, "without detriment to the individual, observe the movement of the heart, and with his proper hand even touch the ventricles as they contracted." Having done so, "his Most Excellent Majesty, as well as myself, acknowledged that the heart was without the sense of touch; for the youth never knew when we touched his heart, except by the sight, or the sensation he had through the external integument." Thus did royalty in the least fortunate of its representatives, and science in one of the worthiest of her sons, mutually do honour to each another; leaving behind them an example which, let us hope, will never fail to influence our kings and philosophers in days to come. Whatever the faults of Charles I., neglect of science is certainly not to be numbered among them.

The circulation of the blood in parts remote from the heart. Harvey demonstrates by the twofold process of describing the exact forms and positions of the valves of the veins, and making a series of simple experiments on the veins of the forearm, swollen by the ligature of the upper arm applied as in bleeding.

As to the valves of the veins, neither Silvius (their discover) nor succeeding anatomists rightly understood their use. But Harvey, by careful dissection, and passing a probe either way, arrives at the conclusion that "the valves are solely made and instituted lest the blood should pass from the greater into the lesser veins," thus favouring its motion from the lesser to the larger branches, and furnishing a conclusive argument for a circulation.

By applying a bandage above the elbow, as in bleeding from the arm, Harvey shows the site of the valves, and by the pressure of the finger, and "streaking" the blood in one direction and the other, demonstrates their action, and the movement of the blood from smaller veins to larger, always in the direction that leads to the heart. And here reverting to his favourite argument, based on figures, Harvey bids us select some length of vein, assume it to be able to hold some given quantity of blood, empty it by "streaking"; suppose this process repeated for, say, a thousand times, and then judge for ourselves what quantity of blood must be always passing towards the heart, and what sure evidence its passage affords of a circulation.

We who come to the study of the circulation with minds prepared to accept the evidence of facts, and the force of arguments, can scarcely appreciate the difficulty Harvey had in convincing some of his contemporaries, whose minds were preoccupied by certain prevailing errors. I will mention four of them.

The first consisted in imagining a passage for the blood from the right to the left ventricle of the heart through the septum; the second in assuming an equally unreal anastomosis somewhere between the large arteries and veins; the third that the arteries dilate after the manner of bellows, and so occasion the pulse; and the fourth that the arteries do not contain and carry blood, but air.

Harvey meets the first of these errors by denying the state of things which they allege, as well as by statements which prove the extent and precision of his anatomical knowledge. As to communications between the two sides of the heart, he does not see them; and as to these anastomoses, he searches for them in vain in all the principal viscera, even when he resorts to the artifice of rendering them so friable by boiling that he could shake their tissue-like dust from even the capillary filaments.

The third fallacy, which attributed the pulse to "a power communicated from the heart through the coats of the arteries, and not to the shock of the blood contained within them," thus making "the coats of the vessel the cause of the pulse," rested on the experiment of tying the artery upon a tube

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inserted within it—an experiment which Vesalius and Galen prescribed, but Harvey really performed. They assumed that the part beyond the tube would not pulsate, but he finds that it does; and, by way of confirmation, adduces the case of a nobleman, his "very particular friend," whose "most attentive physician" he was. From the body of this nobleman Harvey removed part of the descending aorta, about a span long, with the two crural trunks. They had been converted into bone; and yet he had often noted the pulse in the legs and feet of this patient while he lived. Here was an experiment of nature's own making: the bony artery was the exact counterpart of the rigid tube, and yet the facts of the case distinctly contradicted the hypothesis of which Harvey was exposing the unsoundness.

The fourth error Harvey had to combat, instead of being an unfounded assertion, is an inference based upon a fact. I will show you how Harvey refutes this fallacy, and so give you a good illustration of his method of procedure, and bring this, my analysis, to a close.

When Harvey's predecessors opened a dead body, they found the arteries nearly or quite empty, and the veins full; and accordingly they inferred, with Erasistratus, that the arteries contained only "aërial spirits." Harvey begins his work of correction by observing that this empty state of the arterial system occurs only in that kind of death which begins in the lungs, not when the heart ceases to beat and the lungs to act at the same moment of time, as happens in more than one form of sudden death. A universal truth had therefore been assumed from a common, but still only an occasional, occurrence. And these "aërial spirits," with which the imagination had peopled the arterial system, what were they? What their consistency? Are they separate and distinct from the blood and the solids, or mingled with them? Harvey had never been able to find any of them—neither *natural spirits* in the veins, nor *vital spirits* in the arteries, nor *animal spirits* in the brain or nerves. The ancients, need I say, never found an empty space in brain, heart, or arteries, but, convinced of nature's horror of a vacuum, they filled it with spirits. Indeed, they fancied as many spirits as there are faculties or organs. But Harvey saw in these creations of the fancy "the common subterfuge of ignorance," alleging that "persons of limited information" used them, as indifferent poets do the gods, whenever they have a plot to unravel or a catastrophe to bring about; or as the vulgar and unlettered refer the causes of events they do not understand to the immediate interposition of the Deity. If these spirits of which people speak so confidently are of the nature of the air that issues from the breathing organs of animals, then, if an artery or vein from which blood is flowing be plunged under water or oil, the spirits will show themselves by "a succession of visible bubbles." But this does not happen with the blood, though it does with all drowning creatures without exception.

I have entered thus far into detail, at the risk of being deemed tedious, that I may create in your minds the impression which the study of Harvey's works has left upon my own—that the discovery of the circulation was a discovery in the best and fullest sense of the word. It was no mere hypothesis, suggested by analogy, and supported by a fact or two, destined some day to be cited by some learned man as an anticipation of a discovery rightly so called, but a demonstration complete and perfect up to the extreme limits of our then existing knowledge—a demonstration the more remarkable forasmuch as the composition of the "fuliginous vapour" discharged from the lungs was then unknown, and the chemical necessity of a pulmonary circulation unexplained; and the magnifying-glass through which Harvey had seen the movements of the heart in the transparent shrimp taken from the Thames, had yet to be developed into the powerful compound microscope, through which we now see the unbroken capillary circulation in the frog's foot.

The circulation of the blood, then, was not a discovery merely, but a demonstration; and this demonstration was in part a refutation of ancient and prevalent errors, but also a revelation of new truths wrought out by as felicitous a combination of original talent, acquired learning, and unwearied industry as ever met in one man.

Fresh as I am from the study of Harvey's works, I confess myself at a loss which most to admire, his rare endowments, or the use he made of them. If his natural gifts were great, they were not greater than the resources his industry created. The objects of his study at one time shine in the clear pure light of an unclouded intellect, at another they glow with all the rich tints of a poetic fancy. He is as ingenious in devising experiments, as skilful in performing them. He displays all the logical acumen of an Aristotle, all the industry of a Hunter. He brings to bear on his subject a large and exact knowledge of anatomy, human and comparative, healthy and morbid, and of intra-uterine life, and he makes, for the time in which he lived, an unwonted use of vivisection. And here I may remark that no thought of cruelty, no misgiving as to the lawfulness of the proceeding, ever seems to have crossed his mind.

But what has impressed me most strongly in studying Harvey's works is the fine logical faculty which, so to speak, pervades and permeates the whole mass, and, struggling for distinct and independent expression, breaks forth into clear enunciations of the principles of that philosophy which the great Italian genius Leonardo da Vinci first announced, and Harvey's contemporary, Lord Bacon, recommended to the world with all the force and eloquence of a practised advocate. Harvey, indeed, seems to have carried on together the demonstration of a great truth, and the vindication of the methods by which all truths must be explored and established. So that we have only to search out, extract, and arrange these abstract utterances of his, in order to construct a complete system of scientific logic; just as we might, if we pleased, bring forth from one part or other of his masterpieces perfect illustrations of all the logical methods which John Stuart Mill arranges in order in his great work on Logic.

That Harvey did really claim to be not a discover only, but also a teacher of a new logic, may be inferred from the very title of the second section of the introduction to his work on Animal Generation:—"Of the Manner and Order of acquiring Knowledge." Indeed he tells us in express terms that, in treating on animal generation, he is anxious, not merely to set forth "the sure and obvious truth," but also to exhibit "the method of investigation" which he followed, in order to "propose to the studious" "a new" and "safer way to the attainment of knowledge." And here let it be well understood that Harvey seeks rather to revive than to overturn the method of the ancients, whose "unwearied labour and variety of experiments, and especially the industry of ancient Greece," he warmly commends. Nor does he ignore or despise the logical teachings of Aristotle, for after giving us his own views respecting "the manner and order of acquiring knowledge" in one chapter, he presents us in another with a dissertation on "the same matters, according to Aristotle," whom, "foremost of all among the ancients," he follows as his leader.

Harvey, pre-eminently a practical man; the accurate observer; ingenious in devising, skilful in performing experiments, the practised logician and acute critic of the views of others about matters which he himself studies and understands, can appreciate the great Greek philosopher whom Bacon, the man of the closet and study, industriously depreciates. This being so, what, you may ask, is it that Harvey complains of in the scientific habits and methods of his contemporaries? What does he find to reform and amend? Aristotle was in the right. Harvey in the main approves his method and his logic. How, then, have Harvey's contemporaries exposed themselves to rebuke and correction? Simply by lacking the industry for which he gives the ancients credit. For Harvey tells us that it was "the custom, or vice rather, of the age" he lived in, that men preferred going idly "wrong with the many" to becoming industriously "wise with the few." Hence a method of investigating truth "erroneous and almost foolish," content with asking what others had said, instead of inquiring whether things were so or not; substituting verisimilitudes, and "knotty, and captious, and petty disputations," for truths; passing off other men's discoveries as their own: their ideas, "false fancies and empty visions," their knowledge but "a waking dream, or such a delirium as the sick fancy engenders." From this sickly state, this idleness and indolence, this lazy satisfaction with existing knowledge, this quenching of the spirit of scientific adventure, Harvey would rouse his contemporaries to exertion. He tells them how they may arrive at the "citadel of truth" by following the traces of nature, with open eyes, "through devious but most assured ways," rising from inferior to superior levels, till at length they penetrate into "the heart of her mystery." In this pursuit of truth "it is sweet," he says, "not merely to toil, but even to grow weary," for "the pains of discovering are amply compensated by the pleasures of discovery."

Harvey, then, would fain convert men from idleness to industry. But how is this industry to display itself? Not in

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inventing words, but in observing things. For as there is nothing in the understanding which was not first in the sense (the well-known dictum of Aristotle), or, as Harvey puts it, "no certain and definite idea which has not derived its origin from the senses," it is to the senses we must have recourse; first inquiring whether a "thing be or not, before asking wherefore it is," bringing all assertions "to the proof of sense," and admitting or rejecting them according to its decisions. This is the tribunal to which Harvey refers all that he has said respecting the circulation—to the "senses," not to the "reason," to "ocular inspection," not to any "process of the mind"; for "the facts cognisable by the senses wait upon no opinions," "the works of Nature bow to no antiquity, for, indeed, there is nothing either more ancient or of higher authority than Nature"—Nature, as Harvey is never tired of calling her, Nature "ever perfect and divine," ever in harmony with herself, never doing anything amiss or in vain, ever acting with admirable skill and foresight.

And here I am again reminded of Harvey's habit of personification—"a habit born and bred of that fine frenzy" which the discoverer shares with the poet, inspiring him with thoughts of the possible, and so setting him on the track of the actual. For the philosopher, with his "scientific insight," is as truly a poet as if he wrote verses—a poet, and something more. Hence we hear without surprise that Harvey, the discoverer, who is found studying mathematics, and working geometric problems within a short period of his death, finds in the pages of Virgil a perpetual spring of rapturous delight. And as the sailor personifies his ship, and the engineer his locomotive, and all men everywhere the sun, moon, and stars, so Harvey puts not life only, but thought, will, power, into the heart and blood. Of this his tendency to personification I have already given one example from his treatise on the circulation. I will add two others from his work on Generation. Speaking of the heart, about which he has thought so often and so much, he says—"The vesicle and pulsating point construct the rest of the body as their future dwelling-place; 'developed into' the heart, it enters and conceals itself within its habitation, which it vivifies and governs, and applying the ribs and sternum as a defence, it walls itself about. And there it abides, the household divinity, first seat of the soul, prime receptacle of the innate heat, perennial centre of animal action; source and origin of all the faculties, only solace in adversity!" Of the blood, which Harvey saw coming into existence in the embryo before the heart itself, he says, there is "a spirit or certain force" inherent in it, superior to "the power of the elements, very conspicuously displayed in the nutrition and preservation of the several parts of the animal body; and the nature, yea, the soul in this spirit and blood, is identical with the essence of the stars." The blood is "spirit," a something "celestial," "analogous to heaven, vicarious of heaven!"

Here, and not here only, but sometimes when treating of the circulation, often when discoursing on generation, we lose sight of Harvey the discoverer, with his foot firmly planted on the earth, to see in his place Harvey the mystic, floating indistinctly in the clouds, in company with Democritus, Leucippus, and their atoms, Eudoxus and his pupil Epicurus, with their theory of pleasure as the chief good; Empedocles and Hippocrates misleading Aristotle by their doctrine of the four elements; Pythagoras and Plato, interpreters of the fantastic notions of the ancient Thebans. But Harvey is not at home in cloud-land. His fine faculties fail him there. He is not only obscure but inconsistent, reproving in others what he allows in himself; over and over again speaking of occult forces as being of the essence of the stars, and yet objecting to other men that "they bring gods upon the scene," that they "encumber philosophy with fanciful conceits," and derive from the stars what is produced at home. Sometimes, too, but it must be confessed not often, Harvey seems to promote to the place of a personal God, whose existence and attributes, as Creator and Preserver, he humbly recognises, some mysterious impersonal force. Harvey has also been accused of credulity in accepting the evidence of an eye-witness (an intimate friend) respecting the existence in Borneo of a race of human beings with tails; and in attributing the dispersion of certain tumours to the application of a dead man's hand. Our authority for this last statement is Robert Boyle, who says that Harvey told him he had sometimes tried this strange remedy "fruitlessly, but often with good success." It is to Boyle, too, that we are indebted for the information, derived, as he tells us, from Harvey himself, that his dissection of the valves of the veins led him to the discovery of the circulation. For my part I think the account I have extracted from Harvey's works the more feasible.

Need I tell you that Harvey does not stand alone among great discoverers in thus displaying an easy belief in matters that lie beyond the sphere of their own special inquiries; or that in his case, as in theirs, to take no note of such matters would be to substitute an impossible hero for a truly great man. The portrait of the discoverer of the circulation will not be the worse for a few shadows; they will but make it the more real.

What now remains to be said of Harvey must be said in as few words as possible. Let us first weigh his great discovery in his own scales. This is what Harvey himself says of it:—"Reflecting on every part of medicine, physiology, pathology, semeiotics, therapeutics, when I see how many questions can be answered, how many doubts resolved, how much obscurity illustrated by the truth we have declared, the light we have made to shine, I see a field of such vast extent, in which I might proceed so far, and expatiate so widely, that this my tractate would not only swell into a volume, but my whole life, perchance, would not suffice for its completion." And again, after noting some of the leading changes in the circulation brought about by causes bodily and mental, he says:—"Such a flood of light and truth breaks in upon me here; occasion offers of explaining so many problems, of resolving so many doubts, of discovering the causes of so many slighter and more serious diseases, and for suggesting remedies for their cure, that the subject seems almost to demand a separate treatise." These were no idle words, for in his work on Generation, where we should scarcely expect to meet with such statements, Harvey says:—"I have occasionally, and against all expectation, completely cured enormous sarcoceles by the simple means of dividing or tying the little artery that supplied them, and so preventing all access of nourishment . . . to the part affected, by which it came to pass that the tumour, on the verge of mortification, was afterwards easily extirpated with the knife or the searing-iron." And then Harvey gives us a case of a fatty tumour of the scrotum, larger than a man's head, and hanging as low as the knees, which he succeeded in removing without sacrificing the important organs involved in it. This case was but one of many "accomplished in opposition to vulgar opinion, and by unusual procedures,"—a statement fully borne out by a perusal of Harvey's works. But even had it not been so, I should have given Harvey credit for being as good a judge of the originality of his methods of treatment as of the justice of his claim to have discovered the circulation. Certain it is that Harvey himself looked upon that discovery as on a very fruitful field, and that his own experience justified him in so doing. And we may take it that he either had written, or was preparing to write, several works on physiology, pathology, and therapeutics, of which the titles only are to be found scattered through his works; but which, had they seen the light, would have proved him to be no idle boaster. His treatise on the circulation would have been enlarged and supplemented by a "Physiology and particular Treatise on the Blood," by "Disquisitions on the Respiration of Animals," by an essay on "The Causes, Uses, and Organs of Respiration," and by a work on "Physiology"; and we should have had the results of his experience as a practitioner set forth in his "Medical Observations," his "Medical Observations and Pathology," and his "Medical Anatomy, or Anatomy in its application to Medicine." Add to this evidence, if not of views committed to writing, at least of ample material collected, the preparations and writings which a Puritan mob destroyed, and the books, objects of curiosity, and surgical instruments which the Great Fire of London consumed, to the irreparable injury of this College, and we have before us proofs of an unwearied industry, guided by rare intelligence and practical tact, which it is no injustice to the greatest men who have preceded and followed him to characterise as unrivalled.

If we would judge of the spirit and temper in which Harvey worked, we must listen to the language of his old age, as he takes a mournful retrospect of his first great trouble and heavy loss. "Let gentle minds forgive me, if, recalling the irreparable injuries I have suffered, I here give vent to a sigh. This is the cause of my sorrow: Whilst in attendance on his Majesty the King during our late troubles and more than civil wars, not only with the permission but by command of the Parliament, certain rapacious bands stripped

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not only my house of all its furniture, but, what is subject of far greater regret with me, my enemies abstracted from my museum the fruits of many years of toil. Whence it has come to pass that many observations, particularly on the generation of insects, have perished, with detriment, I venture to say, to the republic of letters." This language, so self-restrained, so gently sorrowful, reminds one irresistibly of the plaint of Priestley, who suffered a like injury at the hands of a mob, and of the touching apostrophe of Newton to the little pet that had set his papers on fire. Such has ever been the spirit of those who have done and suffered most in the service of mankind; and I may add that I have been irresistibly struck with the curious coincidence between the words of Harvey and Priestley, and in the expressions used by Harvey when he reluctantly gave over his manuscript on Generation to Sir George Ent, and by Jenner when he resisted the first efforts made to transfer him from the modest retirement of Berkeley to the busy turmoil of London life. Nor is the coincidence less complete between the will of Harvey and that of Howard, in which, after making their humble profession of faith, they prove to their friends and poor dependents that not one of them had been forgotten.

But I must hasten to a close, leaving unsaid many things which I had noted as worthy of record.

I began this lecture by presenting to you Harvey, the aged philosopher, endowing the College with his paternal estate, and providing for the annual delivery of the Oration that bears his name. It is Harvey the old man whose words I shall finish by quoting, and it is Sir George Ent, on the errand that secured for us Harvey's work on Generation, who speaks:—"I found him," he says, "Democritus-like, busy with the study of natural things, his countenance cheerful, his mind serene, embracing all within its sphere." In answer to his salutation, Harvey, referring to the miserable distractions of the time, says—"Did I not find solace in my studies, and a balm for my spirit in the memory of my observations of former years, I should feel little desire for longer life. But so it has been, that this life of obscurity, this vacation from public business, which causes tedium and disgust to so many, has proved a sovereign remedy to me." Again, in one of his letters to Nardi of Florence, in which he treats of some obscure matters connected with generation, he says —"I myself, though verging on my eightieth year, and sorely failing in bodily strength, nevertheless feel my mind still vigorous, so that I continue to give myself up with the greatest pleasure to studies of this kind."

To incite the Fellows and Members of this College "to search and study out the secrets of nature by way of experiment" was, you may remember, a duty imposed on the Harveian Orator. What better course, I ask myself and you, is open to him to promote this object than to present Harvey, the discoverer, in his old age, still finding "the greatest pleasure" in his studies, and a solace and balm to his spirit in the memory of his observations of former years; realising to the full the truth of his own words, that the "pains of discovering are amply compensated by the pleasure of discovery."

There sits the aged philosopher, the toil and weariness of the past transformed into tranquil satisfaction, as his mind's eye rests on some spot once dark and barren, now bright and fruitful, bathed in the "flood of light and truth" which he has shed upon it; or peering into the unrevealed future, "dark with excess of light," feeling even then what we know now, that in the sense in which "a thing of beauty is a joy for ever," a truth discovered and established is an everlasting gain, conferring on the generations yet to come, in the life that now is, priceless benefits, some by direct application, some through indirect and unexpected developments.

Even in the obscure future Harvey might have discerned thus much, that through the long stride he had taken among the many steps that lead from ignorance to perfect knowledge, minds that might have continued to be busied and puzzled with the unsettled problem of the circulation would be set free to engage in other and more profitable inquiries; that no one could henceforth devote himself to the study of any matter relating to the physiology of the human frame, but must own himself in some degree his debtor; that every physician every time he felt a pulse would have a more intelligent appreciation of its indications, every surgeon who should staunch a hæmorrhage, or tie an artery, or perform an operation, would do it with a firmer hand, in consequence of his discovery of the circulation.

And these annual Orations!—may we not venture to hope that in as far as, year by year, they faithfully portray Harvey, in his studious youth, busy manhood, and serene old age; they promote the objects he had in view, supplying with motive, example, and encouragement all who are now striving to render the life that now is, longer, healthier, pleasanter, happier, by manifold methods of cure, palliation, and prevention; in full assurance that true knowledge is real power; and that, if we make the discovery of truth our motive, and use intelligent industry as our means, we shall not miss some portion of that rich reward which fell in unwonted measure to the lot of him whose "immortal memory" we honour this day, for this among other reasons—that he conferred upon us, in the full practical sense of the words, the *Discovery of the Circulation of the Blood.*

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 17.)

The Acanthocephala.—Difficult as is the satisfactory determination of the affinities of *Sagitta*, it is even harder to arrive at a definite conclusion as to the affinities of the singular parasites which constitute the genus *Echinorhynchus.* In their sexual state they inhabit the various classes of the Vertebrata, and are found in the Invertebrata only in an asexual condition.

The *Echinorhynchus* of the Flounder, whose structure may serve as an illustration of that of the group, inhabits the rectum of that fish, which it pierces in such a manner that the anterior extremity or head projects, enclosed within a cyst, upon the peritoneal surface, while the body hangs freely into the cavity of the intestine. Where the worm traverses the wall of the rectum it presents a much constricted neck. It would appear that, eventually, the *Echinorhynchi* completely pass out of the intestine, as they are found enclosed in detached cysts lying in the peritoneal cavity. The anterior extremity of the *Echinorhynchus* is produced into a short cylindrical proboscis, covered with many rows of recurved hooks, and, behind this, it forms a dilatation, in which the integument and the muscular coat are separated by a considerable interval. The body, behind the constricted neck, which separates it from this anterior dilatation, has a thick, yellowish outer wall, between which and the inner muscular tunic lies a system of vessels consisting of two longitudinal trunks, connected by a network of anastomosing canals.

These canals do not appear to possess distinct walls, nor are any cilia visible in them; but the minute molecules which float in the clear fluid which they contain, are driven to and fro, apparently by the contraction of the body. Inferiorly, the vessels all terminate in blind canals, disposed around the margin of the funnel-like posterior extremity. Internal to the vessels lies a double layer of anastomosing muscular fibrils, the external of which are circular, while the internal are longitudinal.(a) The cavity of the body is filled with a fluid, in which the ova, or spermatozoa, float, and, at its anterior extremity, two elongated oval bodies depend from the parietes, and hang freely in it. These are the *lemnisci* of authors; they are traversed by vessels continuous with those of the parietes. The axis of the proboscis is continued downwards into an elongated subcylindrical stem, rounded below, which hangs down like a handle into the cavity of the body. The extremity of the stem is connected by broad retractor muscles with the parietes, and gives attachment to the suspensory ligament of the reproductive apparatus. Two other bands are attached a little above these, and run obliquely forwards to the parietes; they are not mere muscles as ordinarily described, but contain a wide vessel, continuous with a large sinus, separating the axile portion of the stem of the proboscis from its investing coat. In the axis of the stem of the proboscis is the oval ganglion, which sends off some small branches upwards, and two larger

(a) See for an account of the remarkable structure of these muscles, Schneider, "Ueber den Bau der Acanthocephalen," *Archiv für Anatomie*, 1868.

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lateral trunks, which can be traced into the vessels of the oblique bands, and probably supply the walls of the body.

There is no mouth or alimentary canal in *Echinorhynchus*, so that the animal is probably nourished by imbibition through the walls of the body. The reproductive organs are, both in the male and in the female, attached by a suspensory ligament to the extremity of the proboscis, and extend thence through the axis of the body to the posterior extremity. Here they open in a papilla at the bottom of a funnel-shaped terminal dilatation of the body, which exists both in the male and in the female, but is much more marked and separated by a constricted neck from the body, in the former. On each side of the papilla is an organ which has much the appearance of a sucker, but which is apparently non-contractile, while the funnel itself undergoes constant and rhythmical contractions.

In the male, the testes are two oval sacs, one behind the other, connected by double vasa deferentia, often provided with peculiar accessory glands, with the genital outlet, which is provided with a long penis. In the female, the ovary is a single, long, thin-walled, cylindrical tube, whose anterior end is usually empty for a short distance. Further back, clear, pale, rounded masses appear, containing cavities in which corpuscles, like the germinal spots of ova, lie. More posteriorly still, these corpuscles become elliptical, and are surrounded by a membranous coat, which gradually thickens, and gives rise internally at each end to a spiral filament which surrounds the enclosed egg. The ova in this form then pass into the cavity of the body, where they accumulate in great numbers; but I have not found in this species the free floating ovarian masses described by Von Siebold in other *Echinorhynchi*. From the lower end of the ovarium two short oviducts or rather spermiducts arise, and almost immediately unite into a sort of uterus, which is continued into the vagina. The uterus passes above into a short, open, funnel-shaped canal, which lies between the two oviducts, and, according to Von Siebold, takes in the ova from the perivisceral cavity by a peculiar swallowing action.

The embryos of the different species of *Echinorhynchi* vary somewhat in structure. Von Siebold has described those of *E. gigas*, which are provided with hooks disposed like those of the *Cestoidea*, but only four in number. Asexual *Echinorhynchi* have been found in *Cyclops* and in the muscles of fishes. Leuckart states that they acquire sexual organs in the alimentary canal of *Gadus lota*.

The same excellent observer has succeeded in tracing the development of *Echinorhynchus proteus*, a common parasite of many river fishes, especially the Perch. What appeared to be the asexual condition of the same *Echinorhynchus* had previously been seen by Leuckart in *Gammarus pulex*. Into water containing specimens of this Crustacean, ova from *E. proteus* were transferred. After a few days these ova could easily be detected in the digestive tube of the *Gammarus*, whilst numerous embryos, escaped from the egg-shell, were found within the appendages of the body.

Each ovum has two coats; an outer, albuminous, and an inner, chitinous. The first is digested in its progress through the alimentary canal; the second is afterwards ruptured by the embryo, which bores through the intestinal wall into the cavity of the body, and is thence conveyed to the site proper for its development.

The body of the embryo is somewhat fusiform in shape, and consists of a colourless, transparent parenchyma, protected by a cuticle. The parenchyma may be resolved into an outer, homogeneous, contractile layer, and a semi-fluid medullary substance. Within this is lodged an ovoid, central mass, made up of large highly-refracting granules. Isolated granules of the same kind may also be found scattered throughout the soft medullary substance. At its posterior end the embryo tapers to a point, while its opposite extremity is obliquely truncate towards the ventral aspect. On this oblique surface may be observed two series of straight spines, five (rarely six) in each. The two series meet near the middle line to form an arch, the central and largest spine constituting its summit. Two short, ridge-like elevations of the cuticle, close to the middle line, separate the spines on either side from one another. Behind this extremity the peripheral layer gives rise to a knob-like process, the nature of which is not known.

At the end of fourteen days the embryo is found to have increased much in size, but presents few changes of form. The anterior extremity displays two rounded elevations, the spines retaining their original position. The peripheral layer has become thicker and more distinct; its knob-like process has by this time disappeared. The central mass, now much larger, has assumed a spherical figure. No longer granular, it is seen to be composed of numerous pale cells, which continue rapidly to increase.

During the third week, numbers of large yellow granules begin to appear within the outer layer of the embryo. No other changes, save those of growth, take place in its walls; but the central mass, still continuing to enlarge, gradually puts on the aspect of a young *Echinorhynchus*. This mode of development has justly been compared by Leuckart to that of certain Echinoderms, or the production of the Nemertid larva within its "*Pilidium*."

The first part to become differentiated is the cavity of the future proboscis, which appears as a transparent lenticular vesicle at the anterior end of the spherical mass. Behind this are soon seen rudiments of the central axis and its contained ganglion. The position of the "ligament," with its appended reproductive organs, is at the same time marked out. The muscles of the outer wall have also commenced their development.

Next, the central region of the young *Echinorhynchus* rapidly elongates; its walls become thinner, and, separating from the included structures, show the first trace of the visceral cavity. The cavity of the central axis also lengthens, extending gradually backwards. About this time distinctions of sex first make themselves evident.

The posterior end of the body now undergoes a disproportionate increase of size, the muscles are more distinct, and the rudimentary generative organs are clearly manifest. At length the young *Echinorhynchus* occupies almost the whole interior of the embryo, the walls of which have, meanwhile, undergone but slight histological change. The spines, however, have disappeared, together, it would seem, with the cuticle to which they were attached. No rupture of the other embryonic structures takes place. Gradually these attach themselves to the body of the contained *Echinorhynchus*, becoming closely fitted to its surface, and apparently persisting throughout its entire life.

The development of the *Echinorhynchus* now approaches completion. The lemnisci appear. Hooks arise on the surface of the proboscis, not, as might be supposed, from its outer cuticle, but from specially modified cells of an inner membrane. The internal organs begin to assume their final aspect. The external form of the adult organism is rather slowly reached, and a few changes which take place after transference of the *Echinorhynchus* to its final host have yet to be observed.

In the structure and development of the Acanthocephala analogies are discernible, on the one hand, with the anenterous Nematoid worms, such as *Gordius* and *Mermis*, and, on the other, with the Trematoda; but, nevertheless, it must be admitted that they constitute one of the most isolated and anomalous groups in the whole animal kingdom.

The Polyzoa.—These animals bear a general resemblance to the Sertularian Hydrozoa, with which they were formerly confounded under the name of "Corallines." Like the Sertularians, they almost always form compound aggregations, produced by repeated acts of gemmation from the primitively single embryo, and have a hard cuticular exoskeleton which remains when the soft parts decay. The compound organism thus formed is termed a Polyzoarium, and each zoöid which buds from the common stock is a Polypide. The outer chitinous or calcified cuticular layer of the body of a Polypide is termed the *ectocyst*, and, as the rest of the body of the Polypide is contained in, or can be retracted into, the hard case then formed, it is commonly termed a "cell."

The proper ectoderm which lines and secretes this cell is termed the *endocyst*. The mouth is situated on a disc, termed the *lophophore*, at the free end of the polypide; and the margins of the *lophophore* are produced into a number of richly ciliated tentacula. At the oral aperture the ectoderm passes into the endodermal lining of the alimentary canal, which is almost always divided into three portions, a long and wide pharynx, a spacious stomach, and a narrow intestine. The latter is always bent up nearly parallel with the pharynx, and terminates in an anus situated beside the mouth. As the nervous ganglion is placed between the mouth and the anus, the flexure of the intestine is neural. A wide perivisceral cavity occupies the interval between the alimentary canal and the parietes of the body, and sometimes the walls of this cavity are ciliated. Very generally the gastric division of the alimentary canal is connected with the

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parietes of the body by a sort of ligament, the *funiculus* or *gastro-parietal band*. Circular and longitudinal muscular fibres may be developed in the body-wall; and there are usually special muscles for the retraction of the lophophore within the cell, and others for the closing and opening of the opercular apparatus, with which many species are provided.

The single nervous ganglion is situated, as has been stated, between the oral and the anal apertures; but it is doubtful if there are any special organs of sense, unless a lobed process—the *epistoma*,—which overhangs the mouth in many fresh-water Polyzoa, be of this nature. The ectoderm of that region of the body which lies immediately beneath the tentacula is always soft and flexible; and, when the lophophore is retracted, becomes invaginated, so as to form a sheath, in which the tentacles are protected. Sometimes, as in the *Ctenostomata*, this sheath is surrounded by a circle of chitinous filaments, which, when the tentacles are retracted, furnish a protective outer covering to them. And sometimes, as in the *Cheilostomata*, part of the chitinous wall of the polype cell is so disposed as to constitute a movable lid, which shuts down on the retracted polypide. This *operculum* is placed on the opposite side of the polypide to that on which the nervous ganglion is situated.

In many genera, flagelliform appendages—the *vibracula*—are articulated to the polyzoarium, and execute constant lashing movements. In others, bodies shaped like birds' heads, with a movable mandible, are seated upon slender and flexible peduncles, and snap incessantly. Sometimes these last, which are termed *avicularia*, are present along with vibracula.

Male and female reproductive organs are usually combined in the same polypide. They are cellular masses, developed in the funiculus or in the parietes of the body, whence the ova or spermatozoa are detached into the perivisceral cavity. They sometimes pass thence, and undergo the first stages of their development in dilatations of the wall of the body, termed *ovicells*.

Multiplication by gemmation occurs throughout the group, but the buds usually remain adherent to the stock. In *Loxosoma* and *Pedicellina*, however, the buds are detached.

Some multiply asexually by a kind of gemmule developed in the *funiculus*, provided with a peculiar shell, and termed a *statoblast*.

With these general characters, the Polyzoa present an interesting series of modifications. They have been divided by Nitsche into two groups—the *Entoprocta*, in which the anus lies within the circle of tentacles; and the *Ectoprocta*, in which it lies outside this circle. In the former division, the genus *Loxosoma*, which attaches itself to Sertularians and to other Polyzoa, is particularly noteworthy. It is a small stalked animal, and the superior wider end of the body is an obliquely truncated disc, the margins of which are elongated into ten ciliated processes. From the midst of the disc, a conical prominence, the summit of which bears the oral aperture, is situated. The long œsophagus connects this with a globular cæcal gastric sac. The sexes are distinct, and the ovaries or testes are two rounded organs, one situated on each side of the stomach. No nervous system has yet been made out in *Loxosoma*. The animal is fixed by the truncated extremity of its narrow stalk-like end; and this stalk contains a gland, the duct of which opens in the centre of the face of attachment.

Loxosoma multiplies by budding, but the buds are soon detached. The embryo developed from the impregnated ovum becomes a gastrula, with a large post-oral ciliated disc, like a mesotrochal annelid larva.

The Ectoprocta are divided into the *Gymnolæmata*, which have a circular lophophore, and no epistoma or process above the mouth; and the *Phylactolæmata*, which possess an epistoma, and usually have the lophophore prolonged into two lobes, so as to be horseshoe-shaped.

All the Phylactolæmata are inhabitants of fresh water; while all the Gymnolæmata, except *Paludicella*, are marine.

In the fresh-water Polyzoa the impregnated ovum gives rise to a free saccular planuliform embryo, which is covered externally with cilia. From one end of this "cystid" one or more polypides are developed from thickenings of the wall of the sac.

In the Gymnolæmatous genera *Bugula*, *Scrupocellaria*, and *Bicellaria* the embryo is ciliated, and provided with a mouth and with eye-spots. After swimming about for some time, it loses its cilia, and fixes itself, at the same time acquiring a chitinous outer coat, and becoming a mere sac or cystid, in which a polypide is developed by gemmation, and gives rise to the first cell of the polyzoarium.

Schneider has shown that the extraordinary larva *Cyphonautes*, which he considers to resemble *Actinotrocha*, and which is provided with a bivalve shell, is the larva of *Membranipora pilosa*. It is provided with an intestine, with a sort of shell, and with largely developed ciliated motor bands. But when it attaches itself, all these organs disappear, and the larva passes into the condition of a cystid, from which a polypide is developed, as in the foregoing cases.

Hence, it has been pointed out that the characteristic polypide of the ectoproctous Polyzoa is a structure developed from the cystid, in much the same way as the Tænia head is developed from its saccular embryo; or as the Cercaria is developed from the sporocyst or Redia; the cystid of the Phylactolæmata being comparable to a sporocyst, and that of *Membranipora* to a *Redia*. But, without altogether denying the justice of this comparison, it may be suggested that the cystid is comparable to a vesicular Morula, and that the mode of development of the alimentary canal of the polypide is comparable to the formation of an alimentary sac by invagination. If this view of the case be correct, the perivisceral cavity in the Polyzoa is a blastocœle.

(To be continued.)

ORIGINAL COMMUNICATIONS.

A NOTE ON

PRESYTOLIC MITRAL MURMUR, AND ON PRESYSTOLIC FRICTION-SOUND.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Medicine in King's College, Physician to King's College Hospital.

Eliza M., aged thirty-six, was admitted under my care on May 1. She is married, and has had two children. About sixteen years ago she had an attack of rheumatic fever, since which she has suffered from shortness of breath and palpitation on exertion. A month ago she caught cold, and since then has had cough, with scanty expectoration and increased shortness of breath.

When admitted, there was some dulness on percussion, with mucous râles over the bases of both lungs. The pulse was small and feeble. The extent of cardiac dulness was normal; the impulse moderately strong and sharp, and *preceded* by a distinct thrill. On auscultation over the apex, a soft blowing sound was heard, commencing immediately after the systole, therefore diastolic. This sound was continuous until, immediately before the succeeding systole, it was intensified, and then ceased with the sharp systolic impulse, and the short, but normal, first sound. There was, therefore, a soft *diastolic* murmur, continued into a louder *presystolic*, and ceasing with the ventricular systole. The second sound was normal, but accentuated over the pulmonary valves to the left of the sternum.

It appears to me that the phenomena of this case confirm the usually accepted explanation of the presystolic mitral murmur—namely, that it is a result of constriction of the mitral orifice (mitral stenosis), that it is synchronous with the contraction of the auricle (auricular-systolic, as Dr. Gairdner has well designated it), and that the forcible driving of the blood through the constricted orifice by the auricular contraction is the main cause of the presystolic murmur and thrill. It seems probable that the soft diastolic murmur which commenced immediately after the systole was caused by the blood flowing into the ventricle under the influence of the elastic resiliency of the distended pulmonary veins, while the presystolic intensification of the sound was caused by the increased rapidity of the blood resulting from the auricular contraction. It would seem that in most cases of mitral stenosis no sound is audible during the ventricular diastole until the force and speed of the blood-current are increased by the auricular systole, so that there is a silent interval between the first sound and the subsequent presystolic murmur; while, in the case which I have here briefly noted, a soft diastolic murmur, commencing immediately after the first sound, was continuous with a presystolic intensification.

There was, a short time since, a man in Craven ward in the advanced stage of granular contraction of the kidneys, in

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whom we noted somewhat peculiar pericardial friction-sounds, which tend to confirm the accepted theory of the rhythm of the presystolic mitral murmur. We heard first, towards the base of the heart, a friction-sound which immediately preceded the systole of the ventricle. It was a presystolic friction-sound, and, as it was obviously synchronous with the auricular systole, I said at the time that it was probably caused by a layer of lymph on the surface of one auricle. At our next visit, we found that while the presystolic rub was still audible, there was also a *systolic* friction-sound, best heard over the heart's apex. It now seemed probable that the surface of the ventricle was also roughened by lymph. In a few days the presystolic murmur towards the base of the heart had ceased to be audible, while the systolic friction at the apex was still distinctly heard; and this continued until, in a few days more, the man died. We found, as we had expected, that the anterior wall of the right auricle was covered by a thin layer of recent lymph, the surface of which had been smoothed down by friction, and this explained the cessation of the presystolic rub. Over the apex of the heart there was a thicker and a somewhat uneven patch of recent lymph, about an inch and a half in diameter, which explained the systolic friction-sound. There was no fluid in the pericardium, nor on the exterior of the heart was there any other morbid condition than the two patches of recent lymph—the one over the surface of the right auricle smoothed down by friction, the other still rough over the apex of the heart.

I observed and noted the phenomena of this case with the more care and interest in consequence of my recollection of a somewhat similar case which was published by the late lamented Dr. Hyde Salter shortly before his death (*Lancet*, July, 1871, pages 152-3). A girl suffering from renal disease had a pain in the left side of the chest, and a presystolic friction-sound was heard over the third rib, about an inch to the left of the sternum. She died a few days afterwards, and the left auricle was found covered with recent lymph.

In most cases of acute pericarditis, three friction-sounds, of distinctly different rhythm, may be heard: two sounds, occurring in such quick succession as to be almost continuous, correspond with the auricular and the ventricular contractions respectively—auricular-systolic and ventricular-systolic; while the third, which occurs after a longer interval, is synchronous with the diastole of the ventricles.

A SUGGESTION CONCERNING THE OPERATION FOR RUPTURED PERINEUM, ETC.

By C. F. MAUNDER,
Surgeon to the London Hospital.

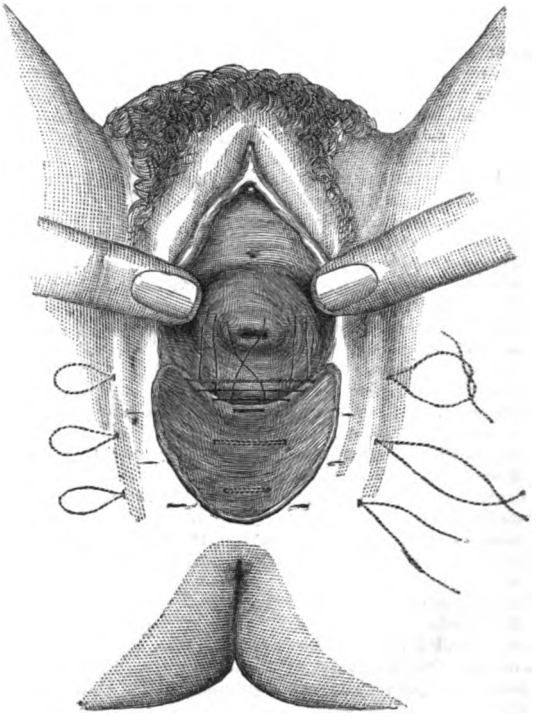
History.—Mrs. ——, aged thirty-seven, the mother of eight children, the youngest being nearly two years old, miscarried about eight years ago, and soon after went on a tour in Switzerland. This was followed shortly by "bearing down, as though the whole inside would come out, associated with a distressing sense of dragging at the end of the back-bone, so that I could not sit up with comparative comfort for more than an hour or two at a time. Spent most evenings on my back, and once was recumbent for four consecutive months. All sorts of pessaries have been used in vain, also injections, and I slept for weeks on an inclined plane."

I saw the case at the request of Dr. Langdon Down, under whose care this lady had recently come. During the last seven years her life had been wretched, and now her sufferings and deprivations from society and the active duties and pleasures of life had reached a climax. On examination, independently of the subjective symptoms, the vaginal outlet proved to be enormously dilated; the cervix uteri presented; and the posterior wall of the vagina especially bulged forwards extremely; the anterior wall also had somewhat descended, giving to the meatus urinarius a characteristic direction. The perineum had been slightly lacerated in past time. The patient was stout, and of very delicate and lax fibre.

It was agreed that the vaginal outlet should be contracted by the usual operation for ruptured perineum. It was also very essential that the proposed elongated perineum should form a very substantial and resisting floor upon which the uterus, etc., might rest.

With this object in view, I determined to introduce some *internal* superficial sutures, as well as the customary deep and external superficial stitches. To this end I was led by the known behaviour of a fine catgut suture, which, when applied, might be left to soften and disappear spontaneously.

A sufficient surface having been vivified, I proceeded to introduce three sutures as represented in the drawing by the dark lines running up across the cervix uteri, tying them so that the knots should not separate the rawed surfaces. This done, the operation was completed in the usual manner.



It will be understood that the case in question was not one of simple ruptured perineum, but was aggravated by the fallen uterus and bulging posterior wall of rectum, both of which, at the operation, tended to get between the edges of the wound, and would prevent union of its surfaces. It will also be seen at once that these internal superficial sutures would oppose intrusion on the part of the cervix uteri. These stitches being used, less dragging and constriction of the soft structures by the deep sutures, in order to maintain the parts in apposition, is required; primary union is thereby favoured, and suppuration in the track of the sutures is less likely to happen.

The operation was performed on January 21, 1875. On the 23rd the deep quilled sutures represented by the dotted lines were removed. On the 24th a little redness about the left side of the vulva appeared, and it transpired that the nurse had allowed a little urine to fall on the part.

Both sets of superficial sutures consisted of catgut, and were not meddled with. Those on the cutaneous surface yielded about the sixth day; those in the vagina were of course never seen after the operation had been completed. The tissues of this patient being very delicate, I feared suppuration rather than adhesion would be the tendency, and was anxious to remove a source of irritation as quickly as possible, and therefore I took out the deep sutures after the lapse of forty-eight hours. Had I not done so, I believe pus would have quickly formed along their tracks, as it did just at their points of exit and entrance. To favour firm cicatrisation, the bowels were kept quiet for a fortnight, and then, on examination, the operation was found, both by Dr. Down and myself, to have resulted in an unusually substantial perineum.

April 28th.—Dr. Down informs me that our patient has lost her former distressing symptoms, and he has allowed her to go yachting, as was once her custom.

The length of time during which the deep sutures are to be left in must vary, and should be determined by the condition of the patient and of the parts interested in the operation. The duck-bill speculum held in the vagina during the first part of the operation will indicate to what extent the orifice of the vagina may be vivified.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

CASE OF TUBERCULAR DISEASE OF THE URINO-GENITAL ORGANS—DEATH FROM BASILAR MENINGITIS.

(Under the care of Dr. HENRY THOMPSON.)

JAMES B., a tailor, aged twenty-two, was admitted February 10, 1875. There is nothing noteworthy in his domestic or previous personal history. His present illness began about six months before date with severe vomiting and diarrhœa after purgation. From that time forth he became subject to a dry cough and to pain in the right side of the back on taking a deep breath. During the same period he lost flesh and colour, sweated freely in the night, and was unable to sleep.

On Admission.—Complexion pale and wan; aspect that of deep depression. Decided dulness over the lower half of the right back, fading away gradually above. Dulness also over the left scapula. Coarse respiration, with prolonged expiratory murmur, and impaired percussion-resonance in the first left interspace; dulness also in the corresponding region on the right side, with weak breathing and subcrepitation, which, indeed, characterise the whole of the right front. Urine acid, of specific gravity 1020; contains one-sixth of its volume of albumen, along with a considerable amount of pus. Pulse 92; temperature 98·2°.

February 15.—Sweats profusely, and in the early morning is much distressed by nausea and retching. The urine now contains one-fourth of its volume of albumen, and is loaded with pus. There are pain and tenderness with great muscular tension in the right ilio-costal space.

From this date until March 6 he remained much in the same condition, retching often, and vomiting sometimes. The urine continued to be acid; it was passed without distress or difficulty; the amount of albumen and of pus varied much from time to time, but on the whole diminished. Sweating was less profuse, and pain in the right flank less severe. On March 6 it is noted that the vomiting and retching had ceased altogether, but the cough became exceedingly harassing, and the tenderness below the margin of the ribs returned.

March 8.—Cough increasing in severity, inflaming the throat, keeping the patient himself awake all night, and disturbing the whole ward. Appetite good. No sickness or sweating. Urine acid; albumen one-twentieth.

From March 11 to 19 he had an attack of diarrhœa. Still no vomiting, retching, or sweating. The amount of albumen now fell to one-thirtieth, and on the 22nd to a mere trace. There is this day a fulness over the right ilio-costal space, with considerable tenderness and tension of muscles, and with pain in the same spot on coughing or straining.

25th.—Again he began to perspire and to retch as before. On the 30th he vomited, and the perspirations increased.

April 17.—Complained of headache for the first time. From this day until the 20th the vomiting and retching continued with more or fewer intermissions, while the cough abated. On the evening of the 20th the sickness became very severe and almost uncontrollable.

21st.—There is less vomiting, but the nausea and the retching remain. He is giddy, and the headache stretching across the forehead is most intense.

29th.—Spent a most restless night, never sleeping at all, but moaning and retching incessantly. Muscular fibrillation is well-marked over the chest, and the red cerebral streak easily elicited on the trunk and arms. He is listless, drowsy, and confused in intellect.

30th.—Passed a restless and delirious night. He is now unconscious, clenching his hands and tossing his limbs about convulsively. In the evening he died.

Two ophthalmoscopic examinations were made by Mr. Humphreys, one about a month before death, when nothing abnormal was noticed; the other two days before, when there was a slight blurring seen at the margin of each disc.

Autopsy (abridged from Dr. Sidney Coupland's report).—The sinuses of the dura mater were much engorged. There was a loose meshwork of œdematous lymph overspreading the base of the brain, most abundantly about the chiasma. The temporo-sphenoid and frontal lobes on each side were adherent, and the folds of the pia mater in the Sylvian fissure studded with small translucent granulations. The lateral ventricles were dilated and full of fluid; their walls were softened. The foramen of Monro was expanded to the size of the forefinger, and there were granulations on the velum interpositum. Both lungs were adherent, most firmly at the apices, by old fibrous bands. Near the summit of the right lung was a thick-walled vomica, the size of a hazel-nut, surrounded by dense pigmented fibrous tissue, the superjacent pleura being puckered. In the neighbourhood of this cavity and scattered throughout the upper lobe were groups of firm, pigmented granulations, along with a few that were semi-translucent, but there was no diffuse dissemination of tubercle. The lower lobe was compressed and collapsed. A similar puckering of the pleura existed at the apex of the left lung, and here also was a minute thick-walled vomica, exactly as on the right side. Masses of the size of a bean, composed of densely aggregated fibrous nodules, were met with in the upper lobe, and a few solitary granulations in the lower lobe. In the abdomen, the liver was large, stretching quite across the hypochondria, and below reaching nearly the level of the umbilicus. The liver-substance was pale, friable, and fatty, not yielding the reaction of lardaceous material with iodine; membrane of stomach softened, and coated with a thin layer of adherent mucus; intestines free from ulceration; mesenteric glands generally larger than normal, and in a few instances caseous; peritoneum free from granulations. The under surface of the right lobe of the liver was found to be adherent to the greatly enlarged and diseased kidney, which, however, preserved in some measure the original shape of the organ. In the hilus and about the pelvis was an abundant collection of overgrown and caseous lymphatic glands. The kidney weighed forty-four ounces, and measured seven inches in its long diameter, its girth in this direction being sixteen inches, and in the transverse direction thirteen inches; its surface was lobulated, and of a whitish colour on section. The capsule and its surroundings were found matted together to form a thick fibrous investment, the whole of the organ being filled with a cheesy granular material arranged within large sacculi, which were separated from each other by bands of fibrous tissue, but there was no secreting structure visible. A few ounces of thin fluid, containing numerous white flaky masses like curdled milk, were collected from the cavities, the walls of which were all in a state of disintegration. The ureter was enlarged to the size of an adult forefinger; it was pervious, but its walls showed a thickness ranging from one-sixth to one-fourth of an inch, the lining membrane of the upper part presenting a honeycombed appearance from ulceration. The left kidney, about twice the natural size, appeared to be healthy in all respects. Neither organ exhibited any trace of lardaceous change. The left ureter was healthy. The mucous membrane of the bladder was natural over the whole fundus. On the insertion of a probe, the orifice of the right ureter was seen to be enlarged and conspicuously wider than that of the left. At the extreme lower base of the bladder, and encroaching on the urethra, was a deeply-cut ulcer the size of a crown-piece, with thickened and undermined edges. All around the spot for some distance, but especially on the right side, were multitudes of small, scattered, cheesy nodules beneath the mucous membrane. Similar nodules constituted the base of the ulcer, which apparently replaced the prostate gland. The left vesicula seminalis was converted into a fibrous mass, channelled in various directions by tubes plugged with caseous material. The right vesicula was not caseous, but had undergone some enlargement. The left vas deferens felt like a piece of whipcord, its walls were thickened, its contents caseous, and its bore reduced to a mere pinhole. The right vas deferens was natural. The testicles were healthy. There were no ulcerations in the larynx.

Remarks.—The foregoing case for all practical purposes may be looked upon as an example of primary tubercular disease of the kidney. The corresponding disease in the lungs may have been collateral in origin, or even antecedent, but it cannot be said to have determined the growth of tubercle in the kidney and its appendages. There was no general dissemination of tubercle throughout the system, and if the kidney had been attacked secondarily during such dissemination it would have been attacked in a wholly different way; the post-mortem appearances would have been insignificant by comparison, and

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the symptoms inconspicuous or altogether lost in those of the general disease. As it was, the local symptoms recorded in the notes, although sufficient to stamp the diagnosis with the characters of certainty, were far from exhausting the whole catalogue ordinarily enumerated under the head of tubercular pyelitis. There was no great intensity of dysuria, and as for hæmaturia it was either entirely absent or only discoverable under the microscope. One local symptom often mentioned as common to tubercular and to calculous pyelitis is the appearance at intervals of a transitory swelling in the lumbar region coincidently with the disappearance of pus and albumen from the urine, owing to occlusion of the ureter for the time being. This was once exemplified in our case, at least to the following extent. Along with the occurrence of fulness, tension, and tenderness in the flank, the pus in the urine dwindled down to a mere trace, representing no more of its former volume than might be easily explained by the ulceration of the bladder. The constitutional symptoms were well marked; they were retching, vomiting, emaciation, and drenching perspirations. The first two may be safely ascribed to the kidney; the lungs may, perhaps, claim an equal share in the production of the last two. There are, however, reasons for believing that even the perspirations were of renal origin in the main. At one time it was noted as a remarkable circumstance that the pulmonary symptoms seemed to be in the ascendant, and to cast into the shade the general manifestations of the kidney disease. The retching and the vomiting abated and disappeared, and along with these disappeared also—the inseparably associated symptom—the sweating. The severe attack of almost uncontrollable vomiting that occurred at an advanced stage may have been owing in great measure to the onset of meningitis, which, at the same time, put an end to the cough and the chest symptoms, as is usually the case. As for the post-mortem phenomena, amidst all the chaos and confusion of structure displayed by the kidney and its surroundings, it is simply impossible to say where the mischief began and where it ended; whether in the parenchyma or in the appendages of the organ. On the other hand, the disease in the bladder, as it was slighter in extent and degree of disorganisation, must presumably have been later in origin. The inferior surface of the bladder presented a strange contrast between the urinary and generative organs. The ureter was diseased on the right side and healthy on the left; the vas deferens and vesicula seminalis were diseased on the left side and healthy on the right. Anomalous as this may appear, it is not altogether unintelligible. The disease had already deviated one step in the direction from right to left, when it assumed a central position near the neck of the bladder and within the substance of the prostate. There is nothing wonderful in the centralisation of the morbid growth, propagated as it plainly was in unbroken continuity from the right ureter. Given, then, this central lesion as a new point of departure for the onward transmission of tubercle, there is no reason why the disease should not deviate one step more and pass exclusively leftwards. A central lesion would have no preference for one side over the other, and, if it must needs be unilateral in its range, might as readily attack the generative organs on the left side as on the right. The immunity of the testes deserves to be specially noted. Most unfortunately, the epididymis on each side and the canal of the urethra were not examined.

CHARING-CROSS HOSPITAL.

NOTES OF A CASE OF FRACTURE OF CERVICAL SPINE.

(Under the care of Mr. HIRD.)

[Communicated by Mr. TAYLOR, Resident Surgical Officer.]

C. D., AGED thirty-three, cab proprietor, admitted on May 13, at 10.45 p.m. The patient gives the following account of the accident:—

He was driving an omnibus under a low archway, when the off hind-wheel caught at the corner of the archway. Turning round to look at the wheels of the 'bus, his head came in contact with a beam running across the archway, and was bent forcibly backwards. He immediately felt great pain across his back, and found his legs were quite powerless. Has never lost consciousness, but states that he feels "numbed" all over below his shoulders, that he has "great pain across the bladebones," that he feels "as if something hard were underneath them."

Present Condition, May 13, 11.30 p.m.—Sensation good in head, arms, and chest, down to fourth costal cartilage, indistinct at fifth, and quite lost at and below sixth rib. Breathing apparently entirely diaphragmatic. Forearms, when extended, are gradually drawn up into flexed position. He can, however, extend them voluntarily, but the flexed position is resumed in a few moments; can grasp feebly with both hands. There is absolute loss of motion and sensation in lower extremities. Feels very cold. Pulse full and strong. Obscure depression felt at lower part of cervical spine. No crepitus (the examination being necessarily unsatisfactory).

14th.—Says that he is feeling better. Has slept well. Pain and physical condition as before, with the exception that there is some hyperæsthesia in arms and chest above line of indistinct sensation. Has not passed fæces or urine; no priapism. Pulse 104, full and compressible. No movement of legs on tickling soles of feet. Pupils contracted, regular. Temperature 104·4°. 4 p.m.: Temperature 106°.

15th.—11 a.m.: Partial priapism. Increase of hyperæsthesia above mid-chest and in arms, the falling of the bedclothes causing him to wince. Flexion of forearms less marked; one partially extended. Skin very hot, but slightly moist. Very thirsty. Temperature 103·4°; pulse 60; respirations 20. 12 noon: Is complaining of pain in his back and arms; hyperæsthesia more marked in hands and arms, but does not exist in head and chest. Says that he thinks he can feel his feet touched, but after several experiments this appears to be an error of imagination. Marked priapism. Temperature, morning 99·6°, evening 99·8°.

16th.—The slightest movement of clothes about hands and arms causes pain—even a current of air (reminding one forcibly of the excitability in hydrophobia). There is nearly constant tremulous motion of hands, lips, and tongue when protruded, but he does not complain of cold; a warm blanket, however, appears to ease him. Asked me to see if his "heels were touching," as he thought he "felt them together"; both feet widely separated. Priapism continues. 8 p.m.: Urine rather cloudy with mucus. Temperature morning and evening 98·4°.

17th.—Hyperæsthesia not so marked; cannot grasp with either hand; occasional tremor. Temperature, morning 98·6°, evening 99·8°.

18th.—Hyperæsthesia much less marked. Complains of pain in throat and difficulty of breathing. Priapism as before. Tongue dry and coated. Some lividity of face. Temperature, morning 98·8°, evening 97·6°; pulse 80; respirations 22.

19th.—4 a.m.: Called to see him. "Has had a slight convulsion" (nurse). While standing beside him there occur slight clonic spasms of muscles of arms and cheeks; no frothing of mouth; perfectly conscious; breathing more laboured; lividity increased. 4.45 a.m.: Died in a third convulsive attack.

Post-mortem Examination.—Fifth cervical vertebra, laminæ and spinous process crushed; sixth cervical vertebra, laminæ fractured, separating spinous process from rest of vertebra. Considerable mobility between sixth and seventh cervical vertebræ, but no displacement, the common ligaments being intact. No laceration of membranes of cord. Extensive hæmorrhage into cord substance corresponding to situation of fifth and sixth cervical vertebræ.

WATERLOO MEDICAL OFFICERS.—Just sixty years ago the great battle of Waterloo was fought, and amongst the list of surviving officers are the following representatives of our profession—viz. (taking them in alphabetical order), Assistant-Surgeon George Evers, Surgeon F. Gilder, Surgeon-Major Thomas Smith, M.D., and Surgeon W. H. Young, M.D.

MEDICAL DEGREES AND LICENCES.—As showing the desire to possess diplomas in medicine exhibited by members of the Royal College of Surgeons, who had also undergone an examination in it prior to admission as members, we may state that of 292 admitted from July, 1873, to May, 1874, the collegiate year, as many as sixty-eight have registered the following qualifications, viz.:—L.R.C.P. Lond., 22; L.S.A. Lond., 19; L.R.C.P. Edin., 12; M.B. Lond. and L.R.C.P. Lond., 3; M.B. Edin., 3; L.R.C.P. Edin. and L.S.A. Lond., 3; M.B. Aberd. and L.S.A. Lond., 2; M.D. Lond. and L.R.C.P. Lond., 1; L.R.C.P. Lond. and L.S.A. Lond., 1; M.B. Lond., 1; and L.K. & Q.C.P. Ire., 1. A great number, however, do not appear to have registered.

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Medical Times and Gazette.

SATURDAY, JULY 10, 1875.

THE LATE MR. J. F. CLARKE.

Our readers will, we are well assured, share in the deep regret we feel in announcing the death of our trusted and valued friend and fellow-labourer, Mr. J. Fernandez Clarke. For more than forty years Mr. Clarke had been connected with the Medical Press, and no man worked more earnestly and faithfully in the interests of the profession, and of the public as connected with the profession, than he did throughout that long period. He has given to the public many most interesting details of the struggles and labours of the Medical Press, in his graphic "Autobiographical Recollections," which we began to publish in our pages in the early part of 1870; and we had hoped that he would oblige us with a continuation of them. But he had for some months been in declining health, and he passed away, rather suddenly at the last, on Tuesday, the 6th inst. We must be content now with this brief expression of our sorrow for the loss of such an experienced and able worker, and true, kind-hearted man; but we hope next week to give our readers some account of his life and labours.

THE CONTAGIOUS DISEASES ACTS.

The principle and practice of these Acts for the Suppression of Venereal Disease were affirmed, after a lengthened debate in the House of Commons on the afternoon of June 24, by a majority of 308 to 126. So the controversy for the present is settled. Yet when we consider the enormous energy which has been misspent in the attempt to repeal the Acts, and the most "horrible literature," as Mr. Gathorne Hardy well called it, which has been promiscuously circulated; and when we consider further the decided weight and influence of many of the names amongst the minority, we may well think it worth while to sift the objections to the bottom, and to deal candidly with any residuum that deserves consideration. When we find that the list of opponents to the Contagious Diseases Acts includes John Bright, Sir T. Chambers, Mr. Childers, Corry, H. Fawcett, W. E. Forster, W. E. Gladstone, Sir H. Havelock, Right Hon. J. W. Henley, Kay-Shuttleworth, Knatchbull Hugessen, M'Arthur, Mundella, Newdegate, Ralli, Sheridan, Stansfeld, Cowper-Temple, and Trevelyan, we feel that the opposition is by no means contemptible, and we see that individuals who oppose the Acts are notorious either for extreme religious susceptibility, or for extreme Radicalism, or for both.

The arguments used against the Acts may be classified thus. They may be denounced as unnecessary; or, if necessary, as inefficient. This was an argument relied on by Mr. Stansfeld; but the necessity is affirmed by those who are responsible for the welfare of the army. And as to efficiency—if the seclusion and cure of diseased women do no good, what will? Such seclusion must form part of any scheme for the suppression of prostitution or of disease.

In another column we give an account from our Madras correspondent of the working of the Contagious Diseases Acts in another climate. The conclusions drawn seem in most respects as applicable at home as in India. They are briefly these:—

First, that venereal diseases, whether of the mucous order, as gonorrhœa and soft sore, or of the deeper infective kind known as syphilis, are decreased amongst that part of the population which is influenced by these Acts.

Secondly, that true syphilis is diminished in greater proportion than the other kinds of disease.

Thirdly, that the worst examples of disease are more rare in the unfortunate women.

It would be very difficult to conceive how the operations of the Acts could have any other result. Surely if the seclusion and treatment of diseased women will not check the spread of disease, what will? The statement made by Mr. Hardy, upon medical authority, in the House of Commons, that the Acts had effected a saving of the services of 648 men daily to the British Army at home, cannot be upset even by the ingenuity of Mr. Stansfeld.

The next argument touches principle. It is "no business of the State," said Mr. Henley, "to provide clean sins for the people." Doubtless! But, as Mr. Cave said, they who hold this doctrine must shut up Lock hospitals. If it is no business of the State, it can be no business of private persons, to provide clean sins, or clean sinners.

The next objection to be noticed relates to the liberty of the subject. But the law already limits the liberty of the subject, if liable to spread disease—small-pox to wit. And we, with Mr. Massey, deny the claim that any woman may make to pursue a course of open profligacy unrebuked.

The next objection we believe to be that which weighed with the Radical, as distinguished from the religious, objectors. It is the fear of corruption and tyranny; of false accusation; of the molestation of innocent young women, obliged to earn their own living, and to walk unprotected at all hours through the streets of large towns. Our letter from Madras shows that corruption is at least possible; and if cases of false accusation should occur here, they would require a revision of the whole machinery of the Acts; which, in fact, ought only to be applied to the known, open profligates. But no corruption has been proved here.

There are two other objections, made in a very temperate and sensible speech by Mr. Childers. These point to deficient legislation; that the Acts leave prostitution unchecked, and deal only with its consequences. For our own part, we would have all juvenile prostitutes summarily dealt with; and would imprison from time to time every prostitute who carried on

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her business openly after due warning, whether diseased or not. But we believe that the Acts, as in operation, do afford what the moralist desires—that is, not only physical cure, but opportunity of amended life, to the unfortunate women; and so as this be done, it matters little whether the law is directed primarily against the sin, or against the disease.

A REVIEW OF THE DEBATE ON PUERPERAL FEVER.

THE debate on Puerperal Fever, inaugurated on April 7 by Mr. Spencer Wells, has now occupied nearly the whole of three meetings of the Obstetrical Society, and still there is no symptom of flagging, either in the number of those anxious to speak, or of the attentive audiences who on each occasion crowd the room. It seems, however, to be definitely settled that the discussion is to close at the July meeting, which is the last this season. We may, therefore, fairly consider the bearings of the debate as far as it has gone, and at the same time announce our intention of reviewing the reply of Mr. Wells, along with the remarks of any others who may speak after the close of the whole discussion.

There can be no doubt that this debate will take a foremost place among similar debates in this and former years; and the reasons of this are not far to seek. The subject is one of such enormous importance, not only to the profession, but to the whole human race, that though our knowledge of it is necessarily somewhat theoretical, still there is an immense collection of well-authenticated facts on which to found theories, and it is connected with a branch of the profession which is so widely practised, that there were sure to be plenty of researches and observations, with the opinions founded on them, to record. But, apart from this, we think much of the success is due to the manner in which the subject has been placed before the Society, the questions being so framed that they give, not only to obstetricians, but to all members of the profession, a fair field for dealing with the parts of the subject which they have had the best chances of studying; and while they to some extent shadow forth the opinions which Mr. Wells has formed, they are, at the same time, free from such dogmatic assertion as might, on the one hand, have led to controversy rather than the recording of facts; or, on the other, have prevented some from freely expressing opinions adverse to those of the distinguished framer of the questions.

In endeavouring to gather into one focus the mass of facts which have been placed on record, with the very varying opinions founded upon them, we think we cannot do better than take the questions in the order in which they were propounded.

To the first question(a) an almost unanimous answer in the negative has been given, though one speaker seemed rather to lean to the idea that there is a distinct disease with definite course and symptoms; and Dr. Fordyce Barker, of New York, has announced his intention of strongly supporting this view at the next meeting. When we come to the second question, no sign of unanimity remains; but, taking first the specific fevers, we find two directly different opinions warmly advocated, while some of the speakers, using the same reports of cases, come to the most opposite conclusions—the one party insisting that these fevers cause in parturient women a form of fever which is peculiar to them, and differs from the same disease when it attacks other people; while the other contends that not only do puerperal patients take these fevers, and pass through them with just the ordinary symptoms, but that they are not more liable to take them than others. The two views are both so ably supported, that it is extremely difficult to know which is the right one; but it seems to us that the advocates of the former rely almost entirely on negative evidence, while the other side certainly brings forward a mass of positive facts which it seems impossible to put aside. Here we see, however, one of the great advantages of the discussion, as the various views are definitely placed before the profession, and will serve as important landmarks for future inquirers. Many of those who would exclude the specific fevers from the list of active agents in the production of the disease are not prepared, however, to take the same ground with regard to the second division of the question, which deals with the part played by surgical fevers and erysipelas. But here again, while there is a general opinion that a very large proportion of cases of so-called puerperal fever are due to some poison, the most varying views are held, not only as to the nature of the poison, but also as to the method of its production.

On the whole, the weight of opinion seems to support the view that a very large proportion of the cases—some speakers insist that all—are due to poison, either coming from without, and conveyed by the medical attendant or nurse, either by direct contact with the parts of the patient, or, as some think, by the breath; or, on the other hand, arising from changes in the secretions of the patient herself, without any infecting agent. The consideration of this part of the subject necessarily led to a reference to the analogy between puerperal fever and those surgical diseases which we call septicæmia and pyæmia; and two distinguished surgeons added considerably to the interest of the debate by the expression of their views; though here again the difficulty of the subject and the want of positive facts to guide us was apparent in the opinions they expressed with regard to pyæmia. Most of the speakers agree in believing that, from whatever cause the various forms of puerperal fever arise, when once a woman is attacked the discharges from her may excite the disease in other parturient women if brought into contact with them,—some believing that there are different forms or degrees which will perpetuate themselves by contagion.

Considerable importance is also attached by some to the peculiar physiological condition of the lying-in woman, and to the changes, not only in the constituents of the blood, but in the circulation and in the nervous system after delivery; as also to the process of secreting the milk, on the one hand, and the involution of the uterus, with the excretion of the morbid materials, on the other. Some, however, argue that there is no febrile state after delivery, and that the state of the blood, so far from being a morbid one, is a special provision of nature for the safe performance of the functions under peculiar conditions. The state of the nervous system and the mental condition, more especially in a certain class of cases, which we need not specify, has also been dwelt on as a predisposing cause. Two of the speakers also referred to the blood lost by the patient as a predisposing cause; and we are inclined to think that this has hardly received the attention it merits.

Questions one and three are so closely related, that when the first has been answered, a tolerable opinion can be formed as to the answer to the other; but those speakers who contend for a peculiar condition of the patient after delivery must be

(a) 1. Is there any form of continued fever, communicated by contagion or infection, and occurring in connexion with childbirth, which is as distinctly caused by a special morbid poison, and as definite in its progress and the local lesions associated with it, as typhus or typhoid, scarlet fever, measles, or small-pox?

2. May all forms of puerperal fever be referred to attacks of some infective continued fever—as scarlet fever or measles—occurring in connexion with childbirth, on the one hand; or, on the other, to some form of surgical fever, or to erysipelas, caused by, or associated with, the changes in the uterus and neighbouring parts, following the process of childbirth?

3. If all cases of contagious and infectious diseases which occur under other conditions than that of childbirth are set aside, does there remain any such disease as puerperal fever?

4. Assuming that a form of continued fever—communicable by inoculation, contagion, or infection—does frequently occur in connexion with childbirth, how can its spread in private and in hospital practice be most certainly prevented or checked?

5. What relation have bacteria and allied organic forms to the pyæmic process in the puerperal state?

6. What is the value of antiseptics in the prevention and curative treatment of puerperal fever?

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considered as, to some extent at least, holding that there is a puerperal fever, though not exactly in the sense in which the disease is ordinarily spoken of. The form of this question was objected to by Dr. Arthur Farre, because he did not think we could compare parturient women with ordinary people, owing to peculiar processes going on in them, and already referred to. Mr. Wells having referred to the way in which the disease is defined in the nomenclature of disease, and referred to Dr. Farre in connexion with that definition, Dr. Farre explained that it was not meant to imply that the College of Physicians dogmatically defined the disease, but merely as a means by which it might be identified.

If the first three questions brought out such a diversity of opinion and varying interpretation of such facts as we are in possession of, it is not to be wondered at, after the result of the debate on the Germ Theory, at the Pathological Society, that the following questions should be found extremely difficult to answer.

From the remarks made by Mr. Wells on the opening night, we suppose him to be, to some extent at any rate, a believer in a germ as opposed to a physical theory of the causation of this class of diseases, and we shall look forward with interest to any remarks from him on the subjects of these three last questions. At present no answer has been returned to any of them, except to suggest such common-sense precautions as isolation when possible, and cleanliness of the patient and those attending upon her; while those who have touched upon the subject of antiseptics have only done so to say that they cannot see how to apply them to the same good end as in surgical hospitals, or to advocate their use for the hands or for washing away putrid discharges,—giving little notice to the chance of using any antiseptic agents as preventives rather than cures.

The question of the conduct of practitioners, which has arisen as an accidental accompaniment of the debate rather than from any direct bearing it has on any of the questions (though indirectly it is connected with the prevention of the spread of the disease, especially in private practice), has called forth a tolerably unanimous opinion, to the effect that absence from practice, in consequence of having to see a case or cases of the disease, is not necessary, and that it is impossible to avoid attending both infectious diseases and lying-in women at the same time in general practice. But, while this is said, practitioners are also advised that they cannot be too careful in regard both to their clothes and persons. The public and those who administer the law are advised to depend more completely on the evidence of experts, and to avoid vexatious and unnecessary interference. Agreeing with those who hold these views, we think there is some danger that the opinions expressed by many as to the absence of special liability to infection in the puerperal state are calculated to make some, who may be already erring on the side of too little care, go still further astray in this direction; and especially should we fear this may be the case with persons so ignorant as many midwives are, when they read or hear of views so strongly expressed as they have been in the present discussion.

In conclusion, we think the discussion up to the present time has rendered very good service, by the very fact of its calling forth such differences of opinion; as it shows us that, however strongly we may hold certain views, others equally strongly, and with as large or larger experience, differ from us. Hence we are induced to examine once again into the foundation of our faith; and if each one who has taken part in, or listened to, the discussion honestly does this, with a mind open to conviction, and only allows actual facts to lead him, we may confidently look forward to much good fruit, if we cannot be sanguine enough to hope that all the difficulties which surround the subject will be quite cleared away.

THE WEEK.

TOPICS OF THE DAY.

We learn that Charles Stenson was found guilty at the Sligo Assizes, on the 2nd inst., of the manslaughter of a boy, by inoculating him with the virus of small-pox. We gather from the report of the evidence, which is very imperfect, that in December last a number of children were inoculated by Stenson, apparently in the manner usual with vaccine virus. Within a short time, however, several of the children were found to have sickened of an eruptive fever, which answers in the description to variola, and four of them died. It does not appear from the report what plea of defence was offered by the prisoner. The sentence was five years' penal servitude.

Among those who had the honour of being invited to attend the garden party of the Prince and Princess of Wales, which took place at Chiswick on Monday afternoon last, were the following ladies and gentlemen, viz.:—Sir George and Lady Burrows, Sir William and Lady Jenner, Sir Thomas and Miss Watson, Sir William and the Misses Fergusson, Sir William and Lady Gull and Miss Gull, Sir Charles Locock, Sir James and Lady Paget and Miss Paget, Dr. Acland, Mrs. and Miss Acland, Dr. Birch, Dr. G. Vivian Poore, Dr. Arthur Farre, Professor Huxley, Dr. Frederick F. Quin, Dr. and Mrs. Sieveking, Dr. J. M. and Mrs. Minter, Dr. Oscar Clayton, Mr. Prescott G. Hewett and Miss Hewett.

The Parliamentary return obtained by Colonel North, respecting the proceedings at the inquest upon the body of Sir Charles Lyell, has been issued. It contains some correspondence which passed between the Lord Chancellor and Dr. Hardwicke in March last. After receiving Dr. Hardwicke's explanation of the course he pursued, Lord Cairns, through his secretary, stated that, while ready to believe that the Coroner had acted under a scrupulous sense of what he believed to be his duty, he (Lord Cairns) felt obliged to point out to him, as he had done, the considerations which led him to the conclusion that, in a more sound and careful exercise of his (the Coroner's) discretion, he would have adopted a different course; and Lord Cairns expressed a hope that in future more accurate and reliable information would be obtained before proceeding to public investigations of death which must be so harrowing to the feelings of relatives and households.

The rooms set apart, and suitably fitted up, by the Guardians of St. Pancras for the holding of coroner's inquests, were first made use of last week, when the coroner and jury expressed their appreciation of the convenient court that had been provided. Two of the guardians attended this inaugural occasion. *Apropos* of the above circumstance, we perceive Mr. Bedford refused to hold an inquest a few days ago in Westminster House of Correction, on the body of a prisoner, because the room assigned in the prison for holding his court was "of a most inconvenient description, being nothing more than a common kitchen, dark and cold." It is difficult to understand the reason for the visiting magistrates refusing Mr. Bedford's application previously made for more suitable accommodation. Mr. Bedford will be quite justified if he adheres to his determination, for his own self-respect and the dignity of his court, to discontinue holding any further inquests inside the prison until some more fitting place for his court is provided. We hope the example of the Guardians of St. Pancras and of Islington will be followed by other parishes equally needing similar conveniences for coroners' inquests.

Mr. J. A. Shaw Stewart drew the attention of the Metropolitan Asylums Board meeting, on Saturday last, to some facts showing how small-pox had been spread by a person who was anxious to conceal that the disease was in her house.

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A man named Geale, whose wife had just died in the Stockwell Asylum from small-pox, had followed his wife into the same place, having also taken the disease. Both these persons came from a house in Sussex-place, Tottenham-court-road, in which several families lived, and some little time ago a child was attacked in the house with a disease which the landlord said was measles, and a second being attacked, the poor woman Geale, not thinking it was the small-pox, kissed them, and took the disease. The medical gentleman in attendance on the children was also asked to attend the woman, and he kept hidden from the husband and wife the nature of the illness, telling them the Latin name of the disease, and thus the woman's removal to the Asylum was delayed until too late, for she died forty-eight hours after admission. Mr. Stewart moved that the parish authorities of St. Pancras should have their attention directed to the house, to secure its disinfection. This was adopted, and Mr. J. Salter stated that the most energetic measures were taken in that parish to carry out vaccination.

The Apothecaries' Society, London, last week brought an action in the Dudley (Staffordshire) County Court against Mr. Adam Lawton, a chemist, of High-street, Price's End, near Dudley, which is of some importance. The defendant practised and acted as an apothecary without the necessary certificate. The proceedings were taken under 55 George III., c. 194, which imposes a penalty of £20 for such an offence, and that sum the Society claimed. The defendant admitted his liability, and judgment was given for the full amount.

The representatives of local authorities of districts in the Thames Valley held a consultation on Tuesday at the Local Government Board, Whitehall, at which a resolution was adopted, declaring that the difficulties of locally disposing of sewage were so insuperable that a combination of local authorities was desirable in order that the question might be dealt with in an effectual way.

The offices of the Royal Commission to inquire into the practice of vivisection are at 13, Delahay-street, Westminster, where the future meetings of the Commission will be held.

The *Bombay Gazette* of the 11th ult. states that proposals have been made, and will probably be carried into effect, for establishing sanitaria on the hills for the wives and families of European soldiers. The want of a provision of this sort has long been felt, and it is to be hoped that some practical measures may be at last taken to carry out the object in view.

At a meeting of the Corporation of Dublin, held on Monday, July 5, Dr. George B. Owens was nominated as Lord Mayor for the year 1876. Dr. Owens, who is a Doctor of Medicine of the University of Glasgow, is also a Justice of the Peace for the city of Dublin, and has for many years enjoyed a seat in the Municipal Council, to the head of which he has now been raised by the unanimous choice of his colleagues.

THE DISCUSSION ON PUERPERAL FEVER.

THE adjourned discussion at the Obstetrical Society was brought to a conclusion on Wednesday night, the time being prolonged half an hour to allow Mr. Spencer Wells to reply.

At the commencement, two letters were read, one from Geneva and the other from Ontario, relating some cases of scarlet fever and measles in support of the oft-repeated statements that puerperal women may be exposed to these diseases and not take them.

Dr. Fordyce Barker, of New York, then continued the debate, which, he said, was watched with great interest in America. He thought it did not tend to make men of one mind in a house. Passing to Mr. Wells' questions, he dwelt on the qualifying phrases, especially of the first one. It would have been better had the words "*distinctly* caused" read "*often* caused." He would, for one, have accepted the latter, but could not the former. He related cases of pyæmia and diphtheria occurring in the same houses with cases of typho-malarial fever, and evidently from the same cause, and objected to the idea that there was any special morbid poison for such diseases. "Identity of cause" and "identity of result" he did not consider at all necessarily linked together. The definition of puerperal fever in the nomenclature of disease he considered perfect. There are three sources from which we draw our information as to a disease like the one under discussion:—1st. Causes from which we do not learn much as medical men; but they are important to study from a sanitary point of view. 2nd. Clinical phenomena. Under this head the speaker dwelt chiefly on the fact that erysipelas produces puerperal fever in a parturient woman, and that puerperal fever may produce erysipelas in a man or child. The clinical phenomena of puerperal fever he considers quite different from those of pyæmia, etc. Pyæmia and such diseases attack a puerperal woman, and are modified by her state. 3rd. Pathological anatomy. Under this head he insisted that to study it in epidemics in hospitals and towns, where it was likely to be mixed up with other diseases, was not a correct way of arriving at a good result. It was the country epidemics we must study. He did not believe we should find constant appearances at post-mortems on women dying of puerperal fever, and he argued that neither did we in people dying of enteric fever, etc. He did not believe in every case we could be sure by post-mortem that a patient died of enteric, scarlet, or any other fever. He concluded an eloquent and humorous speech with a cleverly introduced quotation from a speech of Cromwell to the Scotch Assembly.

Dr. West followed, objecting to Mr. Wells having introduced the subject of bacteria, etc., as a cause of puerperal fever, because the subject was not ripe for discussion, as shown by the debate on the germ theory, in which capable men differed not only in their conclusions, but in the reading they gave to actual facts. Thirty-six years ago Dr. Fergusson had written that puerperal fever depends on a vitiated state of the fluids of the body, and in puerperal women such a state was very likely to arise, and he does not think we have got much beyond that yet. He pointed out that puerperal fever has neither characteristic features like small-pox, scarlet fever, etc., nor does it produce certain results like the pustule or the rash. It occurs now from one cause, now from another, primiparæ being especially liable from the difficulties of first labours. We must carefully study all the special peculiarities and surroundings of each of our patients; for nervous influences and mental emotions will cause it as well as poisons. He thought it a mistake to attempt to too closely define such diseases when our knowledge of them was so imperfect.

Dr. Snow Beck followed. He thought it possible we might all be mistaken; and he objected to the definition of Dr. Barnes as too general, and to that of the Nomenclature as too indefinite. There was no proof that elimination was arrested during an attack of puerperal fever. If it was, the uterus is made of healthy tissues, and the absorption of these should do no harm. He considered there were two classes of cases—first, those connected with the specific diseases; and second, those arising from accidents during parturition. He read a long address, of which it is impossible to give more than a sketch in a short account like the present.

Mr. Green also read a somewhat lengthy paper, which will be found in the shorthand reports of the debate.

Dr. Routh then gave his experiences when in Vienna, during the great epidemic of 1846 and 1847. He argued, from observations then made, that there are different forms, one of which is not contagious unless the discharges are brought into direct contact with the patient; thus, this form is something like enteric fever. In the other class of cases, however, the disease was

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very contagious. He illustrated his views by a comparison of the number of instances of its occurrence in the cases attended by students who came fresh from the post-mortem and dissecting-room, and those attended by midwives.

Mr. Wallace was glad to hear Dr. Routh support this view of a slightly contagious and a very contagious variety. He had also observed this difference.

Another gentleman, whose name we could not catch, then read a lengthy report of cases, etc., amid unmistakable signs that the Society was waiting anxiously to hear Mr. Wells reply.

Mr. Spencer Wells congratulated the Society on the success of the debate, and on the number of distinguished men other than the ordinary Fellows who had taken part in it. Referring to Dr. Barker's remarks, he contended that a specific morbid poison must produce identity of result, just as a seed produces a peculiar plant, or a small-pox inoculation produces small-pox. If we allow a disease and define it, we must be prepared to show a cause for it. He agreed with Dr. West, that we are only on the threshold of inquiries into the germ theory, etc.; but, in asking the question, he hoped to bring some gentlemen forward who have studied this subject particularly. He then read some interesting reports by Dr. Wm. Farr, of the Registrar-General's department, tracing cases of puerperal fever which have occurred lately; and also letters from various men as to the close connexion of erysipelas and puerperal fever; also one relating cases of typhoid fever and puerperal fever occurring from the same apparent cause; but he argued that as we know sewer-gas contains many different chemical gases, so it may, and probably does, contain the seeds of various diseases. He read a remarkable letter from Dr. Thomas Keith, of Edinburgh, showing the close connexion between erysipelas, puerperal fever, and pyæmia, or septicæmia, after ovariotomy. In conclusion, he referred to the views which had been expressed on "homicide by infection," and eloquently appealed to the Society not to give the sanction of its great name to shelter ignorant women who had wilfully persisted in spreading death after due warning, but rather to encourage practitioners to greater care, not only in their own conduct, but in the training of the midwives they employ.

ARMY MEDICAL DEPARTMENT PAMPHLETS.

Although we have frequently stated it as our opinion that, pending the promulgation of an improved order of things for the Army Medical Department by Mr. Hardy, the flow of pamphlets advocating all sorts of changes and improvements would be much better suppressed, we have been so strongly impressed by the views put forward in one of these small publications, which we have lately received, that we feel bound to notice it. The pamphlet in question bears the motto "Union" on its title-page; and from the fact of its being printed at the Indian Railway Press, Jubbulpore, is evidently the production of an officer of the department, doing duty out of England. The writer is strongly in favour of the recent arrangements which have abolished the regimental hospital system; and he affirms that the first sentence of the Warrant of 1873, doing away with regimental hospitals, was written seventeen years before the Crimean War, but the conservative tendencies of our army are so strong, that it took the long intervening lapse of years to complete it. The regimental hospital system, as it recently existed, is carefully reviewed, and its drawbacks minutely noted; after which the advantages of the unification system are carefully set out. Amongst the most prominent of these is the fact that the establishment of station-hospitals obviates the necessity of having one arrangement for peace and another for war, whilst the terrible danger of inaugurating new systems in the field is thereby avoided; and to this latter error in the old days the author attributes the former maladministration of the war general hospitals. There is a certain amount of earnestness about the views expressed in this pamphlet which commands respect, even where one is not quite in accord with the writer. Thus, he asserts that if any officer of the army—military or medical—imagines that the introduction of the new system means easier work, he is thoroughly and entirely mistaken; on the contrary, the unification system will entail harder work, more responsibility, a greater amount of forethought, and more attention to duty than ever were necessary under the old system. So far we have nothing but praise for this little work, but the conclusion touches upon those vexed questions which we fear will never be settled to the satisfaction of all parties—uniforms, titles, and relative rank. Whilst conceding that in some of these matters the military medical officer has just grounds for complaint, we cannot lose sight of the fact that these are the sore points at which the Horse Guards authorities wince, and as such they require to be very tenderly handled. But we cordially agree with the author when he says that all the army medical officer requires is a fair field, untrammeled by petty regulations; and in the campaigns and epidemics of the future he will do, as he has often done in the past, good and trusty service for the army and the country. Amongst the shower of pamphlets from members of the service, under which Mr. Hardy announced himself some time since to be suffering, we presume the present was not included. Nevertheless, it would be well worth the Secretary of State for War's perusal, before he issues the next warrant for the Army Medical Department.

BILATERAL IRRITATION OF THE PNEUMOGASTRIC NERVES IN MAN.

An experiment, so nearly attended with serious consequences that it is scarcely likely to be repeated, was tried last April by Dr. Thanhoffer, of Budapest, and consisted in the simultaneous compression of both pneumogastric nerves in a medical student named Ignacz von Kovacs. The young man, who was a willing martyr in the cause of science, had already undergone a number of experiments in which the vagus on the right side of the neck was compressed by himself, at the inner edge of the sterno-mastoid muscle, and on a level with the external angle of the thyroid cartilage, by means of the nail of the incurved index finger of the left hand. The result almost entirely confirmed the conclusions which Ludwig and others have drawn from their experiments on animals—namely, that irritation of the vagus diminishes the frequency of the pulse, and prolongs the duration of each individual beat. Dr. Thanhoffer found, however, one point of difference—namely, that there was not, as had been observed in dogs, a marked diminution of the blood-pressure as indicated by the pulse-tracing.

The bilateral compression of the vagi was made by Kovacs with the thumb and forefinger of the left hand; the forefinger being on the right, and the thumb on the left nerve. The first few attempts were apparently unsuccessful, probably because both nerves were not exactly hit; but the last time Dr. Thanhoffer was startled by finding that his pupil returned no answer to his questions, but kept convulsively pressing his neck, while his eyes were starting and glassy. With great difficulty his hand was at last wrenched forcibly from his neck, with the fingers still bent as when they were compressing the nerves; and even then his consciousness did not immediately return, and it was not till he was lifted from his seat that he began to come gradually to himself; but it was some time before he could stand. He afterwards stated that his sensations at this time were as if his head was bound with iron rings, and as if there was an intense pressure on the whole surface of his body. Soon after the experiment he had a rigor, and began to be feverish; his tongue was furred, and his appetite gone, and he had a feeling of nausea during the rest of the day. Happily he was able to sleep well at night,

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and only suffered from severe headache the next morning. Since then he has been quite well. The pulse phenomena observed during the compression of the pneumogastrics were, as shown by a sphygmograph on Kovacs' right wrist, as follows:—From the moment when pressure began, the line traced by the lever sank continuously for sixty-seven seconds, then rose again very slightly, and then stood quite still, in consequence of the arrest of the heart's movements. The pulse, which had beaten regularly eighty a minute before the experiment, was seventy-four two hours after, and continued so until one o'clock in the afternoon, the beats being irregular. Immediately after the experiment, Kovacs' pulse and heart's impulse were strong, and the heart's sounds clear, but toneless. The whole details of this remarkable experiment, with the sphygmographic tracings, will be published at the completion of Dr. Thanhoffer's researches. The preliminary notice, to which we are indebted for the above description, will be found in the *Centralblatt* for May 29.

THE LECTURERS ON INSANITY AND THE EXAMINING BOARDS.

We have received from the honorary secretary of a committee, composed of all the leading lecturers on psychological medicine in England and Scotland, a copy of a memorial which they have addressed to the various examining boards in the United Kingdom on the subject of instruction in insanity. They point out the absence of any provision in general hospitals for teaching insanity and various other nervous diseases clinically to students, although the number of medical men required as officers on medical attendants in asylums and other establishments for the insane is annually increasing; and although there can be no doubt that those who adopt this department of practice should have some previous practical and scientific knowledge of it. They further point out that at present there is a distinct discouragement offered to students who wish for a clinical knowledge of insanity, because only one examining board—that of the University of London—recognises an attendance at an asylum as equivalent to the same time spent in a general hospital. The memorialists, therefore, humbly pray the other examining bodies to follow the example of the London University, and to allow students to substitute, if they so desire, a three months' course of clinical instruction in the wards of a lunatic asylum for the same period of attendance in the medical wards of a general hospital. Without at present discussing the details of the memorial, or the motives which may have led to its preparation, we can only say that it seems to us a step in the right direction. One question, however, is forced on us in looking over the list of signatures appended to it—namely, Why are the Irish lecturers on insanity conspicuous by their absence?

TROOPS FOR FIJI.

The Government has decided to send out a company of engineers to Fiji, and they are expected to embark this week at Gravesend for their destination. As the sanitary condition of our lately acquired territory is said to be in such an unsatisfactory condition, the troops will be accompanied by a medical officer, and it is rumoured that Surgeon Carew, of the Army Medical Department, will proceed in medical charge of the detachment. Latest accounts from Fiji are unanimous in stating that the severe epidemic of measles has begun to decline. The natives are still, however, reported to be in a panic-stricken condition, and as the limited staff of colonial surgeons on the spot will be fully employed for some time to come, it is a commendable piece of forethought on the part of the authorities to provide the soldiers and their families, now embarking, with a medical officer, whose services will be exclusively at their disposal in the event of the health of the colony not having been fully re-established upon their arrival in it.

PARLIAMENTARY.—POLLUTION OF RIVERS—SALE OF FOOD AND DRUGS—PUBLIC HEALTH.

In the House of Lords, on Thursday, July 1,

The Pollution of Rivers Bill passed through Committee.

The Earl of Airlie, commenting upon the Bill as amended, said that no amount of filtration would get rid of the deleterious matters in sewage, and, unless powers were given for the acquisition of land for utilisation purposes, he did not see how the object in view could be attained.

Considerable discussion ensued upon Clause 3, one of the most important clauses in the Bill, as it provided for the due control of manufacturers' pollution, as also of liquid matters passing into the river. The not-contents were mostly desirous of passing the Bill only so far as it applied to solid matter. The clause proposed that "every person who conveys into any stream, through or by any sewer or channel, any solid or liquid sewage matter shall be deemed to commit an offence against this Act. Provided that where matter of the same description was conveyed to the stream through the same sewer or channel during the month of January, 1875—(1) no proceedings shall be taken against such person until after the end of the year 1876; and (2) such person shall not be deemed to commit any offence against this Act so long as he is using the best practicable and available means to purify such matter before it is conveyed into the stream."

The clause was passed by a majority of forty.

On Clause 4,

The Duke of Northumberland moved the insertion of the word "discolouring" after "noxious," his object being to render the discolouring of a river or stream an offence.

The Marquis of Salisbury, regretting that rivers should be discoloured by manufacturing processes, said that it could not be got rid of if the factories were to exist at all. He defended the clause, on the ground that it would facilitate the progress of a more comprehensive measure next session.

The Lord Chancellor explained that by Clause 5 every sanitary authority having sewers under its charge should give facilities to manufacturers to carry noxious fluids into the sewers.

The clause was then agreed to.

On Clause 6, which related to the power of the sanitary authority,

The Marquis of Lansdowne pointed out that in the original Bill this clause was permissive, and now it was compulsory. The duty of enforcing the Act would devolve upon the medical officers.

The clause was agreed to, as were also other clauses, and the Bill as amended was ordered to be reported.

On Monday, July 5,

The report of amendment to the Sale of Food and Drugs Bill was received.

The Duke of Richmond having informed the House that he had received a vast number of communications from Quarter Sessions, and other influential persons, objecting to the use of the word "knowingly" in the third and fourth clauses, decided therefore, on the motion for the third reading, to substitute for the word "knowingly" such other words as might be necessary to meet the objections.

Lord Penzance moved the omission from Clause 5 of words which excepted from punishment for adulteration persons who sold articles containing harmless foreign matter, mixed with them for the purpose of making them portable or palatable, of preserving them, or of improving their appearance, provided such matter was not used for the purpose of concealing the inferior quality of the article.

The Duke of Richmond observed that an article might be "portable" without requiring a handle—as, for instance, ether. Then, as to the mixing of articles, he did not suppose it would be possible to get lard without salt. However, he would endeavour before the third reading to give effect to the noble lord's views by amending Clause 5 so as to make it agree with Clause 7.

The amendment was withdrawn, and the report was then agreed to.

On Tuesday, July 6,

The Earl of Camperdown endeavoured to introduce into the discussion in Committee of the Public Health Bill complaints with reference to the metropolitan water-supply, with special reference to the method of levying increased rates proportionate to the rise of value of property in the metropolis. He apprehended that the companies, as soon as the revaluation was

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completed, would bring large additional sums into their coffers, without extending their works or improving the quality of the water.

The Duke of Richmond explained that the metropolis is excluded from the operation of the Public Health Act.

On Clause 124,

The Duke of Somerset moved the insertion of words which would have the effect of bringing under the operation of the Bill persons who, suffering from contagious disorders, wilfully communicated such disorders to other persons.

The Duke of Richmond said he was unable to accept the amendment, and remarked that it had not been thought advisable to deal with contagious diseases in the present Bill.

The proposal was negatived.

The remaining clauses being agreed to, the Bill passed through Committee.

LETTERS FROM MADRAS.

No. XV.

THE SHADY SIDE OF SOCIETY.—PROSTITUTION AND CONCUBINAGE—DANCING-GIRLS AND TEMPLE PROSTITUTES: HOW RECONCILED WITH RELIGION AND MORALITY—INTRODUCTION OF CONTAGIOUS DISEASES ACT, 1868—HEALTH OFFICERS AND LOCK HOSPITAL—BENEFITS OF THE SYSTEM—ABUSES AND FALSE ACCUSATIONS: BRIBERY; EVASIONS—NEED OF LAW AGAINST JUVENILE PROSTITUTION—EFFECT OF THE ACT IN A SMALL CANTONMENT, ST. THOMAS'S MOUNT.

PROSTITUTION and concubinage are things regarded in different lights by different sections of this very mixed community. The Europeans and East Indians and most of the other Christians look on them much as people do at home. But amongst certain classes of the natives, they are, as Dr. Stanborough, the Health Officer, observes, "viewed with leniency, if not as an established and recognised institution," and an easy way of earning a respectable livelihood. Amongst the Hindus, dancing-girls are considered necessary attendants on the pagodas, or temples of the gods, where they regularly perform for the recreation of the divinity represented by the idol. Their services, too, are called for at all social and family ceremonies with which religion is intermixed—such as marriages. Nay, so little are they regarded with abhorrence, that women who want children, and pray for them, think that they cannot possibly do a more pious act than the devoting their child, if a daughter, to the service of the temple, or procuring a female infant for that purpose if the god grants them a son. The girls so devoted are called *Dasis, i.e.*, servants, or *Devadasis*, servants of God, and must be admitted and stamped or branded for their life of shame before they can walk. "Four, five, or more of them," says Dr. Stanborough, "reside together in a house under the superintendence of a retired dancing-girl, who is styled the mother, and in fact is so considered by them all. She adopts them when very young, and instructs them in dancing and singing. They perform funeral ceremonies for each other, and add the gains of their prostitution to the general fund for common support."

As these girls have religious, albeit confessedly sinful functions, and as the English do not interfere with the religious faith or practices of the natives, they are not molested. In fact, they are not, and cannot be treated as "common" prostitutes; they are *deliciæ domini* as Virgil says; they live in concubinage with Brahmans and other respectable members of the Hindu community, of certain castes, and with no other persons. So, if I may parody a legal phrase, they are not common prostitutes, though to a certain extent prostitutes in common.

The Hindus have the habit of using the appropriate English words to designate their own doctrines and ceremonies; thus they call their Pagodas "churches," and their temple-wardens "church-wardens"; and so one's curiosity is piqued by hearing the term "church dancing-girls" applied to these pagoda functionaries.

In conversing with intelligent Hindu friends on the matter, one seems conscious that they feel this to be a weak part of their religious system. They profess to believe in one god (as all the more intelligent do), and they boast, justly, of the excellent moral precepts inculcated by their *gooroos* or teachers; and yet, in the very temple, before the presence of the deity himself, they permit licentious dances to be performed by women of immoral lives kept for the purpose. It would be out of place here to enter into religious questions, but I may shortly quote the explanation of the matter given me by a very learned friend. "The deity," he said, "although infinite and eternal, has been pleased from time to time to manifest himself, for some special good purpose, by incarnation in finite form and shape, in the likeness of man, or perhaps of some animal, such incarnations being known as 'Avatars.' But when incarnate as man, he is a man, and behaves as such, and displays all the passions and propensities of man; consequently, in our adoration of him, as god incarnate in man, we offer him the spectacles which delight man most, and these are precisely music and dancing-girls." "Besides," added my friend, "Who can tell? These spectacles attract the young, and giddy, and thoughtless; but many a young man who comes to see the girls may have his soul impressed by the sanctity of the place, and may be led to a moral life and the performance of ablutions. The sinner is caught by the bait, and beguiled into sanctity." (The word "ablutions," I may say, comprises the prayers and mystical sentences or muntrums which are uttered by pious persons when they wash themselves as an act of devotion.)(a)

I must leave my friend's arguments without comment, and go on to say that the dancing-girls are the best educated—in fact, till of late were considered the only women amongst the Hindus who possessed either learning or accomplishments. From this, two or three perverse consequences follow. If, argues the Hindu of respectability, immoral women know how to read and sing and do needlework, then reading and singing and needlework are immoral, and my wife and daughter shall be ignorant. So Cæsar did not like his wife to dance too well. But if the wife is ignorant and respectable, it cannot be wondered that our friend thinks it little harm to have a piquante and amusing dancing-girl as a concubine. Then, to do away with this temptation, says the English philanthropist, "educate your respectable women, and make them fit and intellectual companions, and we will open schools for your girls." But when the school is opened it is suspected that amongst the most diligent pupils are the young ladies in training for the life of a dancing-girl, and with these no respectable person will allow his daughter to associate. Thus we see how intricate are the links of evil customs, and how in reforming them new evils meet us at every turn. These girls are not allowed to enter the schools attached to Christian missions if it can be helped; but there are many Hindus who are said to regard their presence in school with their own daughters as a matter of indifference.

Such of the dancing-girls as I have had the opportunity of seeing seem to be attractive, well-trained, and capital actresses. Their dancing is histrionic—that is, it represents some incident in history or drama by a series of movements and gestures, and expression of features. The dancing proper is not a bit like the healthy exercise in which European men and women join; it is a series of shuffling voluptuous contortions, in which the most is made of the more delicately-rounded parts of the figure. The dress is quite modest, and consists of five yards of cloth wound round the hips and over one shoulder, with perhaps a little tightly-fitting and coquettish silken jacket underneath. There is no naked bosom or naked legs. The style of dancing is physiologically and psychologically different from ours; there is no rising on the "light fantastic toe," or display of the instep; but the foot glides flat or with the heel over the floor, and is, besides, hidden with a heavy mass of bangles and anklets. The gastrocnemii are ill-developed in all the low-caste Hindus and Pariahs.

So much for the dancing-girls, who, like other women acting as "concubines," are not to be dealt with as *common* prostitutes; but there are a good many of them, as well as of kept women, Mohammedan nautch-girls, and the like, who are little removed from "commonness," and are supposed to be active propagators of disease.

(a) There are other explanations, such as that the temple service is an imitation of what goes on in *Swarga*, or the celestial Paradise, where Devadasis dance before the gods, and that they are the outcome and representatives of the female principle in nature, which the undivided divinity evolved out of himself, or rather out of *itself*; whilst, again, it is held that these girls, in heaven and earth, so far as they are regarded as concubines of the gods, are the offspring of Maya, or illusion - the bride of the undivided deity. Let me add, as I have said before, that these statements are taken from the lips of Brahmans, and represent not what I learn from books, but what is the belief of my friends who do me the favour to converse with me.

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Here, as elsewhere, the prevalence of venereal disease has attracted the attention of the civil and military authorities, and in order to prevent a serious loss of the service of soldiers and sailors, as well as for the sake of humanity generally, means have been taken to check it. The Indian Contagious Diseases Act, 1868, which received the assent of the Governor-General of India in Council on April 17, 1868, and became law in Madras on October 15, 1868, provided a machinery which Dr. Stanborough divides into four parts—preventive, detective, punitive, and sanative. Six offices have been established at convenient distances in this widely scattered city. To each of these a certain number of *goomastahs* (detective police) are attached, whose duty it is to inform themselves of the prostitutes and brothels within their respective districts. The prostitutes may perhaps come voluntarily; otherwise they are served with a notice, which is followed, if need be, by a summons before a magistrate, requiring them to attend once a week at the health office. There each prostitute is registered and examined. The "Register of common prostitutes permitted to reside in the town of Madras" specifies the name, age, birthplace, occupation, domicile, states whether married or single, and the lodging or brothel where she resides. She is furnished with a ticket in the form of a book, in which entry is made of her weekly attendances for examination, and of the results thereof. The rules under which the Act is worked provide that each common prostitute shall be medically inspected once in seven days, and an entry of the results be made each time on her ticket and in the register. The examination is to be conducted in a room specially set apart, with all regard to the delicacy and to the feelings of the women, but "shall in all cases be most searching, the speculum vaginæ being used so as fully to expose the os and cervix uteri and every part of the vaginal canal." If found healthy, she goes about her business; if diseased, she is sent to the Lock Hospital for treatment till cured.

The Lock Hospital is situated in Black Town, and though the situation is not all that can be wished, it may serve as a model for cleanliness, discipline, good management, and successful treatment. It was opened on October 15, 1868, and in the eleven weeks up to December 31 admitted 29 Europeans and East Indians, and 279 natives; altogether 308. During this time, the highest number of prostitutes registered was 491; thus more than three-fifths of the women examined were found diseased. The cases were classified minutely in the report signed by First-class Apothecary Samuel Hall; suffice it to say that out of the 308 patients, 132 were admitted for gonorrhœa, 172 for primary and secondary syphilis, and 4 for condylomata, etc. There were 77 cases of non-indurated chancre with gonorrhœa and profuse discharge, and 62 indurated. There were many cases of sloughing amongst patients of the poorest class, picked up in the streets in the lowest state of filth and misery and skin disease. During the earlier years of this Hospital, phagedæna and sloughing (the "*black lion*") were sometimes so bad as to spread and infect other cases, sometimes fatally, so that wards were obliged to be closed for purification; now, cases of this sort are most rare except amongst European women attached to regiments.

The last report for the whole year 1874 gives total admissions 862; remaining from 1873, 106; total, 968; daily average of patients, 104—of whom gonorrhœa 644, primary and secondary syphilis 282, others 42. Thus the Hospital records show that the proportion of syphilis to gonorrhœa is much decreased. It may be added that the number of prostitutes on the register during 1874 was 1101.

The Hospital consists of a series of open sheds on the ground floor, for native patients, each of whom has sixty feet superficial, whilst their European and East Indian sisters are treated in an upper storey, where each has 100 feet superficial space. The natives are dressed in a red cloth of peculiar colour, so that they may be known if they run away; the Europeans in a special livery of white and magenta. All the natives seem happy and contented, for they are well fed, and seem to pass their time in the game of *tit, tat, to*. I was present more than once at the morning *clinique*, and was shown a very effective vaginal douche, supplied by a flexible pipe from a cistern in the roof, which seemed a most perfect irrigator. Amongst the cases shown me was one of frightful ulcer and condylomata, with the recto-vaginal septum quite destroyed; another similar case, with a huge hole into the bladder; and two patients, one of eleven, the other of twelve, with frightful ulcers and condylomata.

I was struck with the simplicity and directness of the remedies employed. Chromic acid is found best for destroying warts, and the pernitrate of mercury for condylomata; carbolic acid as a general sweetener, compound decoction of sarsaparilla as a restorative, and bichloride of mercury and iodide of potass as anti-syphilitics. On asking for special formulæ, Mr. Hall told me they used Tanner's; this I mention as an undesigned testimony to the practical value of the works of one of the most amiable, able, and industrious members whom the profession has lately lost.

The expense of the "health establishment," that is, of the "health offices," for examination and registration, and of police, etc., amounts to about £2400 per annum, and of the Lock Hospital to nearly £1800.

Three-fourths of these joint expenses are borne by Imperial Indian funds, and the remainder from local sources, as the Municipal Commission, the Port Dues, etc.

Now, it will be asked—What is the amount of good done? That much good is done is palpable: many poor victims of vice have their sufferings allayed; much propagation of disease is checked; the worst kinds of disease (sloughing, etc.) have disappeared; the proportion of syphilis is less.

I searched the Reports of the General Hospital, Madras, by the kindness of Dr. Furnell, the Principal, and Dr. Cockerill, the head Surgeon, with the following results:—

Year.	Total surgical patients.	Syphilitic.	Primary do.
1868 . .	1404	180	98(b)
1869 . .	1291	180	67(c)
1870 . .	1183	114	38(d)
1871 . .	1328	156	48
1872 . .	1387	122	64
1873 . .	1449	150	63

Whether the decrease in 1870 is to be ascribed to the Contagious Act or to the reasons quoted in the notes must be left to my readers to decide.

As for the diminution of disease amongst the military, Dr. Stanborough says:—

"The Surgeon-General, in his annual report, dated September 27, 1872, shows the average ratio of venereal cases admitted into hospital amongst British troops in Fort St. George before and since the introduction of the Act in 1868 as being 38·4 per 1000; in 1869 it was 24·9 per 1000; in 1869-70, 18·1 per 1000; in 1870-71, 17·3 per 1000; in 1871-72, 13·5 per 1000; in 1872-73, 11·1 per 1000—showing a progressive decrease."

In the Military Hospital for British Troops in Fort St. George, in March, 1874, there were seven men suffering from venereal disease—three contracted in Trichinopoly, one in camp of exercise, two old secondary cases, and only one in Madras. This, in a population of nearly 400,000 and 991 British troops, is very satisfactory. The 2170 native troops stationed in Madras have seldom a case in hospital.

Suffice it to say that a certain amount of suffering is relieved and disease prevented. But what proportion this bears to the whole is a question which no data exist for answering. I have it from certain sources that this year, up to February 15, 1131 women have been registered; that the weekly average attendance of women for examination is 177, besides which an average of 104 are in the Lock Hospital, of whom the Europeans and East Indians are from 5 to 10 per cent. Some of the old registered prostitutes come to the Hospital regularly, and are calculated to spend one-sixth of their time there. Some have come in four times in one year. The total number of prostitutes in Madras, including the dancing-women, is stated by Cornish to be 2058, including 200 dancing-girls. These were enumerated in the Census, but other estimates differ widely. There are whole classes of women, such as grass-cutters' wives, who are nothing else.

Next it must be asked—What harm has been effected by this Act? Has it been attended with any of the grievous inconveniences threatened by opponents of the Act at home?

The truth is that it is a dirty subject, and difficult to touch without defilement. During the first years of the working of the Act, Dr. Stanborough must have been grievously vexed with his subordinates. Some of the apothecaries appointed to examine women were pensioners invalided for infirmity; one was nearly blind, others careless and dirty, using the same speculum, uncleansed, for the examination of different women in succes-

(b) Up to November, 1868, some women were admitted into this hospital; none afterwards.

(c) In 1869 most of the seventy-two European syphilitic patients were sailors.

(d) In 1870 there were one-third fewer sailors admitted than in 1869; fewer vessels entered the roads, and the rules of admission were stricter.

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sion.(e) Bribery, as a matter of course, flourishes on Eastern soil, and apothecaries as well as goomastahs took bribes for letting women off whom they ought to have denounced as prostitutes. Some of the goomastahs, poor devils, might well think themselves entitled to a few irregular rupees from some people to balance the drubbing they were liable to get if they interfered with the ayah whom some British soldier was honouring with his attentions. "Two men," says Cornish, "attended and lodged a complaint against a woman (the concubine of one of the men) that she was a common prostitute, and had given both of the complainants disease." The woman had previously charged the two complainants, and had got them fined for assault. She denied being either a prostitute or diseased, and denounced the charge as malicious. Then the two men were examined, and found free from disease. This is an instance of the worst kind of oppression possible under the Act. One case occurred which was rather ludicrous. A respectable woman, a stranger, being taken ill in the street with cholera, desired a cabman to take her to a hospital. She was taken to the Lock, where, after some embarrassment, the mistake was discovered. On the other hand, the fraudulent evasions of the Act are numerous. In 1874, 171 women were summoned before the magistrates. The common mode of evading the Act is to bring people to swear that the suspected woman is a temple girl, or the private concubine of a Hindu. If a Mohammedan, she goes through a *neekah* marriage (*neekah* signifies betrothal in regular marriage, but it is a word degraded and used in India to signify a kind of sanction to concubinage). If a Christian, perhaps some soldier may claim her for his wife, or may marry her; or some ship captain may go through the form of marriage. So she is let off the register of common prostitutes till the ship sails, and the gallant captain goes to his next wife in the next port. The Act is evaded by women who live outside the municipal limits; and the magistrates are said, here as elsewhere, to prefer the "liberty of the subject" to the interests of public health.(f)

Anyhow, syphilis may be mitigated and made rare; but gonorrhœa and soft sores will always prevail in proportion to the unchastity of a population. I am told that without doubt much disease is prevalent amongst concubines and temple girls, who are protected from the Act. And it is possible that the temple-wardens may be induced to devote a portion of their funds to the prevention and treatment, and establishing a sanitarium for these poor creatures. We may read with emphatic approval the words of Dr. Cornish, who describes "temple prostitution as more mischievous to the morals of the people than *Satté* and the swinging festivals that have been put down by the strong hand of Government. That there should be a traffic in young girls avowedly with the object of training them as prostitutes for the use of a particular class of the community; and that Hindu parents should be permitted to devote their daughters of tender years to the service of the temples, or, in plain language, to prostitution, is not a creditable state of things either to the Government or to the people concerned." Let me add that, to permit the prostitution of young girls, hardly of age to know good from evil, whether in England or in India, is equally discreditable.(g)

Perhaps as good an illustration as can be desired of the operation of the Contagious Diseases Act, showing what it does, and what it cannot do, is to be found in the state of the military cantonment of St. Thomas's Mount, nine miles from Madras, in the adjacent district of Chingleput. The "Mount Cantonment" is said to have an area of 1643 acres, and a population of 15,480, of whom 360 are English artillery. Here is a health office for the registration and weekly examination of prostitutes, of whom there are registered thirty-one, all native women, being a slight decrease on former years. Of these women three were, at the time of my visit, in the Lock Hospital, an airy, clean, and well-ordered building under the charge of Surgeon-Major Dickinson, M.D.

Now then, What can the system do? As a matter of course it is an unmixed benefit to the poor women who are under the operation of the Act. The number of cases is decreased (especially as the inspection is weekly), and the specific virulence likewise. Secondary syphilis is becoming very rare.

"In 1873," says the Annual Report of Surgeon-Major Dickinson, "117 cases were treated in the Lock Hospital, and ninety-four in 1874. They all did well; no deaths occurred, and no case of secondary syphilis came under treatment."

Then, venereal disease is to some extent decreased amongst the soldiers, for there were only fifty-eight cases in 1874, against seventy-six in 1872.

But what the Act cannot do, and cannot be expected to do, is to lessen the unchastity and consequent disease of persons *not* submitted to it. I will quote again from Dr. Dickinson's Annual Medical Report for 1874:—

"I do not give the registered women credit for one-tenth part of the disease that occurs among the European soldiers: for at the time the men of the Artillery were suffering most from 'venereal,' the registered women were more than usually free from disease; and on this point I had communication with the medical officer in charge of the Artillery. In 1873, during the incumbency of Surgeon-Major Kearney, he notes the treatment of ten cases of primary syphilis, one of secondary syphilis, three of gonorrhœa, and two of bubo, amongst the policemen, and in no instance was he able to ascertain the source from whence the men contracted the disease, concerning which, however, the men would not have been so reticent had the women been registered prostitutes. I have had two policemen in hospital for secondary syphilis, and, on mentioning to a police-officer that I thought it would be better to get rid of the men altogether, as their systems were saturated with syphilis, he replied—'Oh! if you turn out all the men having venereal taint about them, you will turn out half my men!' I am afraid that our policemen know more about clandestine prostitution than they care to tell."

Dr. Dickinson fully confirms what has already been said; the Act lessens disease in those subject to it, but what proportion this bears to the whole is not known. Private incontinence is out of its scope.

(e) Cornish's letter in "Proceedings of Madras Government Public Department," April 8, 1873, No. 375.

(f) See Dr. Stanborough's report, dated April 16, 1874, to Deputy Surgeon-General, Indian Medical Department.

(g) *Vide* Cornish, "Census of Madras" and "Proceedings of Government of Madras," August 19, 1869, No. 1162.

ROYAL COLLEGE OF SURGEONS.

The annual festival of the Fellows of the College took place on Thursday last, the 1st inst., at the Albion Tavern, under the able and genial chairmanship of Surgeon-General T. Longmore, C.B., Professor of Military Surgery in the Army Medical School of Netley.

After the usual loyal toasts from the Chairman, that of "The Medical Departments of the Army and Navy and the Auxiliary Forces" was eloquently proposed by Sir William Fergusson, Bart., to which Sir William Muir, K.C.B., and Mr. Alfred Cooper responded.

On rising to propose the next toast, "The General Medical Council," Sir James Paget spoke of the good work which the Medical Council, as our medical Parliament, was doing, especially by maintaining our self-government, and by its regular and real visitations of all the examinations. The complete publicity and careful criticism of the examinations could not fail to improve them all, and insure that all should give to the profession and the public the security that diplomas and licences would really mean fitness for practice.

Professor Humphry, F.R.S., in reply, said: I much regret on your account and my own, as well as on that of the Medical Council, that the first defalcation on the part of the admirable President of that Council should be his absence this evening, and that it should in consequence devolve upon me to respond to this toast. I am extremely obliged to you for the hearty manner in which you received it, being sure that this is due not simply to the eloquent terms in which the toast has been proposed, but also to the good feeling you entertain towards the Council. The members of that Medical Council are desirous to have and to merit your approbation, and I believe that they do both. I have now for five years sat upon that Council, and each year has given me an increasing respect for it, because I meet there men among the most eminent in the profession, who devote their time and attention earnestly to its work in the sincere desire to promote the interests of their profession and the public welfare. It is said sometimes that there is too much talk. If that is so, it is a consequence of the fact that every question is submitted to that free, fair, open discussion which alone would be in accordance with the feeling of this country. Each member is at liberty to express his opinion, and I am sure you would not have it otherwise. And, let me observe,

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this talk is thought worthy of being printed in our journals, and I conclude it is so, because the members of the profession think it worthy of being read. I well remember it being said in this room, by one who, being a member of both bodies, was able to form an opinion, that more good sense was talked in the Medical Council in an hour than he often heard in the House of Commons in a week. Moreover, let it not be thought that what appears in print represents the work actually done. Besides the hours from two to six when reporters are present, there are the two, three, or more hours previously occupied in committees; so that the members, or some of them, are not unfrequently occupied from ten or eleven to six, with only a few minutes' interval. It is not, I can assure you, an idle time. Sir James Paget has spoken of the important work of visitation of examinations which has taken place in the last two years. The examinations of all the nineteen licensing bodies in the United Kingdom have been visited (each by two persons), have been carefully reported on, and the reports have been printed and discussed; so there is now before you a tolerably full and exact account of these examinations, and you may form your own opinion as to the mode in which they are conducted. The manner in which the visitors have been received, and the attention which has been paid to their suggestions, is no small subject for congratulation to the Medical Council, inasmuch as there is scarcely one of these examinations which has not undergone, or is not about to undergo, some modification or improvement in consequence of the visitations. The Medical Council has just concluded another session, in which some important points have been discussed. It cannot yet be said to be in that dangerous position in which all men speak well of it. I trust it will be long ere it is so. By all means watch it closely and criticise it severely—all public bodies require this stimulus; and I trust that, as time goes on, the results of its labours will become more and more apparent, and that it will be found more and more to merit the favourable reception you have just given to the toast.

Mr. Jonathan Hutchinson, in proposing the toast of "The Medical Corporations," expressed himself as follows:—I rise to ask you to drink to the healths severally of Sir George Burrows, Mr. Le Gros Clark, and Mr. Stocker. In other words, I ask you to wish all prosperity to three kindred institutions which are characteristically and admirably represented by the three gentlemen whose names I have mentioned—the Royal College of Physicians, the Royal College of Surgeons, and the Apothecaries' Company. In some respects I could wish that this toast had fallen into the hands of some one more conversant than myself with the recent details of the life of these three corporations. Perhaps there is no one in this room who knows less of those details than I do. When, about half an hour ago, our excellent Secretary came to my elbow and put this toast into my hand, I professed my incompetence to do it justice, and forthwith I received from my table-companions numerous and kind suggestions intended to help out my ignorance. Amongst them, one offered by an illustrious surgeon opposite me was to the effect that the corporations are about to be superseded—that they are, indeed, as he expressed it, just about to accomplish a sort of "happy despatch." He alluded, I believe, to the new examination scheme. Whether or not, however, the changes which are impending be, as regards our great corporations, as revolutionary as this phrase suggests, I still see no reason why we should not drink heartily to their health. We wish life and vigour to their spirit, not to their external shell. That they have in the past done noble work in the cause, and for the progress, of medical science, no one can doubt. Whatever changes may be imminent in this work, their spirit will last. The future of medical education, whatever may be the form which it may take, will be their offspring—their legitimate child. Corporations, as well as individuals, must submit to the inevitable law of change—a change possibly so radical that it may seem to be almost the same as death. But neither we, as individuals, nor they in their corporate capacity, need feel any disappointment at this, but rather in spite, or, perhaps, even on account of it, press forward hopefully into the future, "eager to do and die, leave each his place to the rest." It is in this meaning that I ask you to receive my toast, and to drink to the success of our Medical Corporations, and to express in doing so our hearty approbation of their past, and our best and sincerest good wishes for their future.

Mr. Le Gros Clark, F.R.S., in expressing his thanks for the personal compliment conveyed in the toast, and in acknowledging it in his official capacity as President of the College of Surgeons, said: I shall take the liberty of detaining you for a few moments whilst I make some remarks in relation to the corporation which I have the honour to represent. I cannot accept this as a mere empty compliment paid to our College, for I trust that a cordial feeling has grown up and exists between the Council and those gentlemen who select its members as their representatives. And this cordiality is, I feel, justified by circumstances. I have now been on the Council for several years, and have passed through the different offices, and therefore feel myself in a position to contrast the past with the present position of the College in relation to the profession. Formerly a considerable amount of opprobrium was cast on the Council, and I do not say altogether without reason; for nothing was known officially of their doings, and the examinations were conducted with closed doors. This secresy created distrust, and distrust engendered suspicion, and often misrepresentation. Now the business transacted is made public; and not only are the examinations visited officially, but we court inspection, feeling assured that only good can result from publicity. The standard of our examinations has been raised, and we have even been criticised for making the test of qualification for our fellowship too severe and strict. But it must be remembered that this is an honorary degree, and I think we have the sympathy of our existing Fellows in our desire to make it also an honourable degree, not too easily attainable. At the last annual dinner I ventured to express an opinion that more free intercourse between the Council and the Fellows and Members is very desirable; and I should have ventured to exercise my privilege of summoning a meeting—in which step I am sure I should have been supported by my colleagues—if we had been placed in a position, by the progress of events, to justify our troubling you to assemble at the College. I hope this practice may obtain: but in the meantime I may inform you that the Council have decided on publishing a report, annually, of the affairs of the College and the proceedings of the Council, for which the out-going President is to be responsible. The first annual report has been entrusted to me; and I hope that, in a few days, it will be in your hands. In relation to the examinations, I may state to you that the Council are about to separate the Court of Examiners in Surgery from the Board of Examiners in Anatomy and Physiology, so as to secure thorough efficiency in both examinations. I trust, therefore, gentlemen, that you will admit that we are advancing in the right direction, and that the Council are entitled to the confidence which is now freely accorded to them. One word in conclusion, in reference to the scheme for a conjoint examination in England. There have been legal and other obstacles on our part to its satisfactory completion, which I trust will be surmounted. But our vitality is not exhausted; and we have no idea or intention, as suggested by Mr. Hutchinson, of assisting in our own extinction. We have no such suicidal propensity; and I earnestly trust this College will never relinquish its independent existence or sacrifice its individuality. That existence is identified with the progress and proud position of surgery in this country; and I hope we shall possess the hearty sympathy of all associated with us in maintaining our College in that integrity which is so essential to the beneficial exercise of its influence in the profession.

In proposing "The Provincial Schools," Mr. Savory said: We may well drink to this toast, not only for their own sake, but because the rise and progress of the provincial schools represents the advance of medical and surgical knowledge throughout the country. And indeed, so far as means and opportunity and teaching power are concerned, I can see no reason why they should not continue to prosper, in regard at least to the clinical studies—I mean medicine and surgery in all their branches. But you know our schools have another function to perform—the teaching of anatomy, physiology, chemistry, and other branches of natural science. Now, the numbers of our schools, metropolitan as well as provincial, and the resources at their command, suggest, I think, very strongly the question whether, in this respect, many of them are not too heavily weighted,—whether, in short, the time has not nearly come when these subjects of natural science should be taught elsewhere—at some one central institution, which would be enabled to secure the services of the men best qualified to teach them. For in this way we should obtain some concentration of force. And then,

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our students having, in some sort, graduated there, might pass afterwards to the several hospitals in London or the country, whose whole energy would thus become devoted to clinical work. But I must not intrude on your patience with this matter now. We may be sure that whatever duties the provincial schools will be hereafter called on to perform, those duties they will meet worthily. I have additional pleasure in coupling this toast with the name of Mr. Hussey, of Oxford, of whom, because I have known him so long—ever since the day I entered the hospital,—I will only trust myself in his presence to say thus much: that I do not believe that a nobler representative of the honesty and honour of the profession could have been chosen to reply. I give you—"Prosperity to our Provincial Schools, and the good health of Mr. Hussey."

Mr. Hussey, Senior Surgeon to the Radcliffe Infirmary, Oxford, returned thanks as a provincial teacher, and stated that the necessary changes of late years, and larger changes impending, in extending the field of professional education, and lengthening the period to be given to it, has had the effect of calling so many of the younger men to the larger schools in London, that the numbers of provincial students were no longer what they were. That however small the number of those who sought their professional education from provincial teachers, they would always do their part in training the next generation of surgeons who were to succeed them in the confidence of the public.

"The Metropolitan Schools" was proposed by Staff Surgeon N. C. Macnamara, and responded to by

Professor Wood, who said: The mandate of an unwritten and time-honoured custom at the annual festival of the Fellows of the Royal College of Surgeons (and one which I cannot disobey) imposes upon me the agreeable duty of offering the acknowledgments of the Metropolitan Medical Schools for the toast which has just been drank. Allusions have been made to the probability of a very disinterested self-immolation of the present examining bodies being involved in the changes now impending. But I, for one, am glad to be assured by the respected President of the College of Surgeons that the amount of their self-sacrifice will not reach to that entire "self-annihilation" described by the speaker, but that the Royal Colleges of Physicians and Surgeons will still continue to direct worthily the standard and methods of education of the practitioners of this country. In whatever hands, however, examination powers may hereafter be lodged, I can safely say, on the part of the various teaching bodies, that it is not likely that their functions will come to an end, or that they will, so long as civilisation itself exists, lose their *raison d'être* as a means of preparing students of medicine to practise their responsible profession, and to attain to the standard of education set by the examining bodies. Whatever may be the divergence of opinion and the varieties of practice taught in the different London medical schools, I think I may with confidence make this assertion: that we highly appreciate such opportunities as the one we at present enjoy, of meeting agreeably *in convivio* the representatives of the provincial hospitals and the country Fellows, whose character and influence upon professional education I agree with my metropolitan fellow-labourer Mr. Savory in estimating very highly. I am sure that the metropolitan teachers present this evening join me in heartily thanking you for the toast with which you have been kind enough to honour us.

Mr. John Birkett, in proposing the health of the Chairman, alluded to his early education at Merchant Taylors; his valuable professional services in Canada, the West and East Indies, the Crimea, and elsewhere; his great capabilities as a regimental surgeon, as an author (especially by his "Treatise on Ambulance Transport," and others), as teacher, and professor; his great industry and unswerving sense of duty—

> "Proud to be useful, scorning to be more;
> Less prompt at glory's than at duty's claim!"

Surgeon-General Longmore, C.B., returned thanks. He said: I cannot sufficiently thank Mr. Birkett for the kind expressions he has just uttered regarding me; or you, gentlemen, for the kind manner in which you have received those expressions. Mr. Birkett has been an honoured friend of mine ever since my student-days at Guy's Hospital, and I am personally well aware how much I owe the flattering remarks he has made regarding myself to his friendly disposition towards me and his habitual good-nature. I know very well that I have the honour of occupying this chair—not from any merits of my own, but because the Fellows of the Royal College of Surgeons have desired, through me, to make a manifestation of the good feeling which they hold towards the surgeons engaged in military practice, as well in the navy as in the army. I am sure the fact of my being placed in the honourable position of your president on this occasion will be accepted in the light I have named by the surgeons of both public services; and it is rather in their name than in my own individuality that I now beg to return you my sincere thanks for the cordial manner in which you have just responded to the toast of "The Chairman," proposed by Mr. Birkett, and also, I may add, for the kind way in which you have supported me in discharging the duties of the chair throughout the evening.

Dr. Osborn, of Southampton, in proposing "The Visitors," paid a well-deserved tribute to Dr. West, the Head Master of the Royal Medical College of Epsom. In speaking of Sir Anthony Home, K.C.B., whose distinguished services had won for him the approbation of his Sovereign, the approval of her Ministers, and the admiration of a large portion of his fellow-countrymen, he related how Dr. Home, on the second advance upon Lucknow, in September, 1857, having with him eight unwounded men, and five wounded officers and men, was cut off from advance or retreat by the enemy, and had to take refuge in a small building. There they defended themselves with great heroism during the whole of the day and night, although surrounded by hordes of the enemy, and almost hopeless of relief, which, however, happily came on the following morning. This act of heroism was of the noblest character. In the terrible emergency Dr. Home preserved his coolness and self-possession, and manifested that courage which is the heritage of every Englishman, and won for himself a distinction which was righteously rewarded by his Sovereign by the grant of the Victoria Cross. Now, gentlemen, it is no mere matter of sentiment, no flight of imagination, when I say that heroism such as this deserves to be recorded on the most brilliant pages of our country's history, where not a few other such instances are to be found, and that such heroism, although the band of heroes was but small, may well compare with that celebrated instance in classic story where those brave Lacedemonians, at their country's bidding, fought and fell at Thermopylæ, and found their last resting-place beneath Mount Eva's sacred shade, sinking to their rest, shrouded in an immortality that glows with enduring brightness from age to age. Besides this, Dr. Home has served with high distinction in the Crimean War, the New Zealand War, in the China War of 1860, and, as we all know, he was the principal medical officer in the recent war on the West Coast of Africa. It is familiar to us all, the admirable manner in which he discharged the very important and highly responsible duties that then devolved upon him, and the anxious care he bestowed in adopting every precaution for the preservation of the health of the officers and men of the Expedition; and for his successful administration of the affairs of the Ashantee War Dr. Home was made a Knight Commander of the Bath. I am persuaded, gentlemen, you will join with me in the expression of a hope that a career so brilliant may be far prolonged into the future, and that his country may long enjoy all the advantages that may flow from the services of one so able and distinguished, and that in return his country may find a delight in showering down upon him her choicest honours.

In proposing "The Stewards," Mr. Holden said that he was only giving expression to the universal feeling of a well-earned debt of gratitude to those gentlemen who had taken so much trouble and who had so thoroughly succeeded, not only in giving them a most enjoyable entertainment, but in bringing together a larger number of Fellows than on any previous occasion. The stewards had shown sound judgment in their happy selection of one of the most popular medical officers of the army for chairman. This was the first time that the chair on these occasions had been occupied by an army surgeon, and the wisdom of the choice was fully proved by the admirable result. He hoped that next year the stewards would pay a similar compliment to the medical officers of the navy—a compliment which would be sure to meet the universal approval of the Fellows, and to "draw a full house."

The proceedings were brought to a close by the Chairman proposing the health of Mr. Wm. Allingham, the Hon. Sec. Few who were not behind the scenes could be aware of the immense tax on time, of the large amount of labour in correspondence and other ways, imposed on the honorary secretary at this time; and this work had been given cheerfully and without stint. He had part of his reward in the success

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which had crowned his efforts; the remainder he knew they would give him by expressions of hearty approbation. (Cheers.)

Mr. Allingham returned thanks. Altogether, whether from the great and deserved popularity of Surgeon-General Longmore, or from the sharp contest for seats in the Council, this was one of the largest, as it was one of the most successful, festivals of the Fellows of the College of Surgeons.

It is understood that Mr. T. B. Curling, F.R.S., late President of the Royal College of Surgeons, will be the Chairman next year, and will be succeeded by a representative of the Royal Navy.

DEAN STANLEY AT ST. THOMAS'S HOSPITAL.

Dean Stanley is never more at home than as the chairman of such an assemblage as met him for the distribution of prizes at St. Thomas's Hospital. His words and ideas are always happy, and well worth giving in detail. The duty of presenting the prizes accomplished, the reverend gentleman spoke much as follows:—

The poet Wordsworth, in one of his famous sonnets, spoke of London as seen from Westminster-bridge. It had occurred also to him, in the many times he had passed over the bridge, or when he had shown it to a distinguished foreigner, that it was remarkable in that from it views might be had of three famous palaces. First was the palace of the Legislature, where the whole administration of this great empire was carried on; the second was the palace of Lambeth, the seat of the Primate of England, the citadel, the throne of the Church of England; and the third palace, exceeding in magnitude either of the other two, not perhaps in fame or interest, but certainly in its direct benefit to mankind, was the palace of the poor and suffering, a palace which, like that on the other side of the river, was a palace of Royal foundation, and was founded by one of our kings, whose name was among the best beloved of the long series of English sovereigns. This king was himself an eager student, cut off before he passed the age of studentship, but who had already exhibited the promise which so many of the students had exhibited on this occasion. It was, he thought, exceedingly interesting, in finding oneself in a great hospital, to remember how it served, more perhaps than any other institution, to check the revolutions of time. This institution, with the exception of its change of locality, had preserved its objects and its purpose absolutely unchanged. He remembered being once struck in France with seeing in the town of Angers a hospital, still continued, which was founded by a predecessor of Edward the Sixth, their founder—viz., by Henry the Second—and which alone, of all the institutions in Angers, had remained unchanged in that most changeful of all countries. This brought him to the profession to which those before him were called. Nothing, he thought, could be more delightful to contemplate than a number of young men who were growing up to devote themselves to a career which had for its object nothing less than to do good to the human race. All the great professions no doubt had this for their object indirectly, but their profession and his own profession were the only two of the great professions which had this direct beneficence for their object. He had put the two professions together, and not, surely, without reason. It was probably one of the causes why he had been summoned to distribute those prizes that the clergyman and the physician must be inseparable allies. Whatever rivalry there might exist between the clerical and other professions—he knew not that there was any—at least there existed none between the clergyman and physician.

He was speaking not long ago to a distinguished friend of his, who said it had been mentioned to him, and he fully concurred in the opinion, that, looking over all the professions, if they took the best of all the various classes of students, the best specimen of all was the best kind of medical student. It might possibly be said also that the worst specimen was the worst kind of medical student. There were three reasons why a good medical student ought to be better than the student of any other profession. First of all he had to deal with human suffering—the alleviation of human suffering; and doing good to mankind in the most direct form was his office and duty. There was a very striking passage in a very interesting book, "Scenes in Clerical Life," by George Eliot, in which was described how all the various doubts and difficulties, speculations, and despair of a man shrank away to nothing when he entered a hospital. In a hospital there was no intervening obstacle between themselves and doing good. There they met with every sort of creed and opinion that could be presented to them, and yet always in a form that demanded nothing but their sympathy, nothing but their endeavour to perform their duty towards the suffering, nothing to rouse theological or scientific or any other sort of odium—only the one single purpose of enabling their patients to recover their health, to be what they were intended by their Creator to be in their passage through life. Then there was another reason. Some might think that familiarity with the sight of human suffering might cause them to lose sympathy with it, but, judging from what he had seen of medical men outside hospitals, he had invariably found that their interest in and sympathy for their poor suffering patients was as great as if they never met with any other cases of sickness and suffering in the world, so that it would seem that, instead of having their minds deadened by witnessing suffering, they were quickened. An old clergyman the other day was saying publicly that, often as he had read the burial service, it seemed to him every time he read it to come back to him with fresh feeling and to rouse fresh emotions; and, no doubt, when thus brought into contact with death and mourning the feelings inherent in the human heart were raised. That, he trusted, would be the case with all medical students who had anything whatever in them that was worth living and worth dying for. It was their business to examine and to mark all the various phenomena that attached to our physical frames, and the mysteries of human life, human sickness, health, and death. Then, again, some people thought that, having their attention so much fixed on the external frame, it might lead them to disparage and to put on one side the spiritual and the moral part of human nature, but, in point of fact, and again judging from the most distinguished surgeons and physicians he had known—he thought he might say they all had known—this was not the case, but it was the case that physicians and surgeons of any eminence at all, so far from having their minds fixed or their hearts corrupted by having their attention fixed on the outward physical frame, were perhaps even more than other persons led to feel the difference, the everlasting difference, between what was merely external and what was inward and spiritual. What might be the precise connexion between our thoughts and our physical frames he did not pretend for a moment to say, neither did he wish to anticipate any conclusions of physical science on the subject; but this he did venture to affirm, that, whatever course physical science might take, nothing could ever destroy or change in the least degree the immense preponderance of the moral nature of man above everything else in the world. If they had fixed in their minds the one central thought that the moral nature of man and the moral excellency which existed in man was beyond everything else, that would be at once a guarantee of their own good conduct, and also of the stability of their intellect, amid all the various changes and variations and speculations of an advancing and sometimes retrogressive age.

FROM ABROAD.

Prizes and Prize Questions at the Académie des Sciences. At the annual meeting of the Académie des Sciences, held on June 21, the following of the prizes which were adjudged related to medical science:—1. The Montyon Statistical Prize was given to M. Kertanguy for his essay on the establishment of a mortality table on the policies of life assurance companies; and "honourable mentions" were decreed to M. St. Genis for his Statistical Account of Savoy, and to M. Loua for his Statistical Atlas of the Population of Paris. 2. The Jecker Chemical Prize was divided between Prof. Reboul, of Besançon, and M. G. Bouchardat for their respective works on the Ethers. 3. The Desmazières Prize was given to M. Seynes for his investigations of Cryptogams, and especially the *fistulina hepatica*. 4. M. Auguste Forel received the Thore Prize for his work, "Les Fourmis de la Suisse"; and 5. M. Pellarin received a "recompense" of 3500 fr. under the Bréant legacy for his "Etudes sur le Caractère et les Modes de Transmission du Choléra," M. Armieux likewise

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receiving 1500 fr. for analogous investigations. 6. For the Montyon Prize in Medicine and Surgery three awards were made—(1) to M. Dieulafoy for his work, "Sur l'Aspiration des Liquides Morbides dans le Traitement des Maladies Chirurgicales"; (2) to M. Malassez for several memoirs on the Numeration, by means of an instrument, of the Red and White Globules of the Blood in different diseases; (3) to M. Méhu for various memoirs on the Composition, in relation to the Blood, of Liquids effused into Natural or Artificial Cavities. Three "encouragements" of 1000 fr. each were also accorded—viz., to M. Berenger-Féraud for his two works on the Yellow Fever in Senegal and the Bilious Melanuric Fever of Hot Climates; one to M. Letiévant for his work "Sur les Sections Nerveuses"; and one to M. Péter for his "Leçons de Clinique Médicale." 7. The Montyon Prize in Physiology was divided between MM. Arlong and Tripier for their experimental work "Sur les Conditions de la Persistance de la Sensibilité dans le bout Periphérique des Nerfs Sectionnés"; and M. Sabatier for his "Etudes sur le Cœur et la Circulation centrale dans la Série des Vertébrés."

Among the thirty-nine prizes offered for future competition we may indicate the following:—1. The Grand Prix des Sciences Physiques. Two of these (3000 fr. each) are offered for 1876, the subject of the one being "Faire connaitre les changements qui s'opérent dans les organes intérieurs des insectes pendant la métamorphose complete"; and of the other "Etude du mode de distribution des animaux marins du littoral de la France." A third prize of 3000 fr. is offered for 1877: "Etude comparative de l'organisation intérieure de divers crustacées édriophthalmes qui habitent les mers d'Europe." 2. The Jecker Prize of 3000 fr. for the best work in organic chemistry. 3. The Barbier Prize of 2000 fr. for the work announcing a discovery in medical, surgical, or pharmaceutical science. 4. The Alhambert Prize of 2500 fr.: "Mode de nutrition des champignons." 5. The Desmazières Prize of 1600 fr. for the best work on Cryptogams that has appeared within the preceding year. 6. The Thore Annual Prize of 300 fr., adjudged alternately in recompense for "les recherches sur les cryptogames cellulaires de l'Europe, ou, sur les mœurs et l'anatomie d'un insecte." 7. The Bordin Prize of 3000 fr. for 1876: "Etudier comparativement la structure des téguments de la graine dans les végétaux angiospermes et gymnospermes." The same prize will be awarded in 1877: "Etudier comparativement la structure et le développement des organes de la végétation dans les lycopodiacées." 8. The Bréant Prize of 100,000 fr. for the discovery of the causes or means of curing the cholera. The interest of this sum may be employed in recompensing works which add to our knowledge of this disease. 9. The Montyon Annual Prize in medicine and surgery, of varying value, for the recompense of approved works. 10. The Serres Triennial Prize of 7500 fr. for the "meilleur ouvrage sur l'embryogénie générale, appliquée autant que possible à la physiologie et à la médecine." 11. The Godard Annual Prize of 1000 fr. for the best work on the anatomy, physiology, and pathology of the genito-urinary organs. 12. The Montyon Annual Prize of 760 fr. in experimental physiology for the best work on this subject. 13. The Cuvier Triennial Prize of 1500 fr. will be adjudged in 1876 to the author of the best work on the animal kingdom or geology that has appeared during the three years 1873-75. All essays and works must be sent in to the Académie by June 1.

Amputations in Scrofulous Subjects.

A case related at a recent meeting of the Société de Chirurgie (*Gazette des Hôpitaux*, June 19), in which a scrofulous child exhibited remarkable resistance to several successive operations, led M. Verneuil to protest against the illusions that exist as to the innocuity of operations in scrofulous subjects, and especially operations performed on bones. As long back as 1845 he had been struck by examining in the hospitals the results of the partial extirpations of the bones of the hands and feet in scrofulous subjects. The immediate results are very favourable, erysipelas being very mild in these subjects, and pyæmia rare; and few are lost by acute traumatic accidents. The wounds are very fine, granulating abundantly—indeed, too abundantly; but the cicatrisation is defective. When the patient attempts to use his limb, the disease reappears, either at the same spot, in other joints, or in some of the viscera. The amputation wound heals up, but the patient dies with albuminuria, general œdema, fatty degeneration of the liver, or tubercle. An English author, who is a good observer, recommends that operations should be performed early in scrofulous subjects, before the development of morbid manifestations in the liver or kidney, and that in them amputations, not excisions, should be resorted to. M. Marjolin partakes of M. Verneuil's scruples relative to the performance of operations in scrofulous children. Having been in charge of a children's hospital service for eighteen years, he has been able to follow the patients during long periods, as they re-entered the wards on several occasions. Inclined, as he was at first, to operate early, experience has taught him that these operations are premature before the constitutions of these little subjects have undergone modification, until when they should always be rejected, unless great urgency exists, which is rare. He has often seen infants who had been operated upon and cured, re-enter and die of meningitis, pulmonary tubercle, or intestinal lesions. The marine hospitals at Forgs and Berck constitute a valuable resource for the modification of the scrofulous diathesis, but they are insufficient for the demands made upon them, as there are from 100 to 200 children always waiting their turn of admission. Obliged to wait a year or eighteen months, when summoned, one-half of their number has ceased to exist. It is highly desirable that the number of beds should be increased, for country air constitutes the best treatment, and only the most immediate wants should be attended to in Paris. M. Larrey, during his long experience in military hospitals, has been much struck with the great mortality attending amputations, principally in young subjects, and especially in the scrofulous. The examples of this which he had met with in the wards of Roux, Lisfranc, Dupuytren, and especially of Velpeau (once so prodigal in amputations, and so sparing of them in his later years), led him at an early period to react against this practice, and from 1839 he adopted from the political language of the day the designation *chirurgie conservatrice*. At the present time, scrofulous soldiers find immense resources in the hospitals established for them at the seats of mineral waters, the specific influence of these being greatly aided by the change of scene and the free exposure to the air. M. Larrey has sought also to obtain sea-bathing for them, and great advantage has attended the sending some of them to Rochelle for that purpose. It is to be hoped that means will be found to confer the same advantages upon the patients and convalescents of the civil hospitals. M. Desprès observed that all surgeons are agreed that, as operations, amputations succeed better in scrofulous than in healthy subjects, but no one pretends that this operation furnishes them with any security against ulterior accidents. In place of multiplying the beds for children, as recommended by M. Marjolin, he would prefer assisting the mothers of such children, in order that they may take better care of them at home, and avoid sending them to the hospitals, where death, in spite of good nursing, usually awaits them. There are already too many beds devoted to children in the hospitals; and too many parents only bring their children there to get them off their hands. M. Marjolin, on the contrary, maintained that in the homes of these children the dirt, negligence, and misery were such that they generated disease, so that they were better off in the hospitals.

GENERAL CORRESPONDENCE.

THE ELECTION AT THE ROYAL COLLEGE OF SURGEONS.

[To the Editor of the Medical Times and Gazette.]

Sir,—I have received two letters (printed) from Mr. Smee, soliciting my vote at the coming election for members of the Council of the Royal College of Surgeons of England, on the principle of seniority of membership; the last urgently requests an answer. Permit me to give it through your next issue. The grade of fellowship was instituted to raise the education and tone of the surgeons of this kingdom, not to promote individual interests, which can have no rightful claim apart from such main object. Mr. Smee does not advance any claim which can establish his right as a surgeon to such distinction, nor do I know that in the arduous and painful pursuit of his profession he has ever established such claim. He has not, that I know, ever laboured as a surgeon to a hospital or even to a dispensary, and he therefore gives no proof that he is enabled to take the lead of those who have. Superior knowledge in our profession in general rests on

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superior experience and attentive labour, and it is to the interest of us all that our *primi* and *principes* should give proof of their having both. Mere time cannot give superiority, unless it can be shown that time has been employed for the general as well as the personal good. It may be, I dare say is, the fact that schools endeavour to get their men to the front. Is it to the public injury that working men should come to the front? It may be very true that in public service increased pay should somewhat be determined by long service, but in giving honours in a profession, mere seniority would be a very dangerous, if not injurious, rule. I am a country Fellow by examination (senior), of 1846 (I think Mr. Smee is not Fellow by examination), and in a long life have had to deal with no small amount of surgical difficulty; but were I to be—which certainly I never shall be—a candidate for the Council, I should think of other claims than mere seniority even of Fellowship; and I cannot think it raises our profession to have a personal canvass of the kind Mr. Smee has instituted. As I have no personal interests in this matter, I simply sign myself F.R.C.S.

June 30.

OBITUARY.

JOHN THOMAS MERCER, M.B. Lond., M.R.C.S. Eng. L.S.A., etc.

We regret to chronicle the untimely death of this estimable member of our profession, who fell a victim to his unsparing devotion to duty. He died on the 9th ult., aged thirty-six, after eight days' illness from diphtheria, which he contracted during constant attendance upon two patients who succumbed to this disease.

Dr. Mercer, who was a native of Leicester, commenced his professional life as a pupil to Dr. Stallard, then residing in that town, and was subsequently articled to Mr. C. R. Crossley, Surgeon to the Leicester Infirmary. He entered on his hospital studies at Guy's in 1857, and, after a successful career as student, he offered himself for examination at the Royal College of Surgeons, and obtained his diploma of membership in 1861, and L.S.A. the same year, taking his M.B. Lond. in 1863. He was elected Resident Medical Officer to the Brixton Dispensary, where he soon became an especial favourite with the poor confided to his care. "Yes, sir," said a grateful 'busman to the writer of this notice on the day of the funeral, "Dr. Mercer *was* a good man; we all liked him,"—a statement confirmed by the policeman standing by. After nearly four years' earnest dispensary work, he established himself in private practice at Leicester Villa, Effra-road, Brixton; but, as one of the honorary medical officers of the dispensary, he still retained his interest in that institution, and continued up to the time of his death one of its most valued supporters.

During his last illness, which he bore with quiet fortitude, he was constantly watched by several of his old medical friends, to whom Sir William Gull gave the advantage of his kindly and ready aid in consultation, but notwithstanding the most affectionate nursing and great medical care his nervous power rapidly gave way.

His funeral at Norwood afforded opportunity for a display of genuine grief such as is seldom witnessed. His remains were followed by nearly all his medical neighbours; and the long string of private carriages, the almost universal closure of houses and shops in the locality, and the presence round his grave of a large concourse of unbidden mourners, showed what esteem he had gained from all classes, and proved that, by a life of unassuming gentleness, by sympathy with suffering, and by genial good-fellowship, he had raised for himself, in the hearts of his fellow-men, and especially of the suffering and distressed, a memorial "more lasting than brass."

Sir James Paget was last week admitted to the honorary freedom of the Grocers' Company.

Collegiate Elections.—At a quarterly meeting of the Council of the Royal College of Surgeons, on the 8th inst., Sir James Paget, Bart., F.R.S., was elected President, anp Messrs. Prescott Hewett, F.R.S., and John Birkett, Vice-Presidents of the College for the ensuing year. Mr. William Guybon Atherstone, of Graham's Town, South Africa, was admitted a Fellow of the College, his diploma of membership bearing date May 11, 1838.

MEDICAL NEWS.

University of Dublin.—At the Summer Commencement, held in the Examination Hall of Trinity College, on Wednesday, June 28, the following degrees and licences in Medicine and Surgery were conferred by Sir Joseph Napier, Bart., Vice-Chancellor of the University:—

Magister in Chirurgiâ (honoris causâ).—Gulielmus Colles.

Baccalaurei in Medicinâ.—Arturus W. W. Baker, Robertus S. Cochrane, Gulielmus Clibborn, Allan Nesbitt Fox, Thomas Carson Fisher, Franciscus G. Goodman, Nicholas Johannes Halpin, Gulielmus Hume Hart, Thomas Crawford Hayes, Archibaldus Henricus Montfort, Johannes Josephus Power, Gulielmus B. Smyth, Gulielmus Henricus R. Stanley, Gulielmus Walter.

Baccalaureus in Chirurgiâ.—Gulielmus Lovell Hunter.

Magistri in Chirurgiâ.—Alfredus Banks, Alexander S. Bleakley, Arturus W. W. Baker, Thomas Carson Fisher, Jacobus de Burgh Griffith, Gulielmus Hume Hart, Nicholas Johannes Halpin, Jacobus Josephus Moran, Georgius Michael Nixon, Johannes Josephus Power, Ricardus Theodorus Stack (*antea per diploma*).

Doctores in Medicinâ.—Hon. Arturus Hill Trevor de Montmorency, Christopher Elliott, Thomas Crawford Hayes, Cedric Herbert Hurford, Carolus Alexander M'Munn, Johannes Edvardus Meredith, Horatius Townsend Newman, Gulielmus Henricus Oulton, Gulielmus Magee Tredenneck, Oscar Thomas Woods.

Licentiati in Medicinâ.—Martinus O'Carroll, Edvardus H. Byrne, Johannes Lane.

Licentiatus in Chirurgiâ.—Edvardus H. Byrne.

Apothecaries' Hall.—The following gentlemen passed their examinations in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 1:—

Collins, Henry Abdy, Bayswater.
O'Callaghan, Kenneth Macdonald, Blackrock, co. Cork.
Rees, Alfred, Maesteg, Glamorganshire.
Saunders, Edward Argent, Haverfordwest, South Wales.

The following gentlemen also on the same day passed their primary professional examination:—

Jakins, Percy Septimus, St. Mary's Hospital.
Skerman, Sidney, King's College.

At the recent competitive examination for the Prizes in Botany given annually by the Society of Apothecaries to medical students, the successful candidates were:—

First.—Whitney, Neville Scott, of University College, a Gold Medal.
Second.—Parker, William Rushton, of University College, a Silver Medal and a Book.

NAVAL AND MILITARY INTELLIGENCE.

Admiralty.—The following officer has resigned his commission in the Royal Navy:—Surgeon John B. Isaac, late of the *Duke of Wellington*.

War Office, Pall-mall—Medical Department.—Surgeon-Major Titterton, M.D., retires upon temporary half-pay. Surgeon Charles Henry Young Godwin to be Surgeon-Major, *vice* Henry Fowle Smith, M.D., retired upon temporary half-pay. Surgeon Samuel Popham, M.B., resigns his commission. Surgeon Edmund Thomas Palmer, half-pay, resigns his commission. Surgeon James Magill, M.D., resigns his commission. Henry Archibold Fogerty, M.D., to be Surgeon; dated September 30, 1874, such antedate not to carry back pay prior to May 7, 1875. Assistant-Surgeon Frederick Ffolliott is removed from the Army, the period for which his half-pay has been granted having expired.

BIRTHS.

Baker.—On July 3, at Handford Hall, Ipswich, the wife of T. Y. Baker, Army Medical Staff (late 27th Inniskillings), of a daughter.

Churchill.—On July 1, at 6, Sumner-place, South Kensington, the wife of Frederick Churchill, M.D., F.R.C.S., of a daughter.

Fraser.—On June 30, at Greenlaw Park, Mid-Lothianshire, N.B., the wife of H. M. Fraser, M.D., Deputy Surgeon-General, of a daughter.

Gordon.—On June 29, at Herbert Hospital, Shooter's-hill, the wife of Dr. H. G. Gordon, Deputy Surgeon-General, of a son.

Kerr.—On July 2, at 42, Grove-road, Regent's-park, N.W., the wife of Norman S. Kerr, M.D., F.L.S., of a daughter.

Metcalfe.—On July 6, at 53, Clifton-gardens, W., the wife of R. Metcalfe, F.R.C.S., of a daughter, stillborn.

Turner.—On July 4, at 29, Cross-street, London, N., the wife of Duncan Turner, L.R.C.P., of a son.

MARRIAGES.

Archer—Woodcock.—On April 20, at St. Peter's Collegiate Chapel, Adelaide, South Australia, Edmond Lewis Archer, surgeon, of Moonta, third son of Thomas Archer, Esq., of Cathcart-hill, London, N., to Fannie, youngest daughter of the late Rev. — Woodcock, Archdeacon of Adelaide.

Bramwell—Reynolds.—On July 6, at St. John's, East Dulwich, John Milne, youngest son of James Patton Bramwell, M.D., of Perth, to Mary Harriet, eldest surviving daughter of the late Captain Charles Sheppard Reynolds, Bengal Native Infantry, and Assistant-Commissioner of the Assam Provinces.

Grove—Wornum.—On July 1, at St. John's Church, Hampstead, John Grove, of 9, Stanley-gardens, Hampstead, and 7, Queen-street, Cheapside, London, only son of John Grove, M.D., of Spring-grove, Hampton, Middlesex, to Anna Rosa, fifth daughter of R. N. Wornum, Esq., of 20, Belsize-square, and of the National Gallery.

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HORTON—ELLIOTT.—On May 29, at St. George's Cathedral, Freetown, Sierra Leone, James Africanus Beale Horton, M.D., Surgeon-Major Army Medical Department, to Selina Beatrice, third daughter of John Bucknor Elliott, Esq., Civil Commandant of the Western District of Sierra Leone.

HUTCHINSON—FRANKLIN.—On July 1, at St. Mark's, Notting-hill, W., William Hunter, third son of the late John Hutchinson, M.R.C.S., of Donington, Lincolnshire, to Julia, youngest daughter of the late Henry Franklin, Esq., of Kingston, Jamaica.

NEWINGTON—BARNES.—On July 1, at St. George's, Hanover-square, Alexander Samuel Lysaght Newington, M.B. Cantab., third son of Dr. Newington, of Ticehurst, Sussex, to Mary Gertrude Fancourt, elder daughter of Robert Barnes, M.D., of 31, Grosvenor-street, W.

SMITH—JEFFERY.—On July 3, at St. Leonard's Church, St. Leonard's-on-Sea, James Frederick Smith, of Toronto, Canada, barrister-at-law, to Alice, eldest daughter of G. A. Jeffery, M.D., of Eastbourne.

WALL—STEWART.—On July 1, at St. George's, Campden-hill, A. Wall, L.R.C.P., M.R.C.S., L.S.A., of 46, Norfolk-terrace, Bayswater, W., to Isabella Sarah Vivian, elder daughter of R. W. Stewart, Esq., of 13, Colville-terrace West, Kensington-park, W.

DEATH.

BIRKBECK, Mrs., widow of the late George Birkbeck, M.D., suddenly, at her residence, 1, Monkbarns-villas, Haverstock-hill, Hampstead, on July 2, in her 83rd year.

BOWEN, HARRIETT, wife of Frederick P. Bowen, M.R.C.S. Eng., L.S.A., at Ivy Cottage, Harrow-on-the-Hill, from inflammation of the lungs, on June 25, aged 78.

CLARKE, JAMES FERNANDEZ, M.R.C.S. Eng., etc., at 23, Gerrard-street, Soho, W., on July 6, in his 63rd year.

RUMBOLD, THOMAS, M.R.C.S. Eng., late of Guy's Hospital, at 49, New North-road, on June 26, aged 58.

WARDROPER, WILLIAM, M.R.C.S., F.S.A., eldest surviving son of the late Richard Wardroper, Esq., of Midhurst, at Epsom, after twenty years' suffering, on June 26, aged 71.

WINCKWORTH, FANNY MARCIA, beloved wife of Lewis Winckworth, Esq., of Abingdon-street, Westminster, and only daughter of the late W. H. Powell, M.D., of Fareham, Hants, at Devonshire Lodge, The Avenue, Brondesbury, N.W., on July 4.

WOLFF, HENRY, M.D., at Bonn, on the Rhine, on June 29, in his 82nd year.

WRIGHT, WILLIAM EVATT, Staff Surgeon to his Excellency the late Lord Hobart, Governor of Madras, at Coonoor, Madras, on June 25, in his 31st year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ADDERBURY, OXON.—Medical Officer to the Poor. Candidates must be duly qualified. Applications, with testimonials, to Lieut.-Col. Cobbe, West Adderbury House, Banbury, on or before July 20.

BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, at the Hospital, on or before July 22.

CHELTENHAM GENERAL HOSPITAL.—Surgeon to the Branch Dispensary. Candidates must possess both a medical and surgical qualification, and be registered. Applications, with testimonials, to the Secretary, at the Hospital.

CONSUMPTION HOSPITAL, BROMPTON.—Resident Clinical Assistants. Applications, with testimonials, to the Secretary, on or before August 2.

DENTAL HOSPITAL OF LONDON, LEICESTER-SQUARE.—Assistant Dental Surgeon. Candidates must hold the dental diploma of the Royal College of Surgeons of England. Applications, with testimonials, on or before July 12.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, RATCLIFF CROSS, E.—Resident Medical Officer. Applications, with testimonials, to the Secretary, on or before July 15.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—House-Surgeon. Candidates must be M.R.C.S. Applications, with testimonials, to the Secretary, on or before July 30.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.—Surgeon-Dentist. Candidates must be F. or M.R.C.S. Eng. Applications, with testimonials, to the Secretary, before July 15.

KILBURN DISPENSARY.—Assistant Resident Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Honorary Secretary, 33, Boundary-road, Finchley-road, N.W., on or before July 10.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Demonstrator of Anatomy. Applications, with testimonials, to the Registrar, on or before July 31.

METROPOLITAN FREE HOSPITAL, DEVONSHIRE-SQUARE, E.—Assistant House-Surgeon. Applications to the Committee of Management.

NATIONAL DENTAL HOSPITAL, 149, GREAT PORTLAND-STREET, W.—Dental Surgeon and two Assistant Dental Surgeons. Candidates must be L.D.S. of R.C.S. Eng. Applications to be sent, with testimonials, on or before Wednesday, July 14, to A. Hockley, Secretary.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before July 31.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Teacher of Physiological Chemistry. Applications to Dr. Wadham, at the Hospital.

UNIVERSITY COLLEGE HOSPITAL.—Teacher of Operative Surgery; also an Assistant-Surgeon and an Assistant-Physician. Applications for the appointments, the first two of which may be held together, must be sent to John Robson, B.A., Clerk to the Council, on or before July 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Lymington Union.—Mr. Adams has resigned the Lymington District; area 10,079; population 6962; salary £65 per annum.

Ormskirk Union.—Mr. G. Woods has resigned the Second District; area 14,881; population 26,855; salary £60 per annum.

St. Ives Union.—Dr. Serjeant has resigned the Warboys District; area 11,595; population 2395; salary £48 per annum.

APPOINTMENTS.

Axminster Union.—N. W. Spicer, jun., M.R.C.S. Eng., L.S.A., to the Chardstock District. B. Hodges, M.R.C.S. Eng., to the Membury District.

Dunmow Union.—George Richards, L.R.C.P. Edin., L.F.P. & S. Glasg., L.S.A., to the High Easter District.

Newcastle-in-Emlyn Union.—Joshua Powell, M.R.C.S. Eng., L.S.A., to the Penbryn District.

Paddington Parish.—Mr. Alfred G. Anderson as Analyst.

MR. SCLATER-BOOTH has been elected chairman of the Select Committee of the House of Commons to inquire into the Hampstead Hospital question.

ROYAL FREE HOSPITAL.—At a meeting of the General Committee of Management of this institution, on the 8th inst., Mr. William Rose, F.R.C.S., of Old Cavendish-street, was elected Surgeon of this Hospital in the vacancy occasioned by the decease of Mr. J. D. Hill.

HEALTH OF LONDON.—The Registrar-General's return last week records the deaths of 1348 persons in London, showing 30 below the average number. The annual death-rate from all causes decreased to 20 per 1000, a slight decline upon that of the previous week. The deaths included 1 from small-pox, 29 from measles, 69 from scarlet fever, 7 from diphtheria, 54 from whooping-cough, 12 from different forms of fever, and 107 from diarrhœa. To the seven principal diseases of the zymotic class 279 deaths were referred, against 221 and 267 in the two previous weeks. The 279 deaths from the same diseases in the corresponding week of the last ten years were 20 below the average. The death-rate was 19 per 1000 in the West, 20 in the North, 21 in the Central, 22 in the East, and 21 in the South groups of districts.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JUNE, 1875.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	18·28	0·051	0·131	0·001	14·0	3·3
West Middlesex .	18·07	0·044	0·151	0·000	14·0	3·3
Southwark & Vauxhall . . .	18·36	0·052	0·144	0·001	14·0	3·3
Chelsea . . .	18·33	0·056	0·167	0·001	14·0	3·3
Lambeth . . .	18·80	0·055	0·180	0·001	14·0	3·3
Other Companies.						
Kent	27·83	0·007	0·292	0·000	20·8	5·8
New River . . .	17·83	0·014	0·143	0·000	14·0	3·3
East London . .	18·73	0·046	0·171	0·000	14·0	3·5

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was very slightly turbid—namely, in those of the Grand Junction, the Southwark and Vauxhall, and the Chelsea Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 121,543,736 gallons; and the number of houses supplied was 517,489. This is at the rate of 35·3 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 31·4 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Scott.—As to the period within which the course of lectures you allude to can be completed, we are entirely in the hands of the learned Professor, but it is our desire to publish as much as possible every week.

Aorta.—Dr. Archibald Billing is alive and well, judging from his appearance at the *conversasione* last week at the Royal College of Physicians; and long may he continue so!

Cecil F.—The exhibition of sanitary appliances will take place from the 6th to the 16th, in the Corn Exchange, Brighton, in connexion with the Social Science Congress to be held contemporaneously in that town.

Dudley W.—The subject of the essay for the Statistical Society for next year, 1876, is—"On the Mortality of Hospitals—general and special—in the United Kingdom in times past and present."

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Statistics.—Professor Leone Levi, in his "Wages and Earnings of the Working Classes," pages 45 and 46, estimates the number of the manual-labour class in these islands at twenty-two millions, with an annual income of 418 millions, giving a proportional income of about £19 per head, or £85 per family.

G. F. F.—The great Kalahari desert was crossed, and Lake Nyami discovered, in August, 1849. Dr. Livingstone's opinion of this country was that "not only the natives, but Europeans whose constitutions have been impaired by an Indian climate, find the tract of country indicated—the southern borders of the Kalahari—both healthy and restorative. Cases have been known in which patients have come from the coast with complaints closely resembling, if they were not actually, those of consumption, and they have recovered by the influence of the climate alone."

BAND AND MESS SUBSCRIPTIONS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In reference to the anomaly of a staff medical officer being made to pay band and mess subscriptions, it is evident to all experienced men in the department that the authorities consider only the interest of the regimental funds, which they desire to benefit at the cost of the medical officers, on the plea that only a portion (but it is the major portion) of these officers object to such payments. If the authorities are only inclined to act justly, the matter lies within a nutshell. Thus:

1. Let men appointed for five years to regiments pay subscriptions (not contributions) to the band and mess.

2. Let men only attached temporarily have the option of joining the mess. If they consider this honour worth the subscription demanded, they will *accept;* if purchased at too high a rate, they will *decline.*

Make dining membership and use of mess optional, and all medical officers will be satisfied. OVER TWENTY YEARS' SERVICE.

COMMUNICATIONS have been received from—

Mr. SAUNDERS, London; F.R.C.S.; Mr. W. R. SMITH, Winchester; Dr. J. W. MOORE, Dublin; Mr. G. BROWN, London; THE REGISTRAR-GENERAL, Edinburgh; Mr. A. H. B. WICKHAM; Mr. A. SMEE, London; THE SECRETARY OF THE DEVONSHIRE HOSPITAL; Dr. RALFE, Greenwich; Mr. B. VINCENT, London; Mr. W. GILMAN, Birmingham; Dr. TONGE, Harrow; Mr. FISHER, Wigan; Dr. A. H. NOVELLI, London; Dr. NICHOLSON, Redhill; Mr. EGARR, Terrington, St. John's; Dr. DUFF, Elgin; Dr. DEMPSTER, Duncannon.

BOOKS AND PAMPHLETS RECEIVED—

Memoir of Thomas Turner, F.R.C.S.—Insectivorous Plants, by Charles Darwin, F.R.S.—Annual Report of the Fever Hospital and House of Recovery, Cork-street, Dublin—Dudfield's Report on the Health of Kensington—Trader on Anæsthesia and Anæsthetics—Todd on Anæsthetics in Labour—Campbell on Position, Pneumatic Pressure, and Mechanical Appliance in Uterine Displacements.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—The Veterinary Journal—Practitioner—Popular Science Review—Monthly Microscopical Journal—Science Gossip—Medico-Chirurgical Review—Obstetrical Journal—Edinburgh Medical Journal—Glasgow Medical Journal—British Quarterly Review—St. James's Magazine—Westminster Review—American Supplement to the Obstetrical Journal—Bolton Daily Chronicle—El Anfiteatro Anatomico Espanol—Dietetic Reformer—L'Archives Générales de Médecine—North Metropolitan and Holloway Press.

APPOINTMENTS FOR THE WEEK.

July 10. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

12. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

13. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

14. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

15. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

16. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 3.

BIRTHS.

Births of Boys, 1079; Girls, 1036; Total, 2115.
Average of 10 corresponding years 1865-74, 2110·5.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	725	623	1348
Average of the ten years 1865-74	667·3	620·7	1288·0
Average corrected to increased population	...	...	1378
Deaths of people aged 80 and upwards	...	...	39

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	3	18	1	4	...	1	1	20
North	751729	...	1	15	4	15	...	2	...	30
Central ...	334369	...	2	3	...	6	...	...	1	9
East	639111	...	10	6	1	9	...	1	...	25
South	967692	1	13	27	1	20	1	4	1	23
Total	3254260	1	29	69	7	54	1	8	3	107

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·682 in.
Mean temperature	59·7°
Highest point of thermometer	74·3°
Lowest point of thermometer	43·7°
Mean dew-point temperature	54·2°
General direction of wind	S.W., S.E., & S.
Whole amount of rain in the week	1·34 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 3, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending July 3.	Deaths Registered during the week ending July 3.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2115	1348	74·3	43·7	59·7	15·39	1·34	3·40
Portsmouth ...	122632	27·3	59	22	...	...	...	...	...	...
Norwich	82842	11·1	53	36	75·5	43·0	60·1	15·62	0·63	1·60
Bristol	196186	44·1	126	92	71·5	44·0	58·0	14·44	1·62	4·11
Wolverhampton ...	71718	21·1	44	29	73·0	46·1	56·8	13·78	3·08	7·82
Birmingham ...	366325	43·6	224	153	72·0	43·5	56·5	13·61	2·08	5·28
Leicester	109830	34·3	78	48	78·8	43·0	59·8	15·45	3·06	7·77
Nottingham ...	92251	46·2	40	37	73·1	42·9	58·1	14·50	1·92	4·88
Liverpool	516063	99·1	380	231	70·9	49·7	57·3	14·06	1·65	4·19
Manchester ...	356626	83·1	265	169	...	...	...	...	...	...
Salford	135720	26·3	104	57	72·0	43·1	56·4	13·55	2·26	5·74
Oldham	87437	18·7	56	48	...	...	...	...	...	...
Bradford	168305	23·3	128	70	70·6	45·8	57·6	14·23	2·99	7·59
Leeds	285118	13·2	197	107	72·0	44·0	57·8	14·34	1·61	4·09
Sheffield	267881	13·6	204	102	71·0	43·0	56·1	13·39	2·59	6·58
Hull	133932	36·8	114	62	72·0	44·0	57·7	14·28	1·17	2·97
Sunderland ...	106342	32·2	91	38	75·0	46·0	57·4	14·11	1·30	3·30
Newcastle-on-Tyne	137665	25·6	135	54	...	...	...	...	...	...
Edinburgh	211626	50·5	115	89	70·0	44·5	56·1	13·39	...	...
Glasgow	534564	88·6	462	259	67·4	43·9	56·6	13·67	0·58	1·47
Dublin	314666	31·3	158	140	68·0	46·4	57·8	14·34	0·23	0·58
Total of 21 Towns in United Kingdm	7742889	37·0	5148	3191	78·8	42·9	57·6	14·23	1·76	4·47

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·68 in. The lowest was 29·53 in. on Thursday evening, and the highest 29·89 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 39.)

The Brachiopoda.—The Brachiopoda are all marine animals provided with a bivalve shell, and usually fixed by a peduncle or otherwise; but they never multiply by gemmation, or give rise to compound organisms. The shell is always inequivalve and equilateral—that is to say, each valve is symmetrical within itself and unlike the other valve. The shell consists of a membranous basis, hardened by the deposit of carbonate of lime, sometimes with a large proportion of phosphate of lime (*Lingula*); and is a cuticular structure secreted by the ectoderm.

The body, or rather that part of it which contains the chief viscera, is small relatively to the valves of the shell, and is produced into two broad lobes, which line so much of the interior of the valves as the visceral mass does not occupy. The free edges of these lobes are thickened, and are beset with numerous fine chitinous setæ, lodged in sacs like those of the Annelids. Between the two lobes of the mantle, or *pallium*, is the pallial chamber, bounded behind by the anterior wall of the visceral mass. In the middle line, this wall presents the oral aperture, which is seated in the midst of a disc, the margins of which are provided with numerous tentacula. The disc is generally produced on each side into a long spirally-coiled arm, fringed with tentacles —whence the name of "Brachiopoda," applied to the group. And, in many genera, these arms are fixed to processes of one of the two valves of the shell.

The alimentary canal consists of an œsophagus, a stomach, with hepatic follicles, and an intestine. In some genera the latter is short, and ends in a cæcum in the middle line of the body; in others it is long, and opens into the pallial chamber on the right side of the mouth.

The alimentary canal is invested by an outer coat—the so-called peritoneum,—by which it is suspended, as by a mesentery, in a spacious "perivisceral" cavity. Lateral processes of this coat—the *gastro-parietal* and *ilio-parietal bands*—connect the gastric and intestinal divisions of the alimentary canal respectively, with the parietes.

From the perivisceral cavity, sinus-like branched prolongations extend into each lobe of the mantle, and end cæcally at its margins. And the perivisceral cavity communicates with the pallial chamber by at fewest two, and sometimes four, tubular organs, which have been described as "hearts," but are now known to have no such nature. Each of these organs is shaped like a funnel, the wide portion, which opens into the perivisceral cavity, being much plaited and folded, and separated by a constriction from the narrower part, which answers to the pipe of the funnel, and, passing obliquely through the anterior wall of the visceral chamber, ends in a small aperture. It is probable that these pseudo-hearts subserve the function both of renal organs and of genital ducts; and that they answer to the organs of Bojanus in Mollusks, and to the segmental organs of worms.

Between the ectoderm and the lining membrane of the prolongations of the perivisceral cavity, in the mantle and in the outer walls of the perivisceral cavity; and between the endoderm, the ectoderm, and the lining membrane of the perivisceral cavity in the front wall of that chamber, there is an interspace, broken up into many anastomosing canals, which represents a large part of the proper blood system. Vesicular dilatations of the walls of these canals are found at the back of the stomach, and in some other localities, and have been regarded as hearts, but there is no clear evidence that they are such. And although the existence of a direct communication between the perivisceral chamber and these sinuses has not been demonstrated, it is very probable that the perivisceral chamber really forms part of the blood-vascular system.

Muscles for the adduction and divarication of the valves of the shell, and for effecting the other movements of the animals, are well developed in the Brachiopoda. They are to a great extent striated.

The nervous system, where it has been best made out, consists of a relatively thick ganglionic band behind the mouth, the ends of which are united by a commissural cord, which surrounds the gullet, and bears two small ganglionic enlargements. The latter probably answer to the cerebral, the former to the pedal, ganglia of the Lamellibranchiata. Immediately behind the pedal mass are two small ganglia, connected by a commissure of their own, which possibly answer to the parieto-splanchnic ganglia of the higher Mollusks.

The reproductive organs are lodged in the perivisceral cavity or its prolongations, and are apparently always contained in processes of the lining membrane of that cavity. It is not clear whether hermaphrodism is the rule or the exception. *Thecidium*, however, has been shown by Lacaze-Duthiers to be dicœcious.

The recently published investigations of Kowalewsky on the development of *Argiope*, *Thecidium*, *Terebratula*, and *Terebratulina* show that the egg becomes converted into a saccular Morula, in which an alimentary sac is developed by invagination, and that the sac gives off, as in Sagitta, two diverticula, which are converted into the perivisceral cavity. This cavity, therefore, is an enterocœle. The embryo elongates, and becomes divided by constrictions into three segments, of which the anterior becomes fringed with long cilia, and developes eye-spots, so that the young Brachiopod acquires a great resemblance to an ordinary Annelid larva. The resemblance is increased by the appearance of four bundles of setæ on the middle segment, which becomes produced into a sort of mantle, the free edges of which are at first turned backwards. As the larva grows, the third segment becomes truncated at the end, and furnishes a surface (provided with a shell gland ?), by which it becomes attached. At the same time, the first, or præstomial segment, atrophies, and the setigerous hood developed from the middle segment is retroverted, rapidly grows, and becomes converted into the lobes of the mantle on which the valves of the shell are developed.

The resemblance of the larval Brachiopod to a Polyzoon, and especially to *Loxosoma*, is most striking, and fully bears out the conclusion as to the affinity of the Polyzoa and the Brachiopoda which results from the study of their adult structures. On the other hand, the development of the Brachiopoda no less strongly testifies to their Annelidan affinities.

The Brachiopoda are distinguishable into two groups, the *Articulata* and the *Inarticulata*. In the *Articulata*, the two valves are united by a hinge, and the ventral valve is usually provided with teeth, which are received in sockets of the dorsal valve. The gullet ascends in the middle line towards one valve, which is termed dorsal, and the intestine descends towards the opposite, or ventral, valve, and there ends in a cæcum. Very often the dorsal valve has spiral or looped shelly processes to which the arms are attached. The valves are brought together by a pair of adductor muscles, and are separated by divaricator muscles, which pass from the ventral valve to a median process—the cardinal process—of the hinge-line of the dorsal valve. Very often the ventral valve is produced into a sort of spout, through which passes the peduncle by which the animal is attached to rocks. At the sides of the visceral chamber the thickened edge of the dorsal lobe of the mantle passes into the edge of the ventral lobe.

The substance of the shell is very often traversed by numerous canals perpendicular to its surface, which contain prolongations of the mantle.

This division contains the families of—(1) The *Terebratulidæ*, (2) the *Spiriferidæ*, (3) the *Rhynchonellidæ*, (4) the *Orthidæ*, and (5) the *Productidæ*, of which the second, fourth, and fifth are extinct and palæozoic, while the majority of the species of the other two families are also extinct.

The *Inarticulata* have no hinge; the intestine opens into the cavity of the mantle, the margins of the lobes of which are completely separate. Some have a long peduncle (*Lingula*), others are fixed by a plug which passes through an aperture or notch of one valve (*Discina*), or by one valve (*Crania*). There is no brachial skeleton.

Species of all these families exist at the present day, but they are also represented in the older palæozoic epochs, and *Lingulæ* are among the oldest known fossils.

The Mollusca.—This term is used as a convenient denomina-

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tion for the *Lamellibranchiata* and *Odontophora* (= *Gasteropoda*, *Pteropoda*, and *Cephalopoda*, of Cuvier), which can be readily shown to be modifications of one fundamental plan of structure. This may be represented by a body, symmetrical in relation to a median vertical plane, at one end of which is the oral, and at the other the anal aperture of the alimentary canal. This body has a ventral or *neural* face, an opposite dorsal or *hæmal* face, and a right and left side. The neural face gives rise to a muscular *foot*. The integument of the hæmal face is, for a certain extent, produced at its edges into a free fold, and the term mantle, or *pallium*, is applied to the region of the integument thus circumscribed. Between the free portion of this mantle and the rest of the body is a cavity, the *pallial* chamber, from the walls of which, processes which subserve respiration, the *branchiæ*, may be developed.

In the median line of the surface of the mantle of the embryo, a *shell gland* is very generally formed, and from the surface of the mantle a cuticular secretion, the *shell*, is produced.

The heart is situated in the middle of the posterior hæmal region, and consists of, at fewest, two chambers, an auricle and a ventricle. The blood corpuscles are colourless and nucleated. Between the heart and the intestine there are one or two sacs, the organs of Bojanus, which open externally, and communicate with the blood system.

The nervous system consists of a pair of ganglia (*cerebral*) at the sides or in front of the mouth, and two pairs of post-œsophageal ganglia (*pedal* and *parieto-splanchnic*), the latter being connected by commissures with the former.

In the majority of the Mollusca, the embryo passes through a stage in which it is provided with a ciliated *velum*, developed on the hæmal aspect of the cephalic region of the body, in front of the mantle.

The special peculiarities of the different groups of the Mollusca result chiefly—

1. From the form of the pallial region, and the extent of the mantle-lobes relatively to the body.
2. From the number and arrangement of the pieces of the shell to which it gives rise.
3. From the growth and modification of the foot, and the production or non-production of chitinous, or shelly, matter by it.
4. From the development of sense-organs on the anterior end of the body, and the absence or presence of a distinguishable head.
5. From the disproportionate growth of certain regions of the body, and consequent change in the direction of the intestine, often accompanied by asymmetrical lateral distortion.

The Lamellibranchiata.—There are always two large pallial lobes which are lateral, or right and left, in relation to the median plane; and each of these lobes gives rise to a piece, or *valve*, of the shell. The two valves are usually united in the median dorsal line by an uncalcified chitinous cuticular matter, termed the *ligament*, and not unfrequently articulate by interlocking processes. The margins of the mantle present no setæ.

The foot may be rudimentary, but it is usually large, flexible, and employed as an organ of locomotion. The posterior face of the foot not uncommonly presents a gland which secretes a chitinous, or shelly, substance—the *byssus*.

Where each mantle-lobe joins the body, branchial processes project into the pallial cavity, and usually become converted into two reticulated gill-pouches of an elongated lamellar form.

The mouth is bounded by lips, the angles of which are usually produced on each side into two *labial palpi*. A wide and short gullet leads into a stomach surrounded by the liver. Very generally a diverticulum of the stomach contains a transparent rod-like body—the *crystalline style*.

The intestine usually makes many convolutions, but, finally reaching the middle line of the dorsal region of the body, terminates by the anus in the posterior part of the pallial chamber. The heart lies in the region traversed by the termination of the intestine. It consists of an auricle and a ventricle, or of a ventricle and two auricles, or may be divided into two separate auricles and ventricles. Aortic trunks distribute the colourless blood to the body, whence it is carried to a large median venous sinus; from this it passes through the walls of the organs of Bojanus to the gills, and is returned from these to the auricular division of the heart. Very generally the ventricle invests the rectum. The mesodermal region between the endoderm and the ectoderm is for the most part occupied by vascular, connective, and muscular tissues, and by the reproductive organs, so that there is no large perivisceral space. But there is—1. The large median sinus already mentioned, which receives the blood returned from all parts of the body, and is commonly termed the *vena cava*. 2. A spacious pericardial chamber which incloses the heart. It is in communication with the venous system, and, consequently, directly or indirectly with the vena cava. 3. Two organs of Bojanus, which usually freely communicate with one another, open into the pericardium on the one hand, and on the exterior of the body on the other. 4. Canals which open on the exterior of the body, especially on the surface of the foot. These so-called *water-vessels* pass internally into the venous system, of which, indeed, they seem to form a part. It is probable that all these cavities taken together represent the perivisceral cavity, blood sinuses, and pseudo-heart of a Brachopod.

Muscular fibres pass transversely from one valve of the shell to the other, and bring them together; while they are divaricated by the elastic reaction of the ligament. Of such *adductor* muscles there may be either one or two. When there are two (*Lamellibranchiata Dimyaria*), the *anterior adductor* lies in front of, and on the hæmal side of, the œsophagus; while the *posterior adductor* lies in front of, but on the neural side of, the rectum. Hence the alimentary canal, as a whole, lies between these two muscles. When only one adductor muscle exists, it is the posterior. The *cerebral ganglia* lie at the sides of the mouth, and are connected by a commissure, which passes in front of it. They give branches to the labial palpi and to the parts about the mouth. The *pedal ganglia* are situated in the foot; or in the corresponding region on the neural side of the alimentary canal, when no foot is developed. Each is united by a commissure with the cerebral ganglion of its own side, and with its fellow. They supply the muscles of the foot. The *parieto-splanchnic ganglia* lie on the ventral face of the posterior adductor, and each is connected with the cerebral ganglion of its side by a long commissure. They give branches to the mantle, to the branchiæ, and to the viscera.

Eyes are never developed in the cephalic region of the Lamellibranchs, but, very commonly, numerous simple eyes terminate papillæ of the margins of the mantle.

Auditory sacs are almost invariably attached by longer or shorter peduncles to the pedal ganglia.

The Lamellibranchiata are usually dicecious, but sometimes hermaphrodite. The reproductive organs are ramified racemose glands, which occupy a large portion of the body in the breeding season, and the ducts of which open externally close to, or in common with, the organs of Bojanus.

The process of yelk-division gives rise to smaller and larger blastomeres, of which the former, as an epiblast, invest the latter as a hypoblast.

The important observations of Mr. Lankester on *Pisidium* show that, in some Lamellibranchs, yelk-division results in a vesicular morula, which undergoes invagination, and passes into the gastrula stage. From the sides of the invaginated alimentary sac, two oval diverticula are thrown out, but they do not give rise to any portion of the alimentary canal, which results from the metamorphosis of the median portion of the hypoblast which remains between these diverticula. It is impossible not to be struck with the resemblance of these oval bodies to the lateral outgrowths of the primitive gastric sac, out of which, in *Sagitta* and in the *Brachiopoda*, the perivisceral cavity and the mesoderm are developed.

At the cephalic end of the embryo thus produced, a velum, or disc, with richly ciliated edges, and usually a central tuft of longer cilia, is formed. On the dorsal face of the embryo the integument rises into a patch with raised edges, which is the rudiment of the mantle. In the centre of this an involution of the epiblast produces a small sac—the "shell gland"—which has only a temporary existence.(a) It corresponds in position with the ligament, and has nothing to do with the shell, which is at first a chitinous cuticula developed from the surface of the cells of the mantle, and the separation of which into two valves, united by an uncalcified hinge, must probably be ascribed to the manner in which the calcareous matter subsequently added to the shell is deposited.

The foot appears as a median outgrowth of the ventral face of the embryo behind the mouth. The branchiæ have at first the form of separate filamentous processes, which are developed

(a) Lankester, "Observations on the Development of the Pond Snail."—*Quarterly Journal of Microscopical Science*, new series, vol. xiv.

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from the roof of the anterior part of the pallial cavity, and gradually increase in number from before backwards. The processes which are first formed unite, and become the outer lamella of the inner gill-plate; the inner lamella of this plate is produced by the bending round and upgrowth of the free ends of those processes. The inner lamella of the outer gill is formed of branchial processes, which grow out from the attached ends of the first set; and the outer lamella of this gill is produced in the same fashion as the inner lamella of the inner gill.

Recent observations tend to show that in these, as in other Invertebrata, the nervous ganglia are modified ingrowths of the epiblast.

On comparing the *Lamellibranchiata* with the *Brachiopoda*, it is obvious that the two have, in common with one another and with the *Annelida*, the veligerous larval form. If the shell gland is, as Mr. Lankester suggests, the homologue of the peduncular gland of *Loxosoma* and of the Brachiopod larvæ, it follows that the peduncle of the Brachiopod corresponds with the centre of the pallial surface of the Lamellibranch, and that the so-called dorsal and ventral lobes of the mantle in the Brachiopod correspond with the anterior and posterior halves of the mantle in the Lamellibranch. The Brachiopod hinge will therefore be transverse to the axis of the body, while the Lamellibranch hinge is parallel with it. If this comparison be just, however, the three segments of the Brachiopod larva cannot answer to the segments of an Annelid larva, but the two posterior segments of the Brachiopod larva must represent an outgrowth of the hæmal side of the body; and this would correspond very well with the arrangement of the intestine in the articulated *Brachiopoda*.

In the simplest forms of the *Lamellibranchiata*, as *Trigonia*, *Nucula*, and *Pecten*, the mantle-lobes are little elongated, completely disunited with one another and with the branchiæ, and the latter are either simple plumes or have undergone but little modification.

In most Lamellibranchs the gills are lamellar, and the mantle-lobes are united with one another and with the gills so as to separate a supra-branchial from an infra-branchial chamber—(*Ostræa*, *Anodon*). In yet others, the posterior margins of the mantle are produced backwards into shorter or longer muscular tubes—the *siphons;* while the ventral margins of the mantle-lobes unite so as to leave only a small median aperture for the foot. In the most modified forms, the body becomes more and more elongated, until, in *Teredo*, it is completely vermiform, and the valves of the shell cover but a very small portion of the body.

The Odontophora.—The Mollusks which belong to this division are distinguished from the foregoing by possessing a buccal mass, or *odontophore*. This organ consists of a cartilaginous framework attached to the floor of the buccal cavity, upon which, as upon a pulley, a longer or shorter band of chitinous nature, the *lingual ribbon*, plays. This lingual ribbon is armed with tooth-like processes arranged in one or many series, and is developed from a sac situated at its posterior end, so that the teeth are replaced from behind as fast as they are worn away by friction against the food which they rasp at the anterior end of the ribbon.

The Odontophora never possess a bivalve shell, but in other respects some of the lowest forms of this group very nearly approach the Lamellibranchiata, while others more nearly resemble Annelids than anything else.

These lowest forms of the *Odontophora* are the *Polyplacophora*, or *Chitonidæ*, and the *Scaphopoda*, or *Dentalidæ*. In them alone is the bilateral symmetry of the body completely, or almost completely, undisturbed.

The Polyplacophora.—The Chitons are elongated, slug-like animals, having the mouth at one end of the body, and the anus at the other, and otherwise bilaterally symmetrical. A rounded lobe surmounts the mouth, but it bears no eyes or tentacula, and there is no definite head. The edges of the mantle are thickened, but little prominent, so that the pallial cavity is not much more than an elongated groove beneath, and internal to, the thickened edge, which is sometimes beset with setæ. In this groove lie the short transverse lamellæ which represent the branchiæ. The shell is unlike that of any other Mollusk. It consists of eight transversely elongated symmetrical pieces, arranged one behind the other, and usually overlapping and articulating together. The heart, composed of a single ventricle and two auricles, is placed in the middle line, above the rectum, at the posterior end of the body, and the aorta is continued forwards from its anterior end. The reproductive organs are symmetrical, and their ducts open close to the anus.

The embryo leaves the egg as an oval body, surrounded near its anterior end by a circular ciliated band, behind which an eye-spot appears on each side. The segments of the shell appear while the young *Chiton* is still locomotive, and the disc in front of the ciliated band becomes converted into the lobe above the mouth.

The Scaphopoda.—In *Dentalium*, the shell is elongated, conical, and curved like an elephant's tusk with the apex broken off, and it is open at both ends. The animal has a large mantle of corresponding form, and also open at both ends, the margins of the larger aperture being much thickened. The oral aperture, placed at the extremity of a sort of cup, the margin of which is fringed with papillæ, is situated far behind the anterior opening of the mantle. Behind the oral cup, where the body joins the mantle, is a transverse muscular ridge, from which proceed a great number of long tentacles, which protrude through the anterior opening of the mantle, and play the part of prehensile organs. Behind and below the oral cup the very long subcylindrical foot proceeds. Near its extremity are two fleshy epipodial lobes. The oral cup leads into a buccal chamber, containing the odontophore, whence the œsophagus passes to the stomach. The liver consists of two symmetrically-branched divisions; and the intestine, after becoming coiled upon itself, ends in a median, prominent, anal papilla in the median line behind the root of the foot. There is no heart, but the blood fills spacious sinuses. There are no special respiratory organs distinct from the wall of the pallial cavity. In the nervous system, the commissures of the parieto-splanchnic ganglia pass directly to the cerebral ganglia, as in the Lamellibranchs. The sexes are distinct. The embryo is at first surrounded by a number of ciliated rings, its anterior end presenting a tuft of long cilia. By degrees the cilia become restricted to the edges of a disc, into which the anterior end of the embryo expands, and which represents the præ-oral ciliated velum of the Lamellibranchs. The mantle now appears on the dorsal aspect of the body, behind this disc. Its ventral edges are free, and it secretes a shelly plate of corresponding form. But, as development advances, the edges of both mantle and shell unite in the median ventral line, leaving the anterior and the posterior ends open.

(*To be continued.*)

LECTURES ON INJURIES TO THE HEAD.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital; Surgeon to Moorfields Ophthalmic Hospital and the Hospital for Skin Diseases.

LECTURE V.

(*Continued from page 575.*)

TRAUMATIC INFLAMMATION IN THE SUB-ARACHNOID SPACES AT THE BASE OF THE BRAIN.

Case in a Young Man, Mr. Adams' Patient—Case of Joseph Mill—Allusions to other Cases—Conjectures as to the Cause of the Chief Symptoms met with—Comparison with Tubercular Meningitis—Concluding Remarks on Prognosis, Treatment, etc.

A YOUNG MAN was admitted under the care of my late colleague Mr. Adams, having been knocked down in the street, and having received, as was afterwards proved, a fracture of the base of the skull, chiefly on the right side. He had at first the symptoms common to all cases of severe concussion. For about a week he appeared to be doing as well as could be expected; then worse symptoms sent in, and he died on the eleventh day.

I will give you first the particulars of the autopsy, and then consider the symptoms which had been present. We found purulent deposit in the sub-arachnoid spaces at the base of his brain and throughout the whole length of the spinal cord. The quantity of effusion was great: it covered the whole of the pons and medulla in a thick semi-fluid layer; it passed up into the transverse fissure, and occupied all the ventricles. The lateral ventricles were not materially distended, containing, perhaps, half an ounce of serum, but they were lined by a coherent layer of puro-lymph which extended into their cornua, but did not adhere firmly anywhere. This layer passed through the

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foramen of Monro, and was found in the third ventricle, the iter, and the fourth ventricle. In each fissure of Sylvius there was a thin layer of similar material beneath the arachnoid. There was no lymph whatever in the arachnoid cavity itself. Both the visceral and parietal layers of that membrane were everywhere glistening and polished. On the surface of the hemispheres there was nothing whatever to be noted, excepting that the veins were unusually turgid. Observing that the lymph passed downwards from the medulla to the spinal cord, we removed the whole of the latter, and found it everywhere encased by similar deposit. The lymph was of a greenish colour, and half fluid. As you see it now in the specimens, it has shrunk to a tough whitish membrane. In the spinal canal, as in the skull, there was no inflammation whatever external to the theca nor within the arachnoid sac. All the lymph was deposited beneath the visceral arachnoid, encasing the cord itself, and passing, in some instances, with the nerve trunks out of their foramina. It was remarkable how very slightly it adhered to the cord itself. Over the pons and medulla and on the spinal cord we could, with the greatest ease, detach it from the structures which it covered, and they remained clean and still covered by vessels of the pia mater. Nowhere was the structure of the pia mater infiltrated. In the whole length of the spinal cord the deposit was more plentiful behind than in front. As you will see in the specimen, it encases the roots of all the spinal nerves, and extends downwards into the upper part of the cauda equina.

There was a fracture of the squamous portion of the right temporal bone, which passed backwards behind the fossa for the lateral sinus, and then crossed obliquely forwards through the petrous portion of the temporal, across the body of the sphenoid, and into the right orbit. The dura mater had not been torn. There was no material displacement at any part. The right side of the cerebellum in front showed a contused and softened patch; the softening extended about a quarter of an inch into its substance. The cortical substance was broken up and rust-coloured, but it did not show any inflammatory effusions. No other material injury.

You will see, therefore, that the cause of the man's death was a very definite form of traumatic meningitis, that, namely, in which the sub-arachnoid spaces are the seat of the inflammatory effusion. Let us note that the effusion was very extensive from the ventricles to the cauda equina, but that it did not involve the surfaces of the hemispheres, excepting a little at their base. Let us now trace the symptoms which the man had presented during life.

He was admitted on February 28, immediately after his accident, when he was insensible and could not be roused to answer questions. He could move all his limbs, and no paralysis of his face was observed. There was some ecchymosis of his left forehead, upper eyebrow, and conjunctiva. He had some bleeding from his nose, but none from either ear. An hour later he had recovered sufficiently to put out his tongue when asked. His pulse was 84, soft and small. He was chilly, and when the bedclothes were turned down he would pull them up again. During the afternoon he rallied yet further. In the evening he was again carefully examined, and no paralysis of either face or limbs could be discovered. His pupils did not act in the least, and were of medium size. He told his age, and had passed his water. During the night he remained sleepy and stupid. On the following day he was much in the same condition. No paralysis of the face was noticed.

On March 2, the third day, it was for the first time noticed that, when roused, the left side only of his face moved. He could not shut his right eyelids. He could now speak, tell his name, etc., use all his limbs vigorously, and attempted to strike. He had been freely purged. Having found that his right portio dura was paralysed, we tried to ascertain whether he could hear on the right side, but he was too stupid to give satisfactory replies. On the following day, after several trials, it seemed quite certain that his right ear was deaf. From these symptoms we conjectured that his right petrous bone must be broken, but it was difficult to explain why the paralysis of the face had not been present from the first.

During the next four days, from March 3 to March 7, he remained in a stupid heavy condition without any special symptoms excepting the facial paralysis. He took his food, and although sleepy when let alone, could at any time be roused, and would give fairly rational answers. At times he was restless, and he sometimes complained of pain in his head, but he had no delirium, no convulsions, nor did any rigor occur. His pulse never rose to above 100, and his skin was never very hot. His tongue was habitually dry, but not thickly furred.

On the morning of March 7 it was observed that his neck and back were quite stiff, almost in a condition of opisthotonos. On March 8 he was very much more feeble, and although he could still resist when roused, he moved his limbs slowly, and as if they were very weak. He had, for the first time, passed his urine and fæces into the bed.

On March 9, at 11 p.m., he died.

He had become more irritable and restless during the last two days of his life, but was still partially conscious, and would at times ask for food. Just before he died the nurse had given him some milk, and he went off so quietly that she did not notice when he died. Throughout, no convulsion or spasm had occurred. The stiffness of his neck had persisted.

You will see, then, that we had no special symptoms by which to recognise the inflammation of which the man was dying, excepting those which are common to many other cerebral lesions, with the addition of stiffness of the neck and back. The absence of convulsions, of sickness, of rigors, of severe pain, and of delirium, must be kept clearly in mind. As to the mode of death, I have omitted to state that we found his lungs fairly crepitant in most parts. Posteriorly in both there were some patches of lobular pneumonia. The left side of the heart was contracted and empty, the right contained a moderate amount of soft black coagulum.

I have now a third example of this form of traumatic inflammation to mention. It was a very definite and interesting one, but I must allude to it briefly.(a)

A man, named Mill, was admitted under Mr. Adams' care six days after a fall, having been in the interval ill with headache and serous discharge from one ear. He remained in the hospital until his death a week later. I have again to thank Mr. Adams for his courtesy in giving me permission to watch the case and to use my notes. There had been bleeding from the ear in the first instance, and he was quite deaf on that side. On the day of his admission, we found the portio dura also paralysed, but whether this had been so from the first or not we had no means of ascertaining. At the autopsy, we found a large quantity of puro-lymph in the sub-arachnoid spaces, at the base of the brain, extending up to the transverse fissure. It was a beautiful specimen in the recent state, the arachnoid being lifted up and made tense by the opaque semi-fluid effusion beneath it. There was not a shred of lymph on the free arachnoid surfaces. There was fracture of the right petrous bone and rupture of the membrana tympani.

Now, by far the most prominent symptom which this poor fellow displayed during his ten days' illness was *absolute sleeplessness*. He was conscious, and had full muscular power, he even took his food fairly, but he suffered torment from utter inability to get to sleep. He told me he had not slept during the period before his admission, and from careful inquiries I believe it is literally true that he never once slept after he came in. Next we have to mention headache, and, in the early stage, much sickness, a wild impulsive manner, verging on delirium at times, and in the last stage large fixed pupils. He had no rigors, no convulsions, no hemiplegia. His tongue was throughout very thickly coated, and his pulse ranged at about 100. His death was finally caused by rapidly advancing pneumonic congestion of the lungs. He was conscious until within a few hours of his death, and sat up in bed taking food, and talking to those about him. We ought, perhaps, to keep in mind, in reference to the peculiarities of his symptoms, that he was a remarkably powerful man, not likely to succumb early to the attacks of disease.

I might bring forward several other similar cases, but I do not think that they throw any additional light upon the clear picture of the disease which these have presented to us. They all confirm what I stated in beginning this lecture, that inflammation of the sub-arachnoid spaces has symptoms quite distinct on the one hand from those of pyæmia, and on the other from those of arachnitis, and that its diagnosis will often be much helped by observing that the pathognomonic symptoms of those lesions—rigors in the one, and hemiplegia in the other—are absent. I have already explained that in these cases, almost invariably, we have fracture of the base of the skull, implicating one of the canals for nerves, and that it is along the trunk of the latter, external, of course (or posterior), to the true arachnoid cavity, that the inflammation travels up to the sub-arachnoid spaces. From cases of

(a) The detailed notes of this important case will be appended.

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general arachnitis after fracture of the petrous bone, such as happened to the man Inch, the diagnosis is much more difficult.

In conjectural explanation of the symptoms which occur, we must lay much stress on the fact that the trunks of almost all the cranial nerves are near their commencement embedded in the inflammatory effusion. That the inflammation often involves the neurilemma itself is exceedingly probable, and thus we may expect the phenomena of neuritis. Clinical evidence abundantly proves that nerve trunks may pass through inflammatory effusion which coats them on all sides, without paralysis of them being induced. That such a condition can occur without impairment of function is, however, improbable.(b) Thus it may be that the irritation to the roots of the fifth nerve induces the thick creamy fur on the tongue, and that the vomiting is caused by like irritation of the pneumogastrics. The fixed dilated pupils may possibly occur from inflammation about the roots of the third nerves, or perhaps from optic neuritis.(c) Further investigation of the actual condition of the neurilemma of the nerves involved is much to be desired. We ought also always to employ the ophthalmoscope when possible during life, and thus ascertain the exact state of the optic papilla. In one case, a little boy whom I saw with Mr. Owen, at Leatherhead, and who was dying from this form of inflammation after a fall on his head, I found distinct evidence of optic neuritis. In most of my other cases I regret that I have been prevented from making this examination. To implication of the roots of the pneumogastrics I am also inclined to refer the congestive pneumonia which occurred in the last stage of several of my cases. When the effusion is large in amount, as it was in the case of Mill, it is very possible that mechanical stretching of the nerve-fibres may be caused.

The severe headache, the sleeplessness, and the convulsions are probably not to be referred to any single nerve, but to the combined irritation of all.

When rigidity of the neck occurs, with or without distortion, it probably implies that the cervical cord is implicated in the inflammation, and its nerve roots embedded. You may remember that this is a common symptom in the disease known by physicians as "cerebro-spinal meningitis."

I will just ask you to note that we must lay aside all notion that in meningitis the eye presents special symptoms as regards congestion. The conjunctiva often remains quite pale throughout, nor is the pupil contracted. There is neither a "fiery" nor a "ferrety" eye, and the only valuable sign with which I am acquainted is the fixity and dilatation of the pupil which occur in the last stage. Quite recently I have observed a statement by a foreign authority, that conjunctival chemosis is indicative of arachnitis. I feel sure that it has no direct connexion with internal inflammation of any form whatever. That it often occurs in connexion with them I admit, but it is in cases in which the bone is extensively inflamed, and the periosteum of the orbit has become involved by extension.

These cases of inflammation of the sub-arachnoid spaces are, I suppose, more closely analogous with what physicians know as tubercular meningitis, than are any other of our traumatic lesions. The symptoms which are described in connexion with it, allowing for the difference in rapidity of course, that their cases are often chronic and ours acute, agree very fairly. We must remember that tubercular arachnitis often begins locally, and is for some time restricted to one given part, whilst in the traumatic form it seems a marked feature that the inflammation rapidly travels over the whole base, and involves one side equally with the other. Physicians have, I suspect, little or nothing to do with cases of true arachnitis, such as I have described in the preceding lectures. Hence, perhaps, the reason why the most definite symptom which it presents—hemiplegia—has been for so long overlooked.(d)

I fear that the prognosis of these cases, after once the inflammation has decidedly declared itself, is very bad;(e) yet there is reason to think that now and then a case recovers, and we ought to adopt our remedies accordingly. That a few cases of its analogue tubercular meningitis pull through, there can, I think, be no doubt.(f) Although it is unusual after the occurrence of bleeding from one ear, followed by serous discharge, for the patient to recover, yet in a few cases that result does follow. Some years ago, I saw, in consultation with my friend Mr. Hawkins, of Bow, a little boy in whom, with much confidence, I diagnosed inflammation of the sub-arachnoid spaces. It was in an advanced stage, and I thought it probable that the ventricles were implicated. The chief question was as to the propriety of trephining, and we decided this in the negative. The child seemed very ill indeed, and I expressed a very unhopeful opinion. We continued the use of mercury internally and of ice to the head. Contrary to the expectation of all, the child at length recovered, and, as I learnt some years later, without any permanent damage to the brain functions. I regret that I have mislaid my notes of the case, and am obliged to give the above facts from memory. As an instance of recovery after very severe and continued ill symptoms, the case is worth mention.

As to what the treatment should be, there can be little room for doubt. Mercury is our sheet-anchor. With its use we should enforce rest and low diet, purgatives, leeches, and local counter-irritation, the use of ice to the head, and heat to the feet. The grand point is to begin the mercury early enough, and use it efficiently. In most cases we wait too long. The symptoms ought to be anticipated, not followed.

We have seen that cases of fracture of the petrous bone are those in which chiefly there is risk, and we have seen also that serous discharge often sets in very quickly, and that the patient may be dead in three or four days. There is no time to be wasted. I think, looking at the fearful risk which these cases run, that, in any case in which there has been bleeding from one ear as the result of accident, it is desirable to at once prescribe mercury. If, in addition to the bleeding, there were deafness and facial paralysis, making the diagnosis of fracture almost certain, I should not hesitate in the least to do so.

As regards attempts to prevent the access of air to the wound, I suspect there is not much to be done, since the external ear is usually already plugged with dried blood. There can, however, be no harm in filling the ear with oil and then putting in a dossil of cotton-wool. Never on any account syringe the ear to remove dried blood, and never attempt to use the speculum. Measures of this kind are equivalent to re-opening a compound fracture which has been carefully dressed and sealed.

We have considered in this lecture almost solely the cases of inflammation of the sub-arachnoid spaces, in which the effusion is met with at the base of the brain. There are others, however, in which the surfaces are involved either alone or more frequently together with the base. In these latter the symptoms are usually much complicated, as indeed are commonly their causes. The pia mater or sub-arachnoid spaces of the hemispheres are seldom inflamed unless there has been a direct perforating wound of their surface. Such a wound necessarily involves injury both to the arachnoid itself and to the brain substance, and hence risk both of arachnitis and of encephalitis proper. Thus it becomes very difficult to assign the symptoms properly to the several lesions to which they are due. Basal sub-arachnitis is the important form in practice. I will, however, in our next lecture mention some facts bearing upon the other class of cases.

(To be continued.)

(b) The effusion of lymph in proximity with the grey substance of the convolutions induces paralysis, as seen in hemiplegia. The effusion of lymph on the coats of the intestines in peritonitis also induces partial paralysis, and thus tympanites.

(c) Fixed and dilated pupils are common, but not constant, in the more chronic cases of optic neuritis met with in connexion with brain disease. If the dilatation noted in most of the cases I have cited had depended on paralysis of the third nerve, we ought to have had also ptosis, etc.

(d) In a most instructive paper by Dr. Wilks in the *Medical Times and Gazette*, September 12, 1863, he writes:—"The peculiarity is so marked in the lymph being almost confined to the base and absent at the superior surface, that tubercles may always be suspected when this condition is found; it is one, it will be seen, which is in marked contrast with acute simple meningitis." A little lower down Dr. Wilks adds, "I am unacquainted with a simple idiopathic arachnitis."

(e) In the *Lancet* for November, 1866, Mr. H. Power records two cases of recovery from ill symptoms after injury to the head, in each of which the diagnosis of inflammation of the sub-arachnoid spaces seems probable. Both were benefited by mercury, and one was made worse by stimulants.

(f) See a "Report of Cases of Optic Neuritis (a Sequence of Tubercular Meningitis) in Children," by the writer, in the *Ophthalmic Journal* for December, 1866.

THE PLACENTA IN A TRIPLET BIRTH.—M. Depaul exhibited, at the Académie de Médecine, the placenta derived from a woman who had been delivered of triplets, the children at present (thirty days afterwards) being still alive. The placenta forms a single mass of very considerable size, and the three distinct cords present examples of the three principal varieties of insertion. One of them is inserted into the centre of the placenta, another at its edge, and the third into the membranes, vascular communications existing between the cords. There are also three amniotic sacs.—*Union Méd.*

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ORIGINAL COMMUNICATIONS.

OPERA CLINICA.

A RECOVERY BY ARTIFICIAL RESPIRATION, AFTER TRACHEOTOMY, IN A CASE OF DIPHTHERITIC CROUP.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

In the *Medical Times and Gazette* of August, 2, 1873, I published the report of a case in which artificial respiration, carried out with the double-acting bellows, led to the restoration of natural breathing five successive times. The patient in this case was brought back to life, each time, from a condition which, without the interference of art, would have been one of actual death.

It was my misfortune to have to narrate that the patient ultimately died from an extension of the pulmonary lesions; but I was, nevertheless, able to add that, painful as the fact of death was, after so many restorations, "the one particular process for restoration—viz., artificial respiration—as it was carried out, was thereby in no degree lessened in value. It gave a renewal of thirty hours of life, during which, if we had known more respecting the removal of those fatal conditions which so commonly commence in the extreme or peripheral parts of the pulmonary organs, we might have made the temporary safety complete and permanent."

It is now my more grateful task to put on permanent record a case in which the same mode of treatment was crowned by complete success—a case of recovery which, considered as a whole, is new in the history of practical medicine, and which warrants us in attempts to save life, *in extremis*, that will, I feel sure, be richly rewarded.

On March 1 of this year I was summoned late at night by my friend Dr. Wilbe, of Finchley-road, to see a little boy five years of age who was suffering from croup, or diphtheritic croup, and who was breathing with so much difficulty, that death from suffocation appeared to Dr. Wilbe to be imminent if tracheotomy were not at once performed. I went provided with everything for the operation. I found the child breathing with the utmost difficulty, owing to the obstruction in the larynx. He was restless, and at times slightly convulsed; his lips were blue, and his body was becoming cold. The breathing was so noisily shrill, from the narrowing of the larynx, that we had some difficulty in making a correct diagnosis of the condition of the heart, but in a brief interval of quiet I detected that both sounds of the heart were clear, and that there was no obvious indication of obstruction to the course of blood through the right side of the heart, from separation of fibrine.

Agreeing entirely as to the necessity for the operation, I performed it at once, Dr. Wilbe administering bichloride of methylene. The methylene produced rapid and gentle general anæsthesia. I opened the trachea as low down as I could conveniently, experiencing no difficulty except from a little excess of bleeding from the divided surface of an unusually large thyroid gland. So soon as the opening was made into the trachea, there was sharp expulsion of air from the lungs, together with extrusion of a portion of false membrane. This over, I introduced the outer blades of Fuller's tracheotomy-tube, and through them the inner tube. The child was now allowed to recover from the anæsthesia, the tube being neatly and firmly tied in position. Free breathing through the tube was soon established, and the return to consciousness, from the anæsthesia, was attended by favourable symptoms. The heaving of the chest ceased, the face lost its lividity, and the surface of the body became warm.

The operation was performed at 10.30 p.m. on a table to which the patient had been removed. He was taken back to bed at 11.5, and fell into a sleep. To watch him during the night, and to prevent suffocation from obstruction of the tube, we obtained the assistance of Mr. F. Otley Lovell, who, in the previous case of a similar kind, to which reference has been made, rendered most prompt and valuable assistance. On this occasion Mr. Lovell was joined by his brother, Mr. W. F. Lovell, who took turn with him in the careful watching that had to be carried out. To prevent, as far as was possible, the danger of death from asphyxia, every available means was provided for clearing the tracheal tube, and for changing it if that were required. I also fitted up the double-acting bellows as on the former occasion, arming the free end of the tube from the bellows with a portion of firm elastic tubing that would pass readily into the tracheal tube should the necessity for artificial respiration become imperative.

On meeting Dr. Wilbe and Mr. Lovell in consultation at 10.30 on the following morning, March 2, the report was that the child had slept during the night with only two interruptions. He had fed himself with two teacupfuls of milk. He was breathing comfortably through the tube, his body was of natural warmth, and the asphyxia had entirely disappeared. He passed through this day favourably.

Early next morning—namely, at one o'clock of March 3—the breathing became embarrassed, owing to plugging-up of the tube, and as the tube could not be cleared in position, Mr. Lovell was obliged to remove the inner tube. It was nearly choked with a compact mass of secretion, which adhered with great firmness. The patient now breathed easily through the outer blades of the tube, and they therefore were left simply in place. In a few hours the breathing again became embarrassed; at 3 p.m. the tracheal opening was plugged, and the patient was asphyxiated. The blades were promptly removed, and a portion of membrane was expelled. He now for a short interval breathed through the wound, and then ceased to breathe altogether, and to common observation appeared to be dead. At this juncture, Dr. Wilbe and Mr. Lovell, who happily were present, passed the elastic tube of the double-acting bellows into the wound, and set up artificial respiration. The artificial respiration brought back animation in a few minutes, and natural inspiration followed; but the artificial process had to be repeated, at times, during a quarter of an hour before independent breathing was fully re-established.

After the natural respiration was completely restored, the outer blades and inner tube were re-introduced into the trachea. The breathing continued easy during the rest of the day.

On Thursday, March 4, at 3 a.m., the breathing having once more become laborious, the tracheal tube was cleared with a feather, after which, for several hours, the breathing remained free. In the afternoon the blocking-up again occurred, and at 4.30 p.m., at a consultation at which we were all present, it was agreed to remove the metal tube, and to introduce a larger-sized vulcanite tube. As the new tube was being inserted, some false membrane was coughed through it. The patient continued to breathe easily through the vulcanite tube until 11 p.m., when some temporary obstruction occurred, and the respiration was for a little time laboured. In the course of this day the child ate a little beef finely minced, and some small pieces of orange; at intervals he took a teacupful of milk.

On the morning of Friday, March 5, the breathing again was very difficult. The tube was removed by Mr. Lovell at 4.15, and a still larger vulcanite tube inserted. Relief followed, with sleep for four hours. At mid-day the child showed signs of great exhaustion, was exceedingly restless, persisted in picking the skin beneath the wound, and refused food. There was redness of skin—in fact, a faint erysipelatous blush—round the wound, and an increasing difficulty of breathing. There was also an extreme fetor from the mouth, and a large portion of diphtheritic membrane was discovered on the left side of the fauces. The tube being obstructed, was removed, and a new one was put in its place. At four in the afternoon, when we again met in consultation, we deemed it expedient to remove the vulcanite tube in order to introduce one of larger size. The change brought more decided relief, and a large portion of false membrane was coughed up through the tube. The skin around the wound, over which there was the blush of inflammation, was painted with styptic colloid. In the evening the child took food, and, falling asleep soon afterwards, slept until after midnight.

At 1.40 on the morning of Saturday, March 6, the breathing was arrested by an obstruction within the tube. Dr. Wilbe, who on this occasion kept watch, removed the tube and replaced it with a clean one, and with the usual relief. After this, the child coughed up much mucus from the lungs, took food, and at 3.45 fell asleep. Later in the day, Mr. Lovell had occasion to remove and clean the vulcanite tube twice, owing to the urgent difficulty of the breathing; but the secretion with which the tube was clogged was much less firm and tenacious. The inflammatory redness around the wound was less, food was taken with relish, and the little patient was able to play with his toys. At 10.15 the breathing was again attended with so much difficulty, that the tube, which was

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clogged, had to be removed and replaced. After this, a fair night was passed. In the course of Sunday, March 7, the tube was removed, cleared, and replaced twice; a good night followed.

On Monday, March 8, the tube was removed, and was replaced by a clean one at 8.15 a.m. In the afternoon of the same day, after visiting the patient with Dr. Wilbe, we found the breathing sufficiently free when the vulcanite tube was out of the trachea to warrant the suggestion that the wound should be left simply open. The patient was now fairly convalescent.

From this time recovery took place rapidly. There was a slight paralysis of the glottis, and for a day or two, when the patient swallowed milk, a little of it flowed into the trachea, and escaped by the wound. But this difficulty soon passed away. The external opening healed up soundly, and in a few weeks I had the pleasure of making a friendly call, with Dr. Wilbe, to find the boy restored to perfect health.

It is difficult, in recording the facts of a case such as the above, to avoid the expression of an enthusiasm which, however natural, were best concealed. But the facts, accepted with all the reserve which ever belongs to the true historian of scientific results, possess a practical value which may, and indeed ought, to be earnestly enforced. They add, in the first place, an importance to the operation of tracheotomy, which Antyllus little dreamed of when first he ventured to suggest it, and to describe with so much simple accuracy the mode in which it was to be performed. They add a new importance to the experiment of Robert Hooke, on which he founded the process of artificial respiration. They show the modern physician that by his chirurgical skill he may even restore life, when life itself, to the common observer, is beyond recall. The practitioner, armed now with the means of restoring the respiration through the opening he has made into an obstructed windpipe, will feel that so long as ever there is evidence of life, though it be even such evidence as can only be detected by the stethoscopic examination of the heart, there is a chance before him of resuscitating by the plan of combining the operation of tracheotomy with artificial respiration. It is clear that in many such cases he will succeed, and, with a few exceptions, he is bound to make the attempt at success. This observation opens up the question whether, in all cases of extreme obstruction, these operative procedures are demanded. It also opens up the question when, in any case, the moment has arrived for operation. To the all-important practical points here named I propose to devote a special paper.

IS LEPROSY CONTAGIOUS?

By GAVIN MILROY, M.D., F.R.C.P.

No. II.

1. In my former paper I urged the great importance of the study of this question, not only on strictly professional grounds, but also as one involving considerations of very grave social and political interest. Before the investigation of the subject undertaken some years ago by the College of Physicians, at the request of the State, the condition and status of the poor leper in our own colonies, and for which the Imperial Government is mainly responsible, were deplorable indeed. This will be best judged of by the following brief extracts from the account which the then Governor of New Brunswick (now the Hon. Sir Arthur Gordon) gave of what he saw and thought on the occasion of a visit he made to the asylum of that colony in October, 1862. It is contained in a despatch to the Secretary of State for the Colonies, the late Duke of Newcastle, and may be taken as a sample of what generally existed at the time elsewhere:—

"At the time of my visit there were twenty-three patients in the lazaretto, thirteen males and ten females. They were of all ages, and in every stage of the disease. One old man, whose features were so disfigured as to be barely human, appeared in the extremity of dotage; but there were also young men whose arms seemed as strong, and their powers of work and of enjoyment as unimpaired, as they had ever been; and, saddest of all, there were, in addition to these, young children condemned to pass here a life of hopeless misery.

"I was especially touched by the appearance of three boys, who to the ordinary observer were like other lads, bright-eyed and intelligent enough; but the fatal marks which sufficed to separate them from the outer world were upon them, and they were now shut up for ever within the walls of the lazaretto.

"There is something almost appalling in the thought that from the time of arrival until death—a period of perhaps many long years,—a patient, though endowed with the capacities, the passions, and the desires of other human beings, is condemned to pass from youth to middle age, and from middle age to old age, with no society but that of his fellow-sufferers, no employment, no amusement, and no resources. No provision seemed to be made to furnish them with any occupation, either bodily or mental; and under these circumstances I was not surprised to learn that in the latter stages of the disease the mind generally became greatly enfeebled.

"I assume that the contagious character of the disease is so clearly proved as to render the seclusion of those affected with it within the walls of a lazaretto indispensable. . . . As nothing short of an imperative public necessity would justify the horrible mental torture which such a confinement as that in the lazaretto must inflict, I am willing to assume that this question was well and maturely weighed before the Legislature consented to pass the Acts on this subject now in force."

The whole despatch, which will be found in the Report of the College at pp. 203-4, should be attentively read. It was in reference to it that the Colonial Office wrote to the College, stating that "so soon as the point of the contagiousness or non-contagiousness, or more or less of contagiousness, shall have been decided by the College of Physicians, it will become a serious question what instructions should be given to the Governor in regard to the treatment of lepers as described in his despatch."

The result of the conclusion to which the College came, after much consideration, was that compulsory detention or incarceration of leprous patients ceased to exist in New Brunswick and in all other British colonies.

2. While writing the previous article I received a copy of Dr. V. Carter's elaborate and stately treatise on Leprosy—a letterpress of 251 pages, royal folio, and fifteen coloured plates from drawings by the author—issued from the India Office. No one certainly has of recent years worked more indefatigably and ably than this gentleman in endeavouring to elucidate this obscure and hitherto much neglected disease. His observations on its symptomatology and minute anatomy have been specially valuable. It is now many years since he began his researches in the Jamsetjee Jejeebhoy Hospital in Bombay, following in the footsteps of one of his predecessors connected with the Grant Medical College in that city, Mr. Lisboa,(a) whose attention had been drawn to the subject at the instigation of Dr. Morehead. In 1862 he published an excellent article in the *Transactions of the Medical and Physical Society* of Bombay, and in the following year one in the January number of the *British and Foreign Medico-Chirurgical Review*. It was also in 1863 that his replies to the interrogatories of the College of Physicians were communicated to the head of the Bombay Medical Department; these are published in the Report of the College, pp. 108-13. His experience up to that time had led him to regard the disease as a "cachexia of the system," or "constitutional affection having a peculiar local manifestation," and to state that he "had not met with any evidence of the contagious nature of leprosy, such as would bear sifting and then be conclusive." In his article in the *Medico-Chirurgical Review* he had added that he had "seen several leprous husbands with healthy wives, and *vice versâ*; and in the immediate neighbourhood of the Dhurmsalla, where lepers are continually visiting, the disease is said not to have appeared." Mr. Lisboa had come to the same conclusion ten years before, from his experience in the same institutions. "I have seen no instance," writes this gentleman, "in which the propagation of this disease by contagion could be proved. On the contrary, I know that females suffering from leprosy have lived with their husbands for upwards of a year after the disease had fairly and unmistakably set in, without having transmitted it to them or to other members of the family living under the same roof; and I can also bring to recollection instances of men not transmitting the disease by contagion to their wives and children."

It is to be observed that about sixty leprous patients are

(a) To this gentleman is due the credit of having been among the first in India who studied leprosy clinically with any care. The very instructive paper he read in 1862 before the Grant College Medical Society has recently been made known to British readers as a separate pamphlet, published at Bombay, 1874, and will be read with much interest by all who are concerned about the literature of the disease.

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annually admitted into the General Native Hospital (the Jamsetjee Jejeebhoy Hospital) of Bombay, and that not a few of the sufferers end their days there. In the Dhurmsalla, or refuge for the homeless, there are generally about a hundred inmates at all times, and usually very many are lepers. In the former institution "the leprous patients are not segregated, and, in the latter, the lepers and blind together form the mass of the resident poor."

3. Subsequently to the expression of the above sentiments, Dr. Carter seems to have met with facts which induced him to modify or reverse the opinions he previously held. In his Report on Leprosy in Norway, 1874, he avoided declaring the results of what he saw and heard there in reference to the subject of contagion; and even in his present work he does not distinctly or unequivocally state his views, but rather leaves the reader to conjecture what they may be. The following extract contains the clearest exposition of his present sentiments:—"A strong inclination to admit the possibility of leprosy being transmitted, in some way, from the diseased to the healthy, is manifested by many late writers; but hitherto the idea has not gained in clearness. Since my visit to Norway and acquaintance with the late investigations made in Bergen, the possibility in question has become for me tolerably definite; and it would even appear that not only is the *contagium* 'particulate,' but that it may belong to the class of organisms called by De Bary, 'Schizomycetes,'—and including the various forms of bacteria, micrococcus, etc.

"In favour of the personal communicability of leprosy are historical records, and the known 'rapid' spread of the disease in recent tissue; again, the actual decline of the disease in Norway, which has now steadily set in, is a fact distinctly in favour of contagion; and perhaps may be added the peculiarity of leprosy first and chiefly attacking the more exposed parts of the body. Infection from a distance, or through coin, clothing, etc.; single, temporary, or prolonged contact with leprous emanations, vaccination, lactation, or nursing,—these are several modes of transport respecting which I have had occasion briefly to inquire; and I find recorded a few affirmative examples, at least, of each one method or means. But most examples are stated too briefly to allow of close criticism.

"Leprosy cannot be communicated to the lower animals. The inoculation of leprous matter upon lepers themselves always fails; this statement I make on the authority of Boeck. . . . . Not much value, in my opinion, can be attached to any of these statements, or to the numerous others like them which are scattered throughout the Report of the College of Physicians, 1867; the special collection of medical reports published in Calcutta, 1865(b); the Report on Leprosy in the West Indies, by Dr. Milroy, 1873, etc.; but, as I have intimated in the text, a difference of opinion herein prevails. If a few positive data are deemed to outweigh many of a negative character, it will be possible to establish the transmissibility of leprosy; and if the disease be thus communicable, it must, on *à priori* grounds, be of specific character. If this, too, be allowed, then the *rôle* of heredity in leprosy becomes a secondary or even an incompatible term, and contagion must take first rank.

"I may add that the rapid spread of leprosy in Honolulu has been attributed by resident medical men to contagion; to a conjunction with syphilis; or, by Dr. Hoffman, to vaccination; but no precise data are furnished respecting this last point. In this instance the influence of heredity is, it would seem, to be ignored altogether. With reference to the freedom of medical attendants, servants, nurses, etc., who come into contact with lepers, there are a few known instances of their acquiring the disease; and others, also, of husbands and wives affecting each other. Having carefully perused these records, I must say that there is *primâ facie* a probability of their being strictly true; and hence that, in practice, one ought to act as if contagion were possible."—Pp. 178-9.

4. It thus appears that Dr. Carter, while setting aside, as of little account, the opposing evidence in the Report of the College, together with the results of the experience of all the medical officers of leper asylums in the British West Indies, rests his belief in the contagion of leprosy mainly on the threefold basis of "historical records" of the "actual decline of the disease in Norway," and of its "rapid spread in Honolulu" in recent years. Let us look at these three grounds, and examine their validity as evidence.

As to the first, the reader will naturally ask, What and where are the "historical records" referred to? that he may test their force and relevancy.

With respect to the "decline of the disease in Norway" since the institution of leper asylums in 1856 (the asylums are all on the principle of the voluntary, and not compulsory, seclusion) being regarded as a proof of its contagion. It seems somewhat strange that this inference does not appear to have occurred to the mind of any of the Norwegian physicians, even of those who suspect that contagion may have occasionally something to do with its propagation. Dr. Hansen does not, as far as I know, allude to it; and Dr. Bidenkap—who resided for two years in the leper districts, and examined in that time between five and six hundred cases—writes thus in his work, "Leprosy an Endemic Disease in Norway":—

"At present, however, I believe one is justified in supposing that if the disease can possibly be transmitted by contagion, it, nevertheless, occurs very seldom, and has no serious influence on the spread of the disease." . . . . "One has as little reasonable ground for considering the disease as contagious in the districts where it appears as one has from older historical accounts of the disease."

Certainly none of the medical men in Norway appear to be so hopeful as Dr. Carter that "the scourge of leprosy might be stamped out" in any country by the mere multiplication of leper asylums on the model of those of their country.

5. As the consideration of the third adduced proof will occupy somewhat more space, it must have a lengthened paragraph to itself.

With respect to the known rapid spread in Honolulu, which, according to Dr. Carter, "seems to require but little confirmation to become an authoritative fact," it is to be observed that the particulars of this case, as given by Dr. Hillebrand of that island in his letter to Dr. C. Macnamara of Calcutta, in February, 1866, were carefully sifted by a committee of the College of Physicians, at the request of the Secretary of State for the Colonies, in 1872, and that the following report was the result of the inquiry:—

"Dr. Hillebrand states that he recollects first seeing leprosy in Honolulu in 1853; that, as far back as he can learn, it did not exist in the place before 1848; that in 1859 he brought the existence of the disease to the notice of the Government and of the public; and that a recent census shows that the number of lepers was 230 out of a population of 67,000 natives, or about 3½ per 1000. Dr. Hillebrand concludes that the disease was introduced about 1848, or thereabouts, into Honolulu, into a clean nation, and spread rapidly in the island by contagion; and his reason for thinking so appears to be based on the fact of his having discovered by personal inquiry that about one-fourth of the leprous patients who came under his observation avowed contact with other lepers as the cause of their own malady.

"Supposing the statements made by Dr. Hillebrand could be established as true, they might lend a seeming support to the idea of the contagiousness of leprosy. But the College has to observe that many of the statements made by Dr. Hillebrand are so lacking in precision, as well as deficient in details, while others are based on mere hearsay evidence, that the College is compelled to receive them with very great reserve.

"As regards the introduction of the disease into Honolulu, it is only surmised by Dr. Hillebrand that it might have been introduced by the Chinese about 1848; and it is not proved that leprosy, although not seen by Dr. Hillebrand before 1853 (and he had then been only two years in the place), did not exist, even extensively, in the island before 1848. The apparent rapid increase of leprosy began to be noticed, too, coincidently in point of time with the establishment of the Queen's Hospital and Dispensary, the number of lepers who applied for relief augmenting year by year. The truth may be that the presence of the leprous among the population at large was only more clearly perceived on account of their seeking relief in greater number at the hospital as this became better known."(c)

Dr. Boeck, who, Dr. Carter justly says, "is widely known as one of the highest authorities on the subject of leprosy," had about the same time come to the same conclusion as the

(b) These occupy a folio volume of 500 pages, printed in 1865, in Calcutta, by order of the Governor-General of India in Council, and contain replies from 117 medical men in different districts of the Bengal Presidency. The contents are summarised in the Report of the College, from p. 121 to p. 202.

(c) *Medico-Chirurgical Review*, July, 1873.

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College respecting the "Honolulu case." "It is not sufficient," he remarks, "that the disease was (said to be) imported by the Chinese in 1848; a whole series of observations are required to establish a scientific proof. The subject now stands bare for want of further information; and, after my observations in my own country, I consider Dr. Hillebrand's report a total misunderstanding."(d)

Need more be said on this matter until further and more exact information is obtained? Dr. Carter will do a really useful work if he can supply this desideratum.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES OF VESICAL CALCULUS UNDER THE CARE OF MR. BRYANT.

Case 1.—Stone in the Bladder—Lithotomy after Lithotrity—Recovery.

[Reported by Mr. MULCH.]

JOHN W., aged fifty-three, was admitted into Guy's Hospital on September 27, 1870, under Mr. Bryant's care, with a stone in his bladder. His first symptoms were in 1867, and some months later he went into a hospital, where a stone was crushed, and he was discharged cured. The symptoms returned, and he came into Guy's, when another stone was felt by Mr. Bryant, who crushed it in several operations, the man leaving well. He remained so for nine months, when the symptoms returned, and steadily increased. For several weeks he passed blood in his urine. On examining him, two, if not more, stones were felt, about one inch in diameter. Lithotomy was considered to be the better operation. On October 14 this was performed, Mr. Key's operation with the straight staff being adopted, as is the custom at Guy's. Three calculi were taken away, composed of uric acid covered with phosphates. A good recovery followed.

Case 2.—Calculus Vesicæ—Lithotomy—Mulberry Stone—Recovery.

[Reported by Mr. HICKS.]

John H., a healthy-looking boy, aged fifteen, was admitted into Guy's, under Mr. Bryant, on August 2, 1871, with a stone in his bladder. He had had symptoms for four years. On August 9, under chloroform, Mr. Bryant performed lithotomy, using Mr. Key's straight staff, and removed a mulberry stone about one inch in diameter. He had no bleeding after the operation, nor any bad symptoms. On the fourth day urine passed per urethram, and in two weeks the wound had healed. The boy left the hospital well within the month.

Case 3.—Calculus in Bladder, Lithic Acid—Lithotomy—Recovery.

[Reported by Mr. W. LANE.]

Vernon L., a little boy five years old, was admitted into Lydia ward on March 26, 1874. About a year before, he had been sounded for stone, but none was found. He had, however, a long prepuce, for which he was circumcised. The symptoms of stone got worse, the patient having hæmaturia and thick, but not albuminous, urine. The boy was again sounded on March 31, when evidences of a large stone were found. Lithotomy was performed, an incision about three inches and a half long being made in the left ischio-rectal fossa. The calculus was of uric acid, measuring one inch and a half by fifteen-sixteenths of an inch. There was little or no bleeding.

April 1.—He had not been able to sleep during the night. Temperature 100·1°; pulse 128. He was in no pain; the urine trickled through the wound.

2nd.—He was very comfortable, sleeping well. His urine was bloody, and passed both through the penis and wound.

8th.—Temperature 98·7°; pulse 110. The child had been comfortable, and passed his water through the penis.

11th.—Improving rapidly, the wound granulating well.

24th.—He had continued to improve, seeming scarcely to have suffered at all from the operation. He could keep his water for a long time occasionally, but at other times it ran away without giving him notice.

(d) Dr. Carter's "Report on Leprosy in Norway," page 49.

Case 4.—Calculus Vesicæ—Lithotomy—Relieved.

[Reported by Mr. W. P. REYNOLDS.]

Edward H., a healthy-looking boy, although rather short, aged sixteen, was admitted into Job ward on October 21, 1874. His father was living and well; his mother was a strong, healthy-looking woman, having had thirteen children, nine of whom were living and healthy. About six or seven years before, she had passed a stone, and a larger one about the autumn of 1873. One son, when he was three years and a half old, had a stone about the size of a large thimble, which was removed at King's College Hospital. None of her other children had been similarly affected, excepting the present patient, who, it appeared, first noticed about ten months before admission an itching sensation about the glans penis, accompanied by frequent desire to micturate. His water would sometimes suddenly cease, and then go on again. He took medicine for it, but no instruments were passed. A month after, he passed a stone about the size of two peas, very light in weight and dark in colour; it caused him considerable pain at the time, but since then he had no trouble until a fortnight before admission, when he felt pain about the median line of perineum, and the same difficulty in micturition as on the previous occasion. He consulted a medical man, who treated him medicinally; but the symptoms continuing, a catheter was passed and a stone sounded. He was then admitted into Guy's Hospital.

October 21.—He was able to hold his water for three or four hours, and had no pain excepting during micturition, when there was an aching sensation which left him immediately after he had finished, his water stopping suddenly and then going on again. The following day a steel sound was passed, and a good-sized stone was detected.

24th.—The boy looked flushed, and complained of pain during the night in the membranous portion of the urethra; his urine also contained a large quantity of blood. Temperature 98·8°; pulse 76. Two days later his urine was found to contain no blood, but plenty of pus and lithates.

27th.—The boy being placed under the influence of chloroform, lithotomy was performed by the usual lateral operation. Some force was required to remove the stone, which measured two inches and a quarter by one inch and three-quarters in diameter, and four inches and five-eighths by three inches and five-eighths in circumference. It was composed of mulberry nucleus; the second ring being of spongy oxalate of lime; third ring, lithic acid; and the outer ring phosphatic. Hæmorrhage was arrested by pressure of sponge. He slept well after a subcutaneous injection of morphia, and was not at all sick. His bowels had not been opened, but he felt very comfortable. He had passed water through the wound. His legs were bandaged together, and a sponge was applied to the wound.

30th.—The wound was healing rapidly. He passed water through both the penis and the wound—mostly through the former.

He continued to improve much in every way. He passed his water naturally by November 10. A week later, the wound had entirely healed; he was able to get up.

On November 18 he left the hospital quite well.

Case 5.—Calculus Vesicæ—Lithotomy—Cured.

[Reported by Mr. C. E. PERRY.]

John Thomas G., a healthy-looking boy, six years old, was admitted into Lydia ward on February 2, 1875. He had been in the enjoyment of good health until August, 1874, when he first noticed trouble in passing water, there being pain at the time and afterwards, the water stopping suddenly and not coming on again. He had never noticed any sand or gravel, but in November a stone was felt, and also once or twice afterwards. When admitted, a stone of tolerably large size was detached.

February 9.—The boy being placed under the influence of chloroform, Key's operation of lithotomy was performed, and a stone about an inch in long diameter and half an inch in short diameter was found, the outer part of the stone having a very spongy look. The patient was sick after the operation, but slept pretty well.

17th.—The wound appeared fairly healthy, but the urine continued, as it had done since the operation, to pass through it.

March 1.—The wound had healed, and the urine came through the penis.

He continued to progress satisfactorily, and left the hospital on March 19.

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Case 6.—Calculus Vesicæ—Lithotomy with the Straight Staff—Removal of Mulberry Calculus an inch and a half in diameter, with a large Adenoid Tumour of the Prostate—Recovery.

[Reported by Mr. C. E. Pearv.]

James P., a sailor, aged sixty-seven, was admitted into accident ward on January 8, 1875. The patient had been healthy until eighteen months before, when he found very great pain and difficulty in passing water. He consulted a medical man, who gave him some medicine, but he got no better. He passed then at times a little blood in his urine. He kept on with his work until he obtained admission into Guy's Hospital, when he passed a small quantity of urine in a pretty good stream, accompanied by pain both at the time and afterwards. He noticed that he could pass it best whilst lying on his left side.

January 11.—There was a considerable quantity of blood in his urine. He was placed under the influence of chloroform, and on sounding the bladder a stone was detected.

12th.—There was some slight trace of albumen, and the prostate was enlarged.

19th.—Key's operation of lithotomy was performed, and a large stone was extracted, one inch and a half in diameter. A large piece of what looked like the prostate, one inch by half an inch in diameter, was also removed in the fork of the lithotomy forceps. This appeared to be either an enlarged lobe of prostate or an adenoid tumour connected with it, for it consisted in parts almost entirely of gland tissue, in others principally of muscular fibre. The stone consisted of a true specimen of mulberry stone in centre, surrounded by laminæ of lithic acid. The patient was sick after the operation, but slept pretty well.

21st.—The water drained through the wound. Temperature 98·6°. A subcutaneous injection was administered.

25th.—Some urine passed through his penis.

28th.—He appeared to be going on well. The water still passed through the wound.

30th.—The patient had a bedsore on his back, but continued to do well; a large quantity of urine passing through the urethra.

February 5.—The wound was healing up; the urine was full of phosphates, the margins of the wound being also coated with phosphates.

16th.—He for the first time was able to hold his water. He had for some days passed blood after his urine, and the following day, after some exertion, he passed a small piece of stone, after which the bleeding ceased.

20th.—He passed two more pieces of phosphate.

March 9.—He had been troubled with diarrhœa for a day or two, and his water ran away involuntarily rather more than before, but he was able to go home, a little water occasionally running away from him when lying down at night, otherwise he was quite well.

May 10.—Mr. Bryant heard from this patient, who reported that he was quite well, and that he had no bladder-trouble of any kind.

We are reminded by this last case of Mr. Bryant's of a case referred to in the *London Medical Gazette* for August 5, 1842, in which a man was cut for stone, whose symptoms, it turned out, were all due to enlarged prostate. It is often stated that those persons who have been cut for stone, in whom no stone has existed, had very narrow pelves, and that the sound elicited was produced by the instrument striking against the smooth internal surface of the innominate bone. This case, however, shows the reality, and suggests the future possibility, of mistaking an enlarged prostate for vesical calculus. In Mr. Bryant's case, a stone was actually present; but the very interesting and important point is that a portion of prostatic tissue was removed at the operation of lithotomy without any ill result to the patient. We subjoin the note of the case referred to in the *London Medical Gazette* for 1842:—

"*Enlarged Prostate Mistaken for Calculus.*

"M. Ripault, of Dijon, was called to assist at an operation for stone. The patient was an adult, in whom all the usual symptoms of calculus were present: the characteristic sound occasioned by striking the sound against a hard body was distinctly heard by several persons, and the existence of a stone undoubted. The lateral operation was performed; the bladder was opened, but the forceps, several times introduced, brought away nothing but clots of blood. An encysted stone was suspected, but the operation was discontinued. Nevertheless, the pains which the patient previously experienced ceased for some months, after which they recurred with greater violence; difficulty of micturition increased; the urine became ammoniacal; fever set in; and the patient died six months after the operation. On post-mortem examination the prostate was found enlarged, composed of tough fibrous tissue, very horny on section, and when struck with a sound gave the same sensation as was experienced during life."

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Medical Times and Gazette.

SATURDAY, JULY 17, 1875.

A REVIEW OF THE DEBATE ON PUERPERAL FEVER.—No. II.

We think few will be disposed to deny to the debate which has just ended at the Obstetrical Society a very high place in the record of work accomplished by the profession in the medical year which is just closing. For though, as Dr. Fordyce Barker pointed out, it has not tended "to make men of one mind in a house," it has caused an almost perfect record of the existing state of our knowledge to be written, which will serve as a central point round which future observers can group their facts and theories for years to come. And not only so, but it has clearly marked out many paths for those to tread who are anxious to increase our knowledge of a disease which is so full of painful interest to the world at large. Some of these, along with one or two special points of interest which have been touched on in the debate, we shall hope to deal with more fully next week. At present we will confine ourselves to a review of the final night's debate, and, comparing it with what has gone before, see what new theories or facts have been brought forward.

In our review last week we noted the almost universally negative answer which had been returned to Mr. Wells' first question; and the closing night gave a similar result, with one important exception. Dr. Fordyce Barker, of New York, came as the avowed champion of the view that there is a special disease, which he considers has been very well defined in the "Nomenclature of Disease." It is somewhat strange that among such a number of varying views from so many speakers only one should be found distinctly to support this

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view, and that that one should come from the other side of the Atlantic. How far Dr. Barker's view may be regarded as that of our American brethren, we cannot say. He has not professed to express any views but his own, while telling us how anxiously, and with what interest, this debate has been followed in the New World.

Dr. Barker, while supporting the claim of puerperal fever to be considered a distinct disease, is not prepared to follow Mr. Wells' question, and say that it is "*distinctly*" caused by a morbid poison, though he would allow that it "*often*" is. He objects to the idea that "identity of cause" must necessarily be followed by "identity of result," and seems rather to lean to the view that the same cause may produce puerperal fever, or one of the fevers which we all recognise as distinct diseases, *i.e.*, produce one disease in one person, and another in another. In support of this view, he mentioned cases occurring under his own observation, in which an escape of sewer-gas into a house caused in one person diphtheria, and in another typho-malarial fever, etc. We think, however, that he hardly made his ground good here, and that Mr. Wells had the best of the argument in his reply, when he pointed out how from small-pox we get small-pox, and no other disease; from syphilis, a chancre, and so on; and that sewer-gas contains many chemical elements, and may, therefore, fairly be supposed also to contain the *materies morbi* of various diseases, whether we regard them from the germ theory point of view, or the physico-chemical one.

In order to cover what he seemed to feel was a weak point in his theory—viz., the absence of any definite post-mortem signs in many cases of puerperal fever—Dr. Barker said that in the exanthemata generally we had little or nothing to guide us in the pathological anatomy to a clear opinion as to the cause of death—a view which, we fancy, will hardly find much support in this country.

Indeed, taking his argument as a whole, we hardly think Dr. Barker produced evidence sufficient to support his very decided opinion as to the existence of puerperal fever as a distinct disease.

Passing to the second question, we find an immense addition to the strength of those who consider erysipelas a potent and active cause of puerperal fever, Dr. Barker swelling the ranks along with Dr. Thomas Keith, of Edinburgh, from whom Mr. Wells read a remarkable letter showing the close connexion and interchange between erysipelas, puerperal fever, and septicæmia, and pyæmia after ovariotomy. But while they are agreed as to erysipelas, Dr. Keith and Dr. Barker add to the number of directly opposite views as to surgical septicæmia and pyæmia being connected with the so-called puerperal fever.

Before leaving the second question, we must note that the number of those who object to the ordinary exanthemata being considered a common cause of puerperal fever was considerably increased, negative evidence, however, being still almost entirely relied on, which, as we pointed out last week, seems to us unsatisfactory.

Other speakers supported the view that these specific fevers are not only a common cause of the disease under discussion, but that they actually produce a peculiar variety which is very infectious; while they contend that the form produced by decomposing animal matter is only contagious by direct inoculation.

Questions four and six, as on the former nights, received little or no attention, and we cannot help thinking this is a misfortune, and will to some extent detract from the value of the discussion.

Dr. West alluded to question five only to object to bacteria and their allies being introduced into the discussion, on the ground that the subject, as shown by the late debate at the Pathological Society, is not ripe. But we think Mr. Wells' answer was to the point, and regret that no pathologist who has specially studied the germ theory came forward to offer any suggestions. Dr. West should remember, also, that when Mr. Wells tabulated his questions, the germ-theory debate had not commenced, and therefore he had not its results to guide him.

Dr. West is one of those who think we cannot claim puerperal fever as a distinct disease, and that we have made but little progress since Ferguson wrote of it as depending on "a vitiated state of the fluids of the body." How far he is correct in this opinion, we must leave to the profession at large to decide when they carefully read the discussion which has just closed.

Dr. Barker made one very valuable suggestion when he pointed to the advisability of gathering our knowledge of the pathological anatomy of this disease, not from cases occurring in towns and hospitals, but in the country districts, just as Mr. Wells and others had advocated the study of its causation from the same sources.

In the short time which remained to Mr. Wells for his reply, it was obviously impossible for him to attempt any detailed criticism of the various speeches, and we think he did wisely in confining himself to answering some points to which we have referred above; reading some letters which he had received, chiefly in support of the close connexion between erysipelas and puerperal fever; and some cases furnished to him by Dr. Wm. Farr, of the Registrar-General's Office, who was present. He concluded by an earnest appeal to the Society not to throw the shadow of its protection over the ignorant women who, after ample warning, persisted in spreading death, and are now suffering a just reward; but rather to encourage medical men, not only to greater care in their own practice, but to the same care in teaching those whom they employ. After what we said on this subject last week, we need not do more than heartily endorse Mr. Wells' appeal.

We may congratulate the Council of the Society on the wisdom of their unanimous opinion that the debate should be finished with the end of the Society's session. It would have been most unwise to let the great interest it has excited die by inches during a long recess, and unjust to Mr. Wells to expect him to reply after such an interval. As matters stand, both the Society and Mr. Wells have just reason to be proud of a brilliant success.

EARTH TO EARTH.

Last month, Mr. Seymour Haden addressed to the *Times* his final and longest letter on his proposed reforms in our mode of disposing of our dead; and certainly the fact that that journal devoted, at this season of the year, three full columns of its pages to Mr. Seymour Haden's letter, is as strong a proof as could well be obtained of the widespread interest taken in the subject on which he writes, and of the power and skill with which he handles it. In this letter Mr. Seymour Haden treats of the conditions and evils of our existing metropolitan cemeteries, and describes the cemetery that ought to be. The chief evils of our cemeteries as they exist are—"The prevention of the resolution of the body by the use of the closed coffin, vault, and catacomb; the saturation and pollution of the soil by the piling together of a number of coffins in the same grave; the unfitness of the present cemetery for all the essential purposes of sepulture arising out of an improper selection of its geological site, and its dangerous proximity to the town; and the influence in its councils, in a sense adverse to the interests of the public, of its chief proprietor and virtual director, the undertaker." On all these points Mr. Seymour Haden dwells at some length, enlarging for the instruction of the public on facts already well known to many, if not to most, members of our profession, though

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perhaps few even among us were aware that only a hundred and eighty years ago coffins were not in common use in England, "the plainer sort of us being content before that time to be carried to our graves in open chests or coffins, which were kept at the parish church for the occasion, and only employed to convey the body from the house of death" to the graveyard. Arrived at the grave, the body was removed from its temporary case, and buried; committed to its mother earth, enveloped only in coarse linen, or woollen. We have ourselves, as our readers will remember, pointed out that the great evils attendant on modern burial arise from the use of strong wooden coffins, double and treble coffins, brick vaults, and catacombs; and we, therefore, highly approve of the principle represented by the light, permeable coffin, basket, or *κοφίνος*, advocated by Mr. Seymour Haden, and the simple single-tenanted earthen grave; but we are sure that public feeling will be strongly against the use of the open coffin: feeling, sentiment, or "prejudice" will, at any rate, demand, we think, the employment of lids or covers, light it may be, but strong enough to protect the face and body from immediate contact with the superincumbent earth; and we much doubt whether, in many cases, even a surrounding layer of coarsely divided charcoal will suffice to prevent very disagreeable, and harrowing accidents, though the body may be buried very soon—in forty-eight hours, for instance, after death.

We are quite in accord with Mr. Seymour Haden in his denunciation of the modern cemetery system, by which huge graveyards, originally not very far from, and gradually and not slowly approached and surrounded by, dwelling-houses, are managed in the pecuniary interests of shareholders and proprietors. Of the spirit that guides their directors he gives a telling instance, when quoting from the proposal of the directors of one general cemetery company:—"It has been found," they said, "that seven acres will contain 133,500 graves; each grave will contain ten coffins; thus accommodation will be found for 1,335,000 deceased paupers." No means exist at present of preventing such dangerous crowding of our cemetries, and certainly the employment of inspectors of burial-grounds cannot be said to have efficiently guarded against very serious abuses. Mr. Seymour Haden remarks that "it is neither to the interest nor the dignity of a great nation to entrust the burial of its dead to speculative associations, ignorant of their duties, and animated by no higher impulses than such as arise out of a spirit of trade"; and he suggests that so serious a trust "should be undertaken either by the Board of Works, or by a special department under its immediate supervision."

We should think that no one who is at all well acquainted with the position and state of our so-called suburban cemeteries will demur to the indictment drawn against them by Mr. Seymour Haden, that they have been formed in a more or less stiff clay soil—a soil incapable of aiding the resolution of animal matter; that they are full and more than full, the more part of their space being so overfilled that any addition to the mass of decaying matter contained in the whole would be dangerously wrong; and that they will soon be as much a part of the town as the old graveyards, for though they may by their Acts of Incorporation be forbidden to approach within a certain distance of dwelling-houses, there is nothing to prevent the dwelling-houses from coming to them; and London has gone out to, and nearly surrounded, the cemeteries. What, then, is Mr. Haden's proposal for the cemetery of the future?

Its soil should be of a nature to favour the resolution of the body within a certain time—in, say, from three to seven years. It should be to the east of the town, because the east end is the most densely populated, and by a class to whom distance and expense of transit are of importance; because it should be seaward rather than landward, and subject to the visitation of large bodies of movable air, and because prevalent winds should blow from the town towards it, and not from it towards the town; because access to it should be not by narrow road, but by broad river, progress by which is silent, inexpensive, and of a nature not to interfere with the living traffic of the town; because the physical conditions of the whole region east of London are favourable to its formation and to plantation, and peculiarly unfavourable to the increase of population; and because the formation of a large well-planted cemetery there, instead of being a detriment, would be a boon to such a region. All these conditions are to be found, Mr. Haden considers, as we already know from his former letters, in the low lands lying on the Essex side of the river. There "the soil is alluvial, the subsoil chalky, and the general surface flat," and there we may obtain 1000 acres, which would provide for the burial of 100,000 bodies a year for ever. But the population, and consequently the mortality, of London is ever on the increase, and where are we to bury our dead till the new cemetery shall be ready? Mr. Haden is still able to advise us. Allowing, he says, for the increase of population, and adopting 200,000 as a probable mean of the prospective annual mortality of greater London, then a total of 2000 acres would, "without entailing upon us any further outlay at any future time, bury the whole of this mortality for ever"; and at Woking we have already 1000 acres of excellent land for all the purposes of a cemetery, and capable, upon the condition he insists on—of insuring the resolution of the body—"of effecting 100,000 interments per annum for ever, the Act of Incorporation of that cemetery providing also a separate grave for each body." We are glad that Mr. Haden feels himself able to speak strongly in favour of Woking. It is true that it does not lie to the east of London; but have not most of us a painfully vivid impression that the wind very frequently blows from the east, and therefore not from, but towards the town? but, then, from the town and towards Woking; and Woking is easy of access by the railway, though not by the broad and silent highway of the Thames.

We have little doubt that public feeling is, to a very great extent, in favour of Mr. Haden's proposals; chiefly, indeed, as respects the undertaker's paraphernalia and display, but in some degree also as regards the radical evils of our prevailing mode of interment—the solid coffins and the brick graves or vaults. For some years there has been a quiet and gradually increasing revolt against the tyranny of the undertaker; and ordinary funerals have, during the last ten or fifteen years, been conducted with much less expense and undertaker's display. For this change we are, in part, indebted to the burial guilds that have been established in connexion with what is called the High Church party. But some wider-reaching aid than that afforded by those guilds will be needed to give practical effect to Mr. Haden's plan of burial; and the *Times* has suggested the formation of a co-operative society, which would, for its members, take the place of the ordinary undertaker, and at the same time relieve them, as he now does, from the pain and trouble of all necessary funeral arrangements.

However it may be brought about, there can be no question that a very radical reform must, sooner or later, be effected in our system of burial; and both the profession and the public owe a debt of gratitude to Mr. Seymour Haden for his powerful exposure of the great and rapidly increasing dangers of burial as it is, and his clear and graphic description of what it might and should be. His letters will rank among the most able and telling sanitary writings of the day; and we are glad to see that they have been published in a separate form.(a)

(a) "Earth to Earth." By Francis Seymour Haden, F.R.C.S.E. London: Macmillan and Co.

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INSECTIVOROUS PLANTS.

Few books will be read with greater interest than the new volume by Mr. Darwin on Insectivorous Plants, which would probably have been better styled "Carnivorous," there being but little selection in the devouring of animals by plants. The book has long been looked for, and will, as regards certain plants at least, fairly satisfy the curiosity engendered of the hints which have from time to time appeared as to the line of Mr. Darwin's recent researches. Slight though the results hitherto attained may be, compared with the amount of labour devoted to the research, nevertheless the outcome is so clear an advance that it constitutes a real standpoint for the researches of others. It is but a few years ago since the proposition that the foundation of certain parts of animals and plants alike was composed of the same or closely similar substance, known as protoplasm, was received, even by *savants*, in the angriest manner. Since that time we have had it demonstrated that the motion of such plants as the sensitive plant and others of the same kind is due to the contraction of a substance in many respects similar to muscle. Now we have before us the demonstration of the fact that some plants have the power of catching insects, of digesting them in a manner similar to that seen in animals, and of absorbing the matters thus digested.

In the present volume Mr. Darwin begins his investigations on the phenomena of fly-catching, as seen in the *Drosera rotundifolia*, and to this plant is devoted the greater part of the volume. The structure of the Drosera is first described: its leaves, with their curious glandular organs, and hair-like appendages or tentacles, the movements of which are most carefully studied, are here discussed. When a gland becomes excited by the touch of any small particle, especially of meat, it spreads its influence not only to its own tentacle, but also to those of adjoining glands, so that all promptly begin to bend inwards towards the centre, thus inclosing or hugging the particle of matter which has excited the movement. These movements are especially active and energetic when the irritating matter is nutritive, for, if not nutritive, in no long period they begin to re-expand and to resume their normal attitude. Momentary pressure does not produce any movement, but the slightest weight, if prolonged, sets the tentacles in action.

The cause of this movement is not less interesting, and opens up to us the secret of many of the so-called animal motions. The interior of each cell is filled with, or rather is composed of, a mass of protoplasm. This at rest and in health is more or less uniform in character; but being irritated or excited, it becomes cloudy from the formation of granules, and these granules, in accordance with their ordinary laws, tend to aggregate into a spherical mass, leaving a clear ring of moving protoplasm around. This ring also disappears, and now there is but one central protoplasmic mass, undergoing all manner of changes of shape, such as we are wont to see in free-moving leucocytes. Cell after cell is thus affected in a moment's time, until, under the influence of the combined movements, the whole tentacle obeys the impulse, and closes in upon its prey. This continues whilst the gland-cells are in an actively oxygenated state, but by-and-by ceases, the tentacles re-expand, the cellular masses of protoplasm are redissolved, and the cells fill with a homogeneous liquid. But we must return to this subject again.

THE WEEK.

TOPICS OF THE DAY.

Some years ago a male adult received a severe blow over the left parietal bone. During the last few months he has been the subject of convulsions, increasing both in frequency and severity. On the 7th of this month, with the concurrence of Dr. Down, Mr. Maunder trephined over the seat of the injury, and was rewarded by finding a piece of the inner table of the bone embedded in greatly thickened dura mater.

It would appear that the London water companies are not so black as they are painted. Some time ago, Dr. Sandwith wrote to the papers, calling attention to the bad condition of the drinking-water at one of the West-end clubs, and commenting rather strongly on the state of the London water-supply. The President of the Local Government Board feeling, as Supervisor of the Water Companies, that this was a case for full inquiry, immediately took steps to investigate the matter, and, as the club in question offered no opposition, Major Bolton examined the premises, and was able to point out certain defects in the arrangement of the water-pipes and cisterns, which, in his opinion, fully accounted for the impurities that had attracted attention. We believe that the committee of the club lost no time in carrying out the practical suggestions made by Major Bolton for the future prevention of the pollution of their water-supply; and it will be satisfactory to the public to learn, as the result of this inquiry, that the filthy deposit found in the water was proved to have been introduced into the club's cistern *after* the water had been delivered on the premises from the water company's mains.

Although it is satisfactory to find that some of the London parishes are taking steps to establish mortuaries and special rooms for the holding of coroners' inquests, it is very essential that the necessity for providing such accommodation should be kept before the eyes of those parochial authorities who are slow to follow in the footsteps of improvement. At an inquest held last week at Clerkenwell-green by Dr. Thomas, Deputy-Coroner for Central Middlesex, some discussion arose as to the want of a mortuary in Clerkenwell, the post-mortem in that case having to be carried out in a very small room in the house of the deceased, situated in a densely crowded locality. The Coroner remarked that mortuaries were being established in various parts of the metropolis, and the authorities of Clerkenwell would do well to follow the example, if they wished to preserve the health of the locality.

The Admiralty has now received reports on the subject of the suitability of Dartmouth as a site for a naval college, and from the Parliamentary papers lately issued we gather that the weight of opinion is in favour of the adoption of this locality for the purpose in question. The Director-General of the Medical Department of the Navy reports that the site is, in his opinion, about the most suitable and convenient for the purpose that could have been selected in the neighbourhood. It is situate upon a hill about 200 feet high, with a soil of a light character over schistose rock, commanding a picturesque view of the harbour and surrounding country, and partially sheltered by trees to the south-west and north-east. The proposed site is sufficiently far from the town to be free from any evil influences that might result from defective drainage or any other cause of unhealthiness. Still, Sir A. Armstrong strongly recommends that, before any decisive steps are taken a sanitary inspector from the Local Government Board be requested to visit the town, for the purpose of reporting on its sanitary state, with a view of inducing the authorities to make any alterations considered necessary before the buildings are commenced. He also remarks that although the elevated site which has been chosen for the College gives it a great sanitary advantage over the surrounding valleys, it must not be forgotten that the climate of that part of South Devon is mild, humid, and relaxing; and hence he would have preferred a bracing and invigorating locality, more to the eastward of Dartmouth, provided that it possessed the similar advantages to those undoubtedly possessed by this latter neighbourhood.

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The reports of the naval officers who have at different times commanded the *Britannia*, naval cadet training-ship stationed at Dartmouth, are decidedly in favour of the site chosen; and the testimony of Mr. George Busk, F.R.C.S.E., and of Dr. Vaughan, Deputy Inspector of Hospitals (retired), confirm their opinions that the situation, in a sanitary point of view, appears to possess all the advantages that can be desired for the purpose proposed.

Captain Tyler's annual return of killed and wounded on our railways has just been published. The numbers are appalling —1424 killed, and 5041 injured. Even when the increasing number of travellers is taken into consideration, it is a sad reproach upon our railway system that the list of casualties should be so large; and no thinking man will hesitate for a moment to declare that the safety of the public is sacrificed to mismanagement, parsimony, and the half-yearly dividend.

The reports lately issued by Drs. Whitmore and Hardwicke, the Medical Officers of Health for Marylebone and Paddington, show that the west and north-west suburbs of the metropolis are not in such a healthy condition as might be desired. In Marylebone during the month of June the deaths registered were 280—equivalent to an aggregate of 22·85 per 1000 of population of the parish, or nearly 1 per 1000 in excess of the death-rate of the corresponding month of last year, and also in excess of the death-rate of the whole metropolis by about 2 per 1000. In the foregoing return are included thirty-nine deaths from phthisis of persons under forty years of age.

Dr. Adler, the Chief Rabbi, has forwarded a cheque for £638 12s. 8d. to the Mansion House in aid of the Hospital Sunday Fund, being the aggregate of the amounts contributed in the metropolitan synagogues under his spiritual charge. The total amount received by Jewish contributions this year is £991 14s. 4d., as against £950 14s. 11d. collected in 1874. The total amount received up to the present time to the credit of the Hospital Sunday Fund is £27,300, which is now within £800 of the sum collected last year. As further returns have yet to be sent in, it is just possible that the amount for 1875 may equal that of the past year; but it must not be forgotten that two hundred additional congregations have contributed this year, so that the expected increase in the amount collected will not even then have been realised.

The controversy on the subject of the removal of the Knightsbridge Barracks continues, but we still think that the weight of the evidence is in favour of retaining the present site, although there can be but one opinion as to the expediency of a thorough reform. The present buildings should be completely taken down, and new barracks constructed with all the modern sanitary improvements. None of the objectors who have at present come forward have anything to say against the soldiers or their behaviour; and if the eating-houses and music-halls which fringe the road opposite the barracks were removed, as they very well might be, the highway to the great western suburb beyond would be greatly improved, and the aristocratic residents in the neighbourhood have nothing left to complain of.

No serious consequences are apprehended by the authorities from the outbreak of scarlet fever in the Channel Squadron. Only two cases, and those of a mild character, have been reported—one the case of Mr. T. C. V. Dundas, midshipman of H.M.'s ship *Monarch;* and the other that of Mr. R. L. Noel, acting sub-lieutenant of H.M.'s ship *Sultan*. Under these circumstances, little anxiety need be felt for the health of the different crews.

On Monday last a new branch of the Metropolitan Convalescent Hospital was opened at Kingston-hill, Surrey, by their Royal Highnesses the Prince and Princess of Wales. The present addition to the charity is specially designed for the reception of children, and will accommodate 146 inmates at a time—seventy-three of each sex. The dormitories are situated on the first and second floors of the building, and are arranged so that each inmate has a provision of 750 cubic feet of air. There is a tower, the upper portion of which forms a tank for storing water in case of fire, and it is fitted up with bath-rooms and other conveniences, so that it may furnish a place of isolation in the event of any outbreak of contagious disease occurring. Over £200 was presented in purses to the Princess of Wales by different ladies who had collected this sum towards the expenses of the charity.

We are happy to be able to state that M. Ricord is again coming over to England, in order to be able to be present at the meeting of the British Medical Association. While in London he will, we believe, be the guest of Mr. Acton, a paper by whom, at the meeting of the Association, will happily once more give M. Ricord an opportunity of enriching us with some of the results of his vast experience and ripe judgment.

THE NEW FLOATING SWIMMING-BATH.

So many months ago that our readers might almost imagine the project had been abandoned, we announced the intention of establishing a floating swimming-bath in the Thames at Charing-cross. Last week, after a delay which seemed to be well-nigh interminable, the structure was opened to the public, under what must be considered very favourable auspices. The floating baths on the Seine, at Paris, are well known to all visitors to the French capital, and much wonder has been expressed that no enterprise of a similar character had been started with us until so recently. But it must not be forgotten that the difficulties of dealing with the purification of the water taken from a tidal river like our Thames, at a spot where it is thoroughly stirred up all day long, are by no means small; and if the Company which has now essayed the task can accomplish this feat at a moderate cost, the speculation will prove a boon to the public and a source of profit to the shareholders. The swimming area of the bath is 135 feet by 25 feet—nearly the longest in the metropolis—and it contains forty dressing-boxes, with a large extra room available for schools; at the west end of the structure is a large saloon serving as a lounge, from which a general view of the bathing can be obtained. All the details for the comfort of visitors have been carefully attended to, and the result is a luxurious, enjoyable, and most convenient bath for dwellers at the West-end.

The most important feature of the undertaking—the purification of the water—is effected by storing the water, in the first place, in large tanks, from which it is drawn after the densest of the impurities have been deposited; it is then filtered through large bags containing gravel and sand, and is finally pumped into the bath by an engine of fourteen-horse power, 500 gallons per minute being discharged into the bath, insuring a constant as well as a fresh supply. An arrangement is also perfected for regulating the temperature of the water according to the season, so that the building will be available all the year round for those who indulge in the habit of bathing, either for health, or amusement, or both. Should this experiment answer from a financial point of view, it is the intention of the directors of the Floating Swimming-Baths Company to place several other floating baths on the river within the metropolitan limits.

THE HAMPSTEAD HOSPITAL INQUIRY.

The Select Committee appointed by the House of Commons to consider the proposal for the erection of a fever and small-pox hospital in the neighbourhood of Hampstead Heath, assembled last week to hear evidence. Mr. W. H. Wyatt, one of the managers of the Metropolitan Asylums Board, was examined at considerable length; he detailed the history of the establishment of the various fever hospitals in London,

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and explained that objections had been made by residents in the several neighbourhoods against every building put up by the Board. He did not think that the objections urged against the Hampstead site were so real as those put forward against the Homerton and Stockwell Hospitals. At the outbreak of the late small-pox epidemic the two latter hospitals were in course of erection, and therefore could receive no patients; all, therefore, had to be sent to Hampstead. It was impossible to provide proper accommodation for such patients in a temporary building, as the necessary bath-rooms and lavatories could not be made available. In the event of an epidemic occurring, and more accommodation being required than the Board possessed, he should prefer an empty workhouse to huts and sheds, but he did not think it would be much more expensive to construct brick buildings than to erect wooden sheds and line them with iron, as was done at Hampstead. Of the three alternative sites which had been proposed to the Board, two, he thought, were most objectionable; the third was not a bad site if it had not been so far away from the population required to be relieved, and, in addition, it had been stated by Dr. Frankland that it would be likely to contaminate a large part of the water-supply of the metropolis through being in immediate proximity to the Grand Junction Company's reservoir. Further, had the third site been chosen by the Board, Mr. Wyatt was of opinion that the amount of opposition evoked would have been considerably greater than that aroused by the Hampstead scheme.

Dr. Sibson, Consulting-Physician at St. Mary's Hospital, was next examined. It was at his suggestion that the Board resolved to erect three hospitals in the neighbourhood of the metropolis, six miles from each other, but not more than three miles from the places whence the patients would be taken. He did not believe there was any danger of the spread of fever or small-pox by the conveyance of patients in cabs through a populous district; he had never heard of an instance of it; and the result of his experience was, that these hospitals, if properly managed, were no source of danger to the inhabitants of the neighbourhoods in which they are situated. The Committee then adjourned.

THE GENERAL PRACTITIONER FROM A FRENCH POINT OF VIEW.

How difficult it is for a foreigner to convey a true account even of what falls under his own observation, may be seen from the following passage which we extract from the *feuilleton* of a recent number of the *Gazette Hebdomadaire*. It is from the pen of a gentleman who has recently come to set up amongst us, and who is actuated, as we believe, by the best intentions towards his future co-professional brethren. But surely he would have done well to have waited awhile, until better acquainted with what is really going on here, before he dashed off this picture of English medical life for the edification of French readers, and thereby have avoided the common error of mistaking exceptions for rules, and the production of what reads like a ludicrous caricature. However, here is what is published in an influential French journal as representing our professional status:—

"We have already stated in a former article that there are notable differences to be observed among English practitioners. One is the 'physician,' who occupies the highest stage of the social scale, while the other—the 'general practitioner' or 'surgeon,'—on the contrary, has a very modest position. The latter practises in the outskirts, the workingmen's districts, and the country, keeping a shop and selling drugs at the same time that he prescribes them. His practice, or rather his trade, sometimes acquires a great extension, and he is then obliged to employ a great number of assistants. In populous districts, chiefly those occupied by miners, he sets up a number of subsidiary establishments (*succursales*), which he entrusts to more or less clever assistants. It is to these clerks, assistants, or pupils of the 'general practitioner' that we desire to draw attention. Most of them have no idea whatever of the art that they are called upon to exercise, unless it be what they may have acquired by routine. They possess no diploma, and have neither the instruction nor aptitude requisite for obtaining some day the qualifications necessary in order to practise regularly. The number of persons who thus illegally practise medicine under the illusory safeguard of a diplomated patron is truly considerable, and in some localities it even exceeds that of the regular practitioners. This abuse of 'unqualified assistants' has been long since stigmatised, but so deeply is it rooted in, that it does not seem to us likely to disappear within any short period."

UNQUALIFIED MEDICAL PRACTICE IN ISLINGTON.

On Monday, Dr. Hardwicke, Coroner for Central Middlesex, and a jury were engaged in investigating the circumstances attending the death of a child named Emma Jane Plain, aged nine months. The facts elicited at the inquiry showed how the working-classes of Islington are deceived and imposed upon by unqualified practitioners under the so-called "provident system." In the unavoidable absence of Mr. George Brown, the honorary secretary of the British Medical Defence Association, Dr. Slater, of Barnsbury, attended the inquiry to watch the case on behalf of the Association. The mother of the child stated that as it was suffering from diarrhœa, she took it to a provident dispensary, at 110, Copenhagen-street, where she saw a Mr. Kerr, who prescribed some medicine and a dose of castor oil. She gave the castor oil and three doses of the medicine, and next morning the child died somewhat suddenly. The dispensary was called the "Provident Dispensary," where persons paid a shilling for a bottle of medicine, or three shillings a week. Henry Plain, the father, said when the child died he was sent for, and he at once went for Dr. Kerr, who said he was unable to come, but advised him to ask Dr. Kane, who resides close by, to go; and in an hour after, when Dr. Kane saw deceased, he said he could not certify the cause of death. Witness was not aware at the time, but had since heard, that Mr. Kerr was not a qualified medical man. He had practised in his (Mr. Plain's) house before, and represented himself as qualified. In answer to questions it was elicited that the people in the district took it for granted that Mr. Kerr was the principal at the dispensary in Copenhagen-street, and that he was a qualified medical man, he having practised there for about two years. Mr. Derry Jones, M.R.C.S., of York-place, Upper-street, Islington, said he had been directed to make a post-mortem examination in this case, and was of opinion that the cause of death was diarrhœa, but in a form which was amenable to treatment. He had examined the medicine also, and found it to be "liquor ammoniæ acetatis," with excess of ammonia, which was not a proper medicine for such a case. Inflammation might have been caused by the excess of ammonia. Neither ought castor oil to have been given. The medicine given acted as an irritant, but he would not say that death was hastened thereby. If deceased had been properly treated, she would most likely have recovered. He would have prescribed a chalk mixture in such a case. Another witness who had been attended by Mr. Kerr identified him as the same who had prescribed for deceased. He was supposed to be a regular medical man. The case was adjourned for a week for the attendance of Dr. Kane and Mr. Kerr before the Court.

ALLEGED DEGENERATION OF THE FACTORY POPULATION.

In his evidence before the Royal Commission on the working of the Factory and Workshops Acts, Dr. Fergusson, who has held office as certifying surgeon under the Factory Acts at Bolton for fourteen years, stated as the result of his observations that there is a steady degeneration going on among the factory population. He did not believe that it was so much the factory labour that operated prejudicially—the mills being more healthy to work in now than they were in years gone by—as the habits and mode of life of the factory workers.

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By free indulgence in stimulants, and in many cases excess in smoking, parents debilitated their own constitutions and transmitted feeble constitutions to their children. Again, children were often fed on tea and coffee after they were weaned, instead of getting good milk. Another cause of degeneration among boys was that at least one-half of those over twelve years of age either smoked or chewed tobacco, or perhaps indulged in both vices. There is no doubt that the excessive use of stimulants and tobacco is very general in factory districts, and is to some extent the cause of degeneration of the population; but, as the chairman of the Commission observed, the remedy for this unfortunate state of things is scarcely within the reach of Parliament. We hope to return to the subject after the Factory Commissioners have concluded their labours.

THE EXAMINATIONS AT THE COLLEGE OF SURGEONS.

In another column we publish the report of the Court of Examiners of the Royal College of Surgeons as to results of the examinations for the College membership during the collegiate year 1874-75. This report will be read with great interest, as it shows the number who have passed and the number rejected from each medical school, thus indicating pretty accurately the character of the work performed in each. Of the metropolitan hospitals, Guy's takes the first position as regards the "primary" examination, with rejections amounting to 15·3 per cent. only; Charing-cross, St. Mary's, and St. Bartholomew's taking second, third, and fourth positions, the proportion of rejections being 18·5, 19·6, and 24·1 per cent. respectively. Manchester stands first among the provincial schools, with 16·4 of rejections. Last year the London Hospital headed the list with 21·4 of rejections, the others being placed in the following order:—St. George's 25·8, University College 29·6, King's College 29·7, St. Thomas's 29·8, St. Bartholomew's 30·8, Guy's 31·1, St. Mary's 34·2, Charing-cross 40·7, Westminster 52·0, and Middlesex 55·2. In the "pass" examinations, University College stands well, with 10·8 per cent. of rejections, St. Bartholomew's and St. Thomas's taking second and third positions respectively.

THE FORTHCOMING SOCIAL SCIENCE CONGRESS.

The special questions selected for discussion in the health department of the forthcoming Social Science Congress, at Brighton, are:—1. To what causes are to be attributed the ill construction and want of sanitary provisions which exist in the dwellings of the upper and middle classes? and what is the best method which should be adopted to remedy and rectify the same? 2. What are the advantages or disadvantages of water-supply being lodged in the hands of local authorities? 3. What are the advantages of English, as compared with foreign, watering-places and health-resorts? What are the best means for rendering the English watering-places more efficient for obviating the dangers arising from the occasional introduction of infectious diseases, and for determining the annual rate of mortality in each district?

SALICYLIC v. CARBOLIC ACID.

Professor Lister returned to Edinburgh on the 22nd ult., having spent about two months in travelling through Germany and visiting the large German hospitals. At Munich and at Leipzig the learned professor was entertained at banquets in honour of his visit. Speaking on one of these occasions as to the relative value of salicylic and carbolic acids, he said that as far as he was able to judge at present, carbolic acid gave far better results in antiseptic surgery than its new rival. The opinion of such an authority as Professor Lister on this point will, doubtless, have great weight with those surgeons who have adopted the antiseptic system; but we suppose it must be regarded as a kind of interim judgment till the professor has had larger opportunities of comparing the two acids.

PARLIAMENTARY.—ARTISANS' DWELLINGS BILL (SCOTLAND)—ADULTERATED MILK—MILITIA MEDICAL OFFICERS.

The Artisans' Dwellings Bill for Scotland (a very similar measure to that which has now received the Royal assent for England), having passed quickly through the House of Commons, was read for the first time in the House of Lords on Thursday, July 8.

In the House of Commons, on Tuesday, July 13,

Dr. Cameron asked the Home Secretary whether his attention had been called to a report of the proceedings at the Greenwich Police-court, in which the presiding magistrate publicly announced that, after consultation with his brother magistrates, he had resolved not to impose fines in cases of adulteration of milk with water when such adulteration was not over 10 per cent., and whether the Adulteration Acts now in force warranted such a conclusion.

Mr. Cross said that the report was substantially correct. He did not think this opinion would be endorsed by the President of the Local Government Board either under the Act now in force or under the Bill that is at present passing through the House.

Mr. Hardy, in reply to Dr. Playfair, said the new regulations referring to militia medical officers had been for some time in preparation. The regulations relating to medical officers in the yeomanry and volunteers were actually settled, but difficulties had arisen with regard to the militia medical officers, through their being brought into contact with the brigade depôts. He hoped these regulations would be published at no distant date.

ROYAL COLLEGE OF SURGEONS.

At the last meeting of the Council of the College, on the 8th inst., the annual report of the receipts and expenditure during the past collegiate year was received, from which it appears that the former amounted to £16,057 12s. 4d., derived principally from fees paid for the various diplomas of the College, viz., £11,156 7s. Rents and dividends amounted to £2587 2s. 2d. The fees paid on elections to the Fellowship, Council, and Court of Examiners, amounted to only £136 10s. This, of course, will become less as the old members (those prior to 1843, who are eligible by election to the Fellowship) gradually die off. The trust funds appear to have yielded during the year £251 9s., the largest amount being derived from the Erasmus Wilson fund of £5000—viz., £148 15s.

The expenditure of the year amounted to £14,052 8s. 2d.; the largest amount being paid in fees for conducting the heavy examinations for Member, Fellow, Midwifery, Dental, and including the Preliminary Examinations by the College of Preceptors, viz., £5312 12s. 10d. Most of us are familiar with the admirable caricature by Cruikshank, of the two pampered menials in the hall of a nobleman, where one of them inquires, "What *is* taxes, Thomas?" and the other, lolling in the porter's chair, expresses entire ignorance of the matter. At the College of Surgeons they are represented by the large sum of £1217 8s. 7d. The next most important item is for salaries and wages to the large and necessary staff of officers and servants, which appears moderate at the sum of £2915 6s. 7d. For prizes and lectures the sum of £121 9s. 4d. was expended. Alterations, repairs, and painting amounted to £904 11s. 10d. The affairs appear to be so well managed as to leave a balance of £2005 4s. 2d.

The following report from the Court of Examiners, of the number of candidates who have presented themselves for the Primary and Pass Examinations for the diploma of Member of the College during the collegiate year 1874-75, showing the numbers who have passed and who have been rejected from each

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medical school during that period, was presented to the Council on the 8th inst.:—

Primary Examinations.

Medical School.	Totals.	Number passed.	Number rejected.	Percentage of rejections.
University College	87	61·50	25·50	29·3
St. Bartholomew's	80·83	61·3	19·50	24·1
Guy's	78	66	12	15·3
St. Thomas's	64·3	27·83	36·50	56·7
King's College	47	33	14	29·7
London	41·83	26	15·83	37·8
St. George's	31·50	22·50	9	28·5
Middlesex	26·50	16·50	10	37·7
St. Mary's	25·50	20·50	5	19·6
Charing-cross	13·50	11	2·50	18·5
Westminster	10	2	8	80
Manchester	33·50	28	5·50	16·4
Birmingham	28·83	20	8·83	30·6
Liverpool	25	17	8	32
Leeds	23·3	17·50	5·83	25
Bristol	16	11	5	31·25
Cambridge	15	11·50	3·50	23·3
Newcastle	8	5·50	2·50	31·25
Sheffield	3·3	1	2·3	70
Dublin	13·50	6·50	7	51·851
Belfast	1·50	1·50	0	0
Cork	1	1	0	0
Galway	0·50	0·50	0	0
Edinburgh	28·3	23·50	4·83	17·05
Glasgow	9	3·50	5·50	61·1
Aberdeen	2·83	1·50	1·3	47·05
Calcutta	1	1	0	0
Montreal	3·83	3·83	0	0
Toronto	3	1	2	66·6
Kingston	1	0	1	100
Halifax	0·50	0·50	0	0
Heidelberg	0·50	0·50	0	0
Vienna	0·50	0·50	0	0
Totals	727	504	223	30·5

Pass Examinations.

Guy's	96·83	73·83	23	23·7
University College	69·16	61·6	7·50	10·8
St. Bartholomew's	61·3	50·3	11	17·9
St. Thomas's	49·50	40	9·50	19·19
King's College	29·50	16·50	13	44·06
London	28	22	6	21·4
St. George's	27·50	19	8·50	30·909
St. Mary's	14·3	11·50	2·83	19·7
Middlesex	10·16	7·16	3	29·5
Charing-cross	4·50	2	2·50	55·5
Westminster	3·50	2·50	1	28·5
Leeds	15·83	10·83	5	31·5
Manchester	14	12·50	1·50	10·7
Birmingham	12	5	7	58·3
Liverpool	11·50	7·50	4	34·7
Bristol	10	6	4	40
Cambridge	6·83	5·3	1·50	21·9
Newcastle	6	4	2	33·3
Sheffield	5·3	3	2·3	43·75
Hull	1	1	0	0
Dublin	9·83	5	4·83	49·1
Belfast	1	1	0	0
Galway	0·50	0·50	0	0
Edinburgh	10·50	8	2·50	23·8
Aberdeen	1·50	1·50	0	0
Glasgow	9·3	6·83	2·50	26·7
Montreal	2	2	0	0
Toronto	2	1·50	50	25
New York	2	2	0	0
Philadelphia	1	1	0	0
Paris	0·50	0	0·50	100
Vienna	0·50	0·50	0	0
Heidelberg	0·50	0·50	0	0
Totals	518	392	126	20·4

FROM ABROAD.

The Alimentation of Infants.

A paper read by Dr. Dawson at one of the New York Medical Societies (*New York Med. Record*, June 5), contains some very useful remarks upon this important subject. He commenced by exhibiting the intestinal canal taken from a child seven months old, in a state of extreme softening, induced by gastro-intestinal irritation, which had been going on for four months. After alluding to the fact that a fourth of the children born die before they attain their fifth year, he stated his conviction that faulty alimentation is the great cause which induces the gastro-intestinal irritation which carries off the bulk of them. The composition of the mother's milk, as well as the condition of the digestive apparatus, show how well these are adapted for each other; for, at first, there is no secretion from the glands capable of digesting the starchy elements of food, while the size of the liver, and the size and shape of the intestinal tube, show that food is only to be retained for a short time, and, therefore, should be of quick and easy digestion;—also showing that *fluid*, not solid, animal, nor vegetable, food is that which is suitable for the infant. If these indications be neglected, food is very liable to give rise to vomiting, gastro-intestinal catarrh, and other disorders which ultimately prove fatal.

It is, perhaps, difficult to decide on the quantity of milk proper for an infant; but, at all events, the child should not be induced to take more than sufficient to satisfy its appetite, after which it should at once be removed from the breast. Simple as this rule is, it is constantly neglected, every cry of the child being thought to denote hunger, and to call for a fresh supply. Too large quantity, and too frequent repetition, should, however, be carefully avoided, for over-distension of the stomach is almost as bad as giving indigestible food. A positive proof of such over-feeding is the eructation of the milk soon after suckling; although this, in some rare instances, may be due to some fault in the milk. Chronic vomiting and gastro-intestinal disorders can very commonly be traced to this over-suckling, or to too great frequency of suckling. Upon this last point there is much difference of opinion, although it is generally thought sufficient to give the infant the breast every two or three hours during the day, and once or twice during the night—the milk being extremely liable to cause colic, diarrhœa, etc., when given oftener in the night. When called to a case in which, owing to over-feeding, vomiting and intestinal disturbance have been going on for some time, giving rise to emaciation, etc., the urgent indication is to give the stomach rest. All medicine and alimentation should be stopped when the case is urgent, giving, perhaps, a teaspoonful of cold water every fifteen or twenty minutes. The stomach in this way should have absolute rest for twenty-four hours, and, when nursing is resumed, the child should suck only a few mouthfuls at moderate intervals during the next eight or ten days, when it will very frequently be found that the normal quantity of food can be taken without trouble. Constipation, as well as diarrhœa, is very often due to over-suckling or too frequent nursing. The stomach is over-taxed, and the food, instead of being finely coagulated, comes into contact with old coagula, and the coagula then formed are large and hard, and, if not thrown up by the stomach, pass into the intestinal canal little or not at all changed; and there, as hard, dry masses, give rise to constipation. It is an accumulation of such curds that sometimes gives rise to intestinal catarrh,

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which may finally terminate in severer forms of intestinal disease, and is probably one of the frequent causes of cholera infantum. Abnormal acidity of the stomach may sometimes be the cause of the formation of these abundant coagula, but that is exceptional.

If an *artificial diet* be judiciously selected, there is no reason why a child should not thrive as well upon it as upon the breast; but to this end it must consist of a liquid food possessed of heat- and fat-producing properties. Cows' milk should in general be preferred to that of other animals, and, when properly prepared, may answer all purposes. To this end it must be diluted, and for this purpose water is usually employed. But in far the greater number of cases mischief results from this, for the addition of water does not improve the digestibility of casein, inasmuch as it does not dilute it; and when milk so treated is taken into the stomach, the water is soon taken up, leaving the casein unchanged. Nor does the addition of sugar make the coagula easier of digestion, while skimming the milk deprives it of one of its most important constituents. Inasmuch as the mother's milk contains proportionally more fat than other milks, it may be that the finer coagula produced by it are due to the presence of this fat, and it would be better to use other milk from which casein had been removed than that which had been deprived of its cream. The admixture of farinaceous substances also leads to disastrous results. Barley-water, however, is an article that contains so small a quantity of starch that it may be advantageously employed for dilution—good cows' milk diluted with from one-third to one-half of barley-water forming one of the best articles of food that can be used for infants when it is necessary to bring them up artificially. When it cannot be procured, oatmeal may be substituted with advantage. By these a real dilution of the casein is produced, rendering the coagula much finer and more nearly like those produced in human milk.

In the discussion which followed, Dr. Joel Foster expressed his belief that almost as much mischief is done by over-feeding as by under-feeding infants. Attached to the New York Infant Asylum, he has found it necessary to use a substitute for breast-milk, owing to the difficulty of getting a supply of this. For this purpose he employs cows' milk, which he allows to stand until the cream begins to rise, then taking the upper portion and diluting it with barley-water. He is very particular in giving it at regular intervals, and at a temperature near that of the body; for, when given below this, it may readily produce gastro-intestinal disturbances. It has been found that milk taken directly from the cow does not do for children nearly so well as when allowed to stand for about two hours, when a partial separation of the cream has taken place, and then taking the upper portion of the milk. In this way more fat and less casein is obtained. Dr. Messenger urged the propriety of thoroughly cooking whatever article is used for diluting the milk, and he always insists that the barley-water should be boiled for three or four hours. Dr. Lewis Smith remarked, with reference to the use of farinaceous food, that up to the third month the salivary glands and pancreas are present only in a rudimentary state, and consequently that the fluid suited for the digestion of starchy matters is absent; but it is also probably true that starch is not so irritating as is the undigested casein. He has been accustomed to employ the upper portion of the milk, after it has stood for a short time; and he prefers to use as a diluent some article that has been changed into dextrine or glucose, and recommends Liebig's food. He does not think that sugar should be added in warm weather when diarrhœa is present; but if there is constipation, he gives it in the form of sugar of milk, which is the best. He is decidedly of opinion that many deaths occur among children from the fact that mothers regard numerous stools as necessary while the child is teething. Dr. Robinson suggested that the weight of the child might determine whether it is receiving sufficient food or not.

Statistics of German Medical Students.

The *Berlin Klin. Woch.* of May 31 furnishes the following account of the number of medical students who frequented the German Universities during the winter session 1874-75. The number of matriculated medical students in Vienna was 877, Würzburg 542, Leipzig 487, Prague 430, Munich 346, Dorpat 333, Berlin 276 (exclusive of 154 pupils of the military medical establishments, which would, therefore, raise the entire number to 430), Greifswald 229, Graz 227, Strasburg 204, Zürich 190, Breslau 169, Bern 165, Königsberg 156, Halle 155, Tübingen 154, Erlangen 146, Freiburg 132, Göttingen 127, Marburg 125, Bonn 110, Innsbrück 77, Jena 73, Giessen 73, Basel 69, Heidelberg 68, Kiel 56, and Rostock 43.

Comparing these numbers with those for the summer session of 1874, it is found that there is a diminution of the total number from 6190 to 6039. The sequence of the universities according to numbers is much the same in both series. Most show a small diminution—*e.g.*, Vienna from 963 to 877, Leipzig from 502 to 487, Berlin from 290 to 276, Bonn from 126 to 110, and Göttingen from 135 to 127. A proportionally greater falling off is observed at Greifswald from 281 to 229, Graz from 275 to 227, Heidelberg from 83 to 68, and Innsbruck from 99 to 77. On the other hand, an increase took place at Würzburg from 518 to 542, Munich from 310 to 346, Dorpat from 283 to 333, Strasburg from 184 to 204, Zürich from 183 to 190, Freiburg from 117 to 132, and Rostock from 29 to 43. The rapid rise of Strasburg is very satisfactory; but, on the other hand, the small numbers found at such favourite universities as Bonn and Heidelberg are remarkable; while Würzburg, which formerly was chiefly resorted to in summer, has this year increased in numbers even in winter. The preponderance of medical students now occurs in the German empire at Würzburg and Leipzig, the number of medical students at the former having been, in the winter of 1871-72, only 396, and of the latter 436. The total number of medical students in Germany, Austria, Switzerland, and the Eastern Russian Provinces has diminished from 6634 in 1871-72 (when Strasburg did not count) to 6039 in 1874-75—therefore, almost 600, or about 10 per cent. And this is the more remarkable as the total number of students at these universities, which was 22,903 in 1871-72, rose to 24,528 in 1874-75. One of the reasons assigned for this is that a great number of Jewish students now practise jurisprudence, while, as the juridical career was formerly as good as closed to them, the greater portion followed medicine. This especially applies to the Berlin University, where the Jewish element is very strong. The diminution of medical students takes place at Vienna as well as at Berlin, for while they amounted to 1383 in 1871-72, there were only 877 in 1874-75.

During the session 1874-75 the total numbers of matriculated students were—in Vienna 3228, Leipzig 2947, Berlin 1824, Prague 1824, Munich 1101, Breslau 1087, Gottingen 991, Halle 989, Würzburg 951, Graz 834, Tübingen 827, Dorpat 811, Bonn 724, Strasburg 654, Königsberg 623, Heidelberg 584, Innsbrück 527, Münster 472, Greifswald, 465, Jena 442, Erlangen 416, Marburg 409, Giessen 340, Zürich 340, Freiburg 318, Bern 285, Kiel 199, Rostock 158, and Basel 158. If we add to the unmatriculated students those who are mere attendants on the lectures, the numbers are increased to—in Vienna 4223, Berlin 3711, Leipzig 3057, Prague 1904, Munich 1145, Breslau 1112, Halle 1010, and Göttingen 1005.

In the *Wochenschrift* for June 21, the number of students at the Berlin University during the summer session of 1875 is recorded. The entire number of matriculated students amounts to 1724, being just 100 less than in the winter session of 1874-75. But if the different summer sessions be compared with each other, there is an increase; thus, in 1873, there were only 1590, and in 1874 only 1609 students. The 1724 students are thus distributed into the different Faculties:—Theology, 122; Jurisprudence, 567; Medicine, 259; and Philosophy and Natural Science, 776. As compared with former years, the juridical and philosophical students have increased, and the medical and theological have decreased. In the summer of 1873 there were 340 medical students, and in the winter 340; in 1873-74 and the summer of 1874 they diminished to 333 and 299; and now in 1874-75 and summer of 1875 to 276 and 259. Besides the matriculated students, 144 pupils of the military medical school attended the courses; but the number of these pupils has also diminished continuously from 1873, when it was 185. There are also 45 students in dentistry or pharmacy, which subjects are taught in the Philosophy and Natural Science Faculty. There are likewise in attendance, as auditors of the lectures, 1430 students of the architectural and various other academies, making up a total of 3298 attendants upon lectures. Of the 259 medical students, 171 were Prussians, and 17 born in other parts of the German Empire. There were 1 Austrian, 55 natives of other European States, and 12 from extra-European countries. The greatest number of foreigners (44) were Russians or Poles, and 7 students were from America.

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REVIEWS.

Notes on the Treatment of Skin Diseases, with Formulæ for Treatment. By Robert Liveing, M.D., M.A., F.R.C.P. Third Edition. London: Longman, Green, and Co.

This very excellent little handbook on diseases of the skin has now passed into its third edition—a good proof of its great popularity and usefulness. The book is so small, and contains so much information, both in its description of disease and in its formulæ for treatment, that it has justly become a favourite with the student and medical practitioner.

In the present edition Dr. Liveing has added a short chapter on the morbid anatomy of the skin, and has made reference to the use of Goa powder in the treatment of tinea tonsurans, and to chloral camphor in the treatment of that most troublesome symptom, pruritus. There are other important additions which have brought the book up to the work of the present day.

An Address delivered before the Medical Society of the State of California, at its Annual Session, April, 1873. By G. A. Shurtleff, M.D., President. Sacramento: T. A. Springer, State Printer. 1873.

In the absence of any subject of uncommon interest at the time, Dr. Shurtleff's remarks were directed to the division of forensic medicine termed the "medical jurisprudence of insanity." The Address seeks to show that, as the sciences of law and medicine advance, the more will the latter be called in aid of the former, in all cases involving medical questions. The two forms of insanity—*moral insanity* and *mania transitoria*—which in criminal cases there is danger of overlooking where they really exist, and of discovering where they do not exist, are briefly sketched in the Address, and Dr. Shurtleff advocates a revision of the present method of obtaining and delivering medical evidence on insanity in criminal cases, which is well worth the consideration of the profession generally.

Is Torquay Relaxing? The Address from the Chair at the Twentieth Annual Meeting of the Erith House Institution for Gentlewomen of Limited Means suffering from Diseases of the Chest. By C. Radclyffe Hall, M.D., F.R.C.P.L. & E. Torquay. 1874.

The above Address, which was delivered on November 26, 1874, has been reprinted by request from the "Torquay Directory." It principally goes to prove that if Torquay is found to be relaxing, it is by those in whom no organic disease exists, but that to such as are martyrs to pulmonary diseases it affords a retreat at once soothing and healing.

Report of the Medical Commission upon the Sanitary Qualities of the Sudbury, Mystic, Shawshine, and Charles River Waters. Boston (U.S.): Rockwell and Churchill, 39, Arch-street. 1874.

The above Report has been prepared by three physicians, who were empowered to examine and decide upon the comparative desirability, on sanitary grounds, of obtaining an additional water-supply from either of the sources in question. The gentlemen appointed—Drs. C. W. Swan, E. S. Wood, and H. P. Bowditch—have submitted a most ample and careful report, taking as the main points of their research the nature of the soil and configuration of the land where the rivers rise and flow; the colour, taste, and general appearance of the water; the different sources of pollution identical to each river; the density of population in drainage areas, and probable future increase of the same; the chemical composition of the water; and the different opportunities for storage. It is evident from the pages which have been brought to our notice that, in Boston at least, sanitary legislation is very carefully attended to.

Cheerful Words: Sermons specially adapted for delivery before Inmates of Lunatic Asylums, Unions, Workhouses, Hospitals, Gaols, Penitentiaries, and other Public Institutions. Edited by William Hyslop, Proprietor of Church Stretton Private Asylum, Shropshire. Baillière, Tindall, and Cox, 20, King William-street, Strand. 1875.

The above volume, dedicated, by permission, to the Earl of Shaftesbury, is the second of a series of discourses arranged for delivery before that particular section of society which, from defective education or a deficiency of intellect, would fail to comprehend the deeper expositions of religion ordinarily addressed to congregations. Although the subject-matter of Mr. Hyslop's book is scarcely within our province to descant upon, we have no hesitation in recommending it to the notice of the managers of those institutions for which it was specially compiled. The object of the various sermons appears to be the inculcation of hope and resignation, without the admixture of doubt and shadowy speculations of the dreadful which it is sometimes thought right to address to us from the pulpit. Finally, as it appears to advocate the tenets of no particular sect, it may be admitted, without challenge, into any of those establishments for which it is more especially intended, with the comforting assurance that it may do some good, and can certainly do no harm.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, June 12.

The Annual Meeting of the Dublin Sanitary Association.

As a fitting sequel to my letter of last Tuesday, in which I told you of the anniversary meetings of our medical associations, I think it well to write a short account of the third annual meeting of the Dublin Sanitary Association, a body which has been perseveringly at labour for the public weal for more than three years.

The meeting was held in the Molesworth Hall, Molesworth-street, on the evening of Thursday, June 10. On the motion of Lord James Butler, seconded by Dr. H. H. Stewart, the chair was taken by Mr. Jonathan Pim, lately a Member of Parliament for Dublin, and the President of the Association from its foundation. Letters of apology for non-attendance from Viscount Monck, Sir A. E. Guinness, Bart., M.P., Sir Edward R. Borough, Bart., Mr. Ion Trant Hamilton, M.P., Mr. Tufnell (ex-President of the College of Surgeons), and Dr. Duncan (President of the College of Physicians), were read. Mr. R. O'B. Furlong, barrister-at-law, and one of the Honorary Secretaries, then read the report, from which it appeared that the Association now included 272 members, being an increase of 21 compared with 1874. The income had been £144 13s., the expenditure £162 1s. 2d. The Executive Committee had forwarded 347 reports of nuisances to the Public Health Committee of the Corporation, with the following result:—Proceedings to abate nuisance before receipt of complaint, 73; ditto, since receipt of complaint, 99; efforts of the authorities stated to have proved unavailing, 2; complaints referred to other departments, 11; complaints considered by the authorities unwarranted, or only partially warranted by facts, 30; outside the city boundary, 3; no reply as yet received, 129; total, 347. The Executive Committee then alluded to the recent epidemic of scarlatina, which had caused 1083 deaths in the Dublin registration districts. On November 26, 1873, the Committee had urged upon the Public Health Committee the expediency of informing the inhabitants of the then infected districts of the city (two in number), by placard or otherwise, of the imperative necessity for disinfecting the houses, clothing, bedding, etc., of those attacked. No action was taken, and in answer to a second remonstrance, made nearly a year later, the enlightened body which has charge of the health of her Majesty's subjects, the citizens of Dublin, declined to adopt the suggestion of the Sanitary Association on the ground that "it would be productive of unnecessary alarm amongst the public"! The report also referred to several outbreaks of preventable disease in Dublin during the past year, to the inadequate means for conveyance of the sick to hospital, to recent sanitary legislation (including the Artisans' Dwellings Bill), to the delivery of a course of lectures on Hygiene under the auspices of the Association, and to other kindred topics. The concluding paragraph ran thus:—"In concluding this report, your Committee would be glad to be able to hold out to the Association a prospect of early success in the task which it has undertaken. There is, however, in modern times no heroic means of cleansing the Augean stables; it may, indeed, be said that, in the present notorious condition of the Liffey, the Herculean remedy would perhaps be worse than the disease. Your Com-

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mittee trust that, by persevering effort, some gradual amelioration may be effected in the sanitary condition of Dublin, which, as shown by the report of Dr. Burke, Medical Superintendent of Statistics, General Registry Office (*vide* 'Thom's Official Directory for 1875,' pp. 1409-10), compares so very unfavourably with the cities and large towns of England and Scotland. This, too, in the opinion of your Committee, calls for an official inquiry, which they think should be applied for by this Association. A resolution to this effect will be submitted to the meeting. Your Committee believe that good has already been effected, and at all events they do not doubt that the labours of the Association will, if vigorously followed up, lead to considerable success hereafter."

The adoption of the report was moved by Dr. Hayden, who, in the course of an able speech, alluded to a distressing case in which typhus fever proved fatal, probably owing to the patient being obliged to walk part of the way to hospital. Mr. Frederic W. Pim seconded the motion, and in doing so adduced reliable statistics as to the high death-rate in Dublin as compared with London and the eastern districts of that metropolis.

Dr. Robert McDonnell moved, and Mr. John R. Wigham seconded, the next resolution:—"That the following do constitute the officers and committee for the year 1875-6:—*President:* Jonathan Pim. *Vice-Presidents:* Sir Edward R. Borough, Bart., J.P., D.L.; Lord James W. Butler; Fleetwood Churchill, M.D.; Edward Gibson, Q.C., M.P.; Sir Arthur E. Guinness, Bart., D.L., M.P.; Ion Trant Hamilton, D.L., M.P.; the Right Hon. Viscount Monck, G.C.M.G.; George H. Porter, M.D., F.R.C.S.I., Surgeon-in-Ordinary to the Queen in Ireland; the President of King and Queen's College of Physicians, Ireland; the President of the Royal College of Surgeons, Ireland; Wm. Stokes, M.D., F.R.S., etc., Physician-in-Ordinary to the Queen in Ireland, and Regius Professor of Physic in the University of Dublin; Lord Talbot de Malahide; Colonel the Right Hon. T. E. Taylor, D.L., M.P. *Executive Committee:* E. F. Beatty; C. P. Cotton, C.E.; F. R. Davies, K.J.J.; J. M. Finny, M.D.; Thomas W. Grimshaw, M.D.; Rev. Alfred T. Harvey, M.A.; Thomas Hayden, F.K.Q.C.P.I.; Joseph E. Kenny, M.D.; J. J. Digges La Touche; John M'Evoy; J. W. Moore, M.D.; D. Toler T. Maunsell, M.B.; George R. Price; Thomas Purcell, L.K.Q.C.P.I.; Robert Sexton; Abraham Shackleton; Edward W. Smyth; Albert O. Speedy, L.R.C.S.I.; H. H. Stewart, M.D.; Rev. James Walshe, B.D.; W. Dudley White, L.R.C.S.I.; Wm. White, sen., City Coroner. *Hon. Treasurer:* Wilfred Haughton, 28, City-quay. *Hon. Secretaries:* Robert O'B. Furlong; Chas. F. Moore, M.D., F.R.C.S.I.; John Todhunter, M.D.; Frederic W. Pim. *Assistant Secretary:* Edward Spencer. *Bankers:* Messrs. Boyle, Low, Murray, and Co., 35, College-green."

The third and most important resolution was moved by Dr. Grimshaw, seconded by Mr. E. F. Beatty, barrister-at-law, and adopted. It was—"That the evidence furnished by the recently published reports of the Census Commissioners for 1871, the returns of the Registrar-General for the past ten years, and the report upon the sanitary condition of Dublin by Dr. Burke, Physician to his Grace the Lord-Lieutenant, and Medical Superintendent of Statistics at the General Registry Office, prove that the death-rate of the city of Dublin is excessive, and has continued to be so for a considerable period; and further, that, according to Dr. Burke's report and the experience of this Association, the sanitary condition of the city is unsatisfactory: the Committee are hereby directed to take such steps as may be necessary to obtain a public inquiry into the causes of this excessive death-rate and the present unsanitary state of Dublin."

Lord James Butler moved, and Mr. R. O'B. Furlong, barrister-at-law, seconded the motion—"That this Association having learned with deep regret of the resignation by Dr. Churchill of the chairmanship of the Executive Committee, consequent on his retirement from the practice of his profession and intended residence in the country, desires to express its gratitude to him for the valuable services he has rendered to the cause of sanitary reform in Dublin, and for his constant and untiring efforts on behalf of this Association." This resolution was carried with acclamation.

Dr. John W. Moore proposed a vote of thanks to the Press. Mr. Michael Cavanagh, a working man, seconded the resolution, and said that he was glad to bear testimony to the feeling of thankfulness entertained by working men for the efforts that were made by that Association. Perhaps the Public Health Committee might find it difficult to give them air, but was it too much to expect them to see that every house had a sufficient supply of water? It was the habit of the Corporation, in order, he supposed, to prevent waste, to cut off the water at times from the public fountains, from which alone many people could obtain a supply. This was often done, too, just before the dinner-hour, and he had himself experienced the difficulty of getting his dinner cooked on that account. He also complained that there were houses in lanes in that very parish where the meeting was held which were in an insanitary state, but which were never visited by the Corporation inspectors to see whether they got even a little whitewash. The resolution was adopted, and, after the passing of a vote of thanks to the Chairman, the proceedings terminated.

GENERAL CORRESPONDENCE.

Mr. MAUNDER'S OPERATION FOR RUPTURED PERINEUM.

Letter from Dr. G. G. Bantock.

[To the Editor of the Medical Times and Gazette.]

Sir,—There is nothing new in the suggestion of Mr. Maunder "Concerning the Operation for Ruptured Perineum," published in the last number of the *Medical Times and Gazette*. Some five or six years ago, I performed my third perineal operation, assisted by Dr. Junker and others. The case was complicated by a large rectocele, and after extending the vivification to a point high up on the posterior vaginal wall, I put in about six or seven sutures of fine Chinese silk, such as is used by Mr. Spencer Wells in ovariotomy for ligaturing vessels, tying them in the vagina before completing the operation in the usual way. The result was complete success. I have also employed *internal* sutures in the ordinary operation, *i.e.*, when there is no rectocele; as it is not always possible otherwise to keep the vaginal edges well together. As the illustration is drawn, such sutures would be absolutely necessary to avoid gaping of the wound, because of the position of the middle deep suture, viz., in the middle of the wound. At the Samaritan Hospital, Mr. Spencer Wells, Mr. Thornton, and myself are in the habit of passing the middle suture in the line indicated by Mr. Maunder's first catgut suture. Even then, two or three internal superficial ones are sometimes—I may say often—desirable in order to obtain complete union, and thus secure a thick perineum.

While on this subject, I may mention that I have for many years entirely discarded the quilled sutures, because of the sloughing that so often—almost invariably—ensues; and for this further reason, that when the sutures are cut through the rebound of the parts tends to break down the scarcely united tissues. I have, instead, employed simple sutures, formerly of stout silver wire, but latterly of stout silkworm (salmon) gut. The latter material I find superior to anything else I have tried, as it only requires softening in water before use. (For vesico-vaginal fistula it is better to stain it, as it is thus more easily seen.) My first case, which was done with the quilled suture, was the least successful, as there ensued considerable sloughing in the track of each suture (and it is impossible to confine its action within these limits), so that the resulting perineum was thin, and there remained a small perineo-vaginal fistula. I have repeatedly seen cases utterly ruined by sloughing. I now get a thick perineum, and seldom see any suppuration. The sutures, moreover, may be left in for five or six days. I am, &c.,

George Granville Bantock, M.D.

44, Cornwall-road, Westbourne-park, W., July 13.

Letter from Mr. J. Knowsley Thornton.

[To the Editor of the Medical Times and Gazette.]

Sir,—In your journal of July 10 Mr. Maunder makes "A Suggestion concerning the Operation for Ruptured Perineum, etc." This consists in the use of internal superficial sutures of catgut. As Mr. Maunder seems to consider that in making this suggestion he is advancing something new, will you permit me to state that I have repeatedly during the last two years seen Mr. Spencer Wells use similar internal superficial sutures of fine silk, and I believe he had used them before I saw him operate; and I myself have used catgut

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sutures in more than one case, not only where Mr. Maunder advocates them, but also in the rectum when the rupture has been completely through the sphincter, and with the most satisfactory results in both situations, no more being heard or seen of the sutures after their introduction.

I am, &c., J. Knowsley Thornton.

83, Park-street, Grosvenor-square, W., July 13.

A USELESS REMONSTRANCE.

Letter from Surgeon-Major Frede. Robinson.

[To the Editor of the Medical Times and Gazette.]

Sir,—In common, I presume, with some other members of the profession, I have received, from time to time, numbers of a certain anti-contagious disease periodical. As an act of courtesy I have to express my acknowledgment. But, I would add, has it entered the mind of the editor (or publisher) that printed matter having the appearance of an ordinary newspaper may readily be opened by ladies or other members of a physician's family during his absence?—that thus the very unsavoury contents of a journal wholly occupied by a subject which commends itself to the consideration of a few strong-minded women may unwittingly be brought to the notice of less advanced members of the sex? I would fain hope that this aspect of the matter has not entered the mind of the individual to whom I am indebted, and that, now I make mention of it, no further need will arise for a prohibition to my household, hitherto quite unnecessary.

As to the main subject—the efficacy or otherwise of the present Act—I venture to assert that but one opinion is held by medical officers in the army, inclusive, emphatically, of those serving in the Guards. The latter only deplore the absence of its operation in London, by which the hospitals of the Foot Guards there are crowded by inmates from syphilis, the efficiency of the army is seriously impaired, and the cost to the nation, by loss of young soldiers paid for, well fed, trained, and equipped, only to be ejected again from the service as invalids with ruined constitutions, made excessively great. The further consequences, in a higher aspect of the question, still more deplorable, are sufficiently apparent to the medical officers of dispensaries and hospitals for women and children.

How a doubt can be raised as to the great utility of the present Act, limited as it unfortunately is in extent of application, seems incredible. Let me add one recent fact to the mass of testimony hitherto adduced.

A battalion of this regiment came from Windsor about the middle of April. It was found, on careful inspection, to be perfectly free from venereal disease. A fortnight afterwards some half-dozen cases were detected, and sent to hospital. This was a prelude to a rapidly increasing ratio of disease, and at the present time no less than twenty-nine men are under treatment, many with the worst form of syphilis.

It is a matter of some satisfaction to me now to witness the immunity of the Guards at Windsor from enthetic disease, inasmuch as sixteen years ago, when quartered there, I ventured to bring to the notice of the general officer commanding the Brigade the great need for preventive measures—alike on the grounds of economy to the State, humanity to fallen women, and preservation of innocent children. At the time to which I refer, three-fourths of the sick were affected with syphilis.(a) My proposal was not entertained, it being considered impracticable. I have lived, however, to witness the adoption, many years after, of legislative measures almost identical with those advocated by me. Any of your readers who may feel interested in the matter can refer to the issue of the *Medical Times and Gazette* for March 12, 1859, where the communication and your editorial endorsement of my views may be found.

I have already trespassed too greatly on your space, and unwittingly been led on to defend an enactment which, in the estimation of the profession and of unbiased educated persons, simply needs no defence, either on the ground of economy (life and money), of humanity, and last, but certainly not least, of Christian philanthropy.

I am, &c., Frede. Robinson, M.D.,

Surgeon-Major 1st Battalion Scots Fusilier Guards.

Claverton-terrace, St. George's-road, S.W., June 21.

(a) My senior colleague, Surgeon-Major Bostock, whose recollection dates further back than my own, remembers the proportion of syphilitic cases at Windsor to be as great as sixty in a battalion of some 700 to 800 men.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 7.

W. O. Priestley, M.D., F.R.C.P., President, in the Chair.

Adjourned Debate on the Relation of Puerperal Fever to the Infective Diseases and Pyæmia.

Dr. Fordyce Barker, of New York, said: I feel that I have no right to waste any of your time in personal topics, except briefly to express my grateful appreciation of the honour that I have received at your hands, and to appeal to your courtesy to excuse such deficiencies as may be charitably ascribed to weakness of the vocal organs or to that embarrassment which a stranger must feel in addressing such a body of obstetrical men on such a topic as puerperal fever. I may be permitted to say that this discussion is now watched with the greatest interest by your brotherhood on the other side of the Atlantic; but, as yet, this discussion does not appear to have led to that happy result spoken of by the Psalmist, that "maketh men to be of one mind in an house." I shall aim, in the remarks that I am about to make, to confine myself closely to a discussion of the questions proposed to the Society, and to state my opinions, and my reasons for holding such opinions, in the most terse, compact language compatible with clearness. If these opinions seem to be in antagonism with a great majority of those which have been expressed in this discussion, I ask that they may not be regarded as partisan in their tone, but as a presentation of views necessary for a full and comprehensive study of the subject. I ask, for such arguments as may be urged, that candid analytical sifting of evidence which is requisite for sound decision as to what is the true answer to the several questions now before us. I concede to all, and I beg all to concede to me, that it is the truth, and not forensic success, which is sought for by us all who speak in this discussion. Here permit me to say that if, in the excitement of speaking, I should so far forget myself as to exceed the limit of time which is kindly assigned to me, I trust the President will not hesitate to give me a hint, which will be most kindly received, or that the Society will adopt the usual means resorted to in public assemblies in this country to suppress a speaker when he becomes a bore. Of the six questions proposed, the second and third only admit a direct categorical answer of Yes or No, and this will be one or the other, depending upon the answer given to the first question. If the first be answered in the affirmative, the second must be answered in the negative, and the third in the affirmative; or the answers may be exactly the reverse. I suppose the meaning of the first question is clearly defined by the second and third to be, whether there is a disease peculiar to women in childbirth, never met with under any other circumstances, as distinct as typhus or typhoid fever, scarlet fever, measles, or small-pox. I cannot think that the proposer of these questions regards it as necessary that those who believe that puerperal fever is a distinct essential disease must therefore accept all the qualifying phrases of the first question. For example, "distinctly caused by a special morbid poison" is one of the qualifying phrases. Is this a necessary characteristic of a distinct disease? Has science yet determined the special morbid poison which causes typhoid fever? When a disease is induced by contagion or infection, then it is "distinctly caused by a special morbid poison." If the phrase had been, "often caused by a special morbid poison," I should have accepted it as true of puerperal fever, as I believe it to be true of diphtheria and some other diseases. It is just this phrase which seems to have debarred Dr. Farre and Dr. Richardson from answering the first question in the affirmative. And here I wish to remark that it seems to me that the idea involved in this phrase has been a great barrier to a clear conception of the disease, and has greatly contributed to the obscurity and ambiguity of its discussion. It implies that puerperal fever cannot be properly ranked as a distinct disease unless its cause can be proved to be a unit, "a special morbid poison." But this test is not demanded for many other affections which the profession universally accept as distinct diseases. There are many such which originate from multiple causes, so far as science has as yet been able to determine, of which I may instance typhoid fever, diphtheria, erysipelas, and rheumatism. The distinct character of a disease is determined by the evidence derived

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from three sources—the causes, the clinical phenomena, and the pathological anatomy. Some diseases give us proof of their distinctness by evidence derived from all three of these sources; others from only two; others from one alone. Directly in connexion and associated with the idea implied in the phrase, "distinctly caused by a special morbid poison," is another idea which fallaciously colours and obscures much of the reasoning on puerperal fever,—and that is, that identity of cause must be followed by identity of result. In other words, a given cause—a special morbid poison if you please—known to develope a special distinct disease, must always produce this particular disease. In a wealthy family belonging to my *clientèle* a year ago I saw a lady dangerously ill from pyæmia, in consultation with Dr. Sayre, who was attending her for a traumatic injury. At our suggestion the house was carefully examined by a plumber, but no defect was then discovered which could explain the source of the blood-poisoning. Very soon three members of the family were severely ill from a typho-malarial fever. As soon as the conditions of the patients would permit their removal, I insisted that the walls of the rooms covering the plumbing should be torn down, when it was found that there was a defect in the leaden waste-pipes sufficient to permit the noxious gases to permeate the house, but not sufficient to cause an escape of fluids to stain the walls of the rooms. During the past winter, I attended a gentleman with severe typho-malarial fever. His residence was in a large house, constructed on the plan of the French apartments, which was entirely occupied by families of refinement and abundant means. During the time of convalescence of this gentleman, diphtheria appeared in another family in this apartment-house. I saw the first child attacked, in consultation with Dr. Morris. Subsequently, the father and two other children, one of whom died, were severely ill from diphtheria. It is worthy of mention that, while these were ill, the wife and mother was removed into another house, and she was confined with her fourth child, under the care of Dr. J. O. Stone, one of our most prominent physicians, and her convalescence was not impeded by any puerperal disturbance from either diphtheria, typho-malarial, or puerperal fever. On examination, it was found that the waste-pipes in this house were in precisely the same condition as that of the house that I have just spoken of. Who can doubt that the pyæmia, the typho-malarial fever, and the diphtheria were all caused by the same "special morbid poison"? At the last meeting of this Society, Dr. Playfair related some facts which recently occurred at Notting-hill, where puerperal septicæmia in a wife, "from which she barely recovered with her life," and diphtheria in the husband, "from which he nearly died," seem to have been due to the same causes which I have mentioned. I ask you to note the language used by Dr. Playfair, for I shall again have occasion to refer to this. He says, "Who could rationally disbelieve that those two diseases were produced by the same septic poison?" One he names (because of his theory of its cause) septicæmia; the other, produced by the same cause, he names (from its clinical phenomena) diphtheria. The other qualifying phrase, to which I will simply allude, but which time will not permit me to discuss in detail, is the following: "as definite in its progress and the local lesions associated with it" as certain specified diseases. This qualification involves two distinct and different points—the clinical history, and the pathological anatomy. I will only say that, in my judgment, these several diseases mentioned differ in degree as to their definiteness in progress and the definiteness of their local lesions; and, consequently, puerperal fever cannot be compared or contrasted with them as a group in these particulars. I will now give my reasons for believing that there is a distinct disease which may be properly called "puerperal fever." I think the definition given in the "Nomenclature of Diseases" emanating from the College of Physicians is absolutely perfect: "a continued fever, communicable by contagion, occurring in connexion with childbirth, and often associated with extensive local lesions, especially of the uterine system." It is a disease which presents a group of general symptoms, independent of local inflammations, resulting from the absorption of some poison into the system. It is needless for me to discuss this point here, because it is evident, from all that has been said, that "localism" or "Broussaisism" has no status in this Society. Those who would call this disease septicæmia or pyæmia are in agreement in this point with those who call it a fever. We can arrive at truth in medical discussion only by using language accurately. There can be no accuracy of idea without accuracy of language. It is the established usage of standard authorities in medicine to designate as fever all those diseases which result from the absorption of some poison which produce certain morbid blood-changes, and give rise to certain general characteristic symptoms, unless the specific poison is known. Under the denomination of "fever" are properly and legitimately included not only those diseases which are severally called typhus, typhoid, relapsing, remittent, intermittent, and yellow fever, but all the infectious constitutional diseases which either occur epidemically or endemically. When the specific poison is known, which causes the morbid blood-changes and induces certain general characteristic symptoms, the disease is named from that poison; and so we have the accepted terms, in medicine, of uræmia, septicæmia, pyæmia, and others of like character. I will here only allude to the fact that none of this latter class are known to be contagious or to occur as an epidemic. The point we are trying to settle is not a question of name, except so far as this—I doubt not that we will all agree that the name given to a disease should be significant and appropriate. The gist of the matter, stripped of its superfluous and obscuring elements, lies in the inquiry whether there be a disease which attacks puerperal women, and only puerperal women. A necessary preliminary is to ascertain from what sources we are to obtain our evidence by which we can settle the question whether there be a distinct disease peculiar to women in childbirth. I think we will agree that this evidence must be derived either (1) from the causes of the disease; (2) from the clinical phenomena; or (3) from the pathological anatomy. I do not think that we are able at the present day to derive much information from studying the causes of this disease in settling this question, any more than we can in settling the question whether typhoid fever, relapsing fever, or yellow fever are distinct diseases. In a sanitary point of view I think a study of the causes of this disease to be of vast importance, and for this reason: I esteem the paper which was read by Dr. Braxton Hicks before this Society in 1870 as a most valuable contribution. If a puerperal woman, not protected by the immunity of a previous attack or by idiosyncrasy, be exposed to the poison of scarlet fever or of any other infective continued fever, I have no doubt that she will have scarlet fever or whatever specific disease she may absorb the poison of. The puerperal state does not protect her from the influence of such poison. Dr. Hicks, as I understand him, does not claim that puerperal fever is only scarlet fever in the puerperal woman, but names this as one of the causes in the same category with erysipelas, diphtheria, mental emotions, etc. I think the evidence is conclusive to the minds of a great majority of the profession, established by numerous incontestable facts—facts observed not only in sporadic cases, but in very many epidemics, which have occurred not in hospitals or cities alone, but in epidemics which have ravaged large tracts of country in sparsely-settled rural districts—that the poison of erysipelas may cause, in women after childbirth, a distinct disease which some of us choose to call puerperal fever, and that the poison of puerperal fever, if absorbed into the system of a man or a child, will cause in that man or child erysipelas. But the clinical phenomena and the anatomical lesions which result from this common poison are so diverse as to warrant us in regarding them as two distinct diseases. Of course it is quite needless for me to refer to the medical history of Great Britain for proofs of this assertion, but I may be permitted to refer to that of my own country for most striking corroborative evidence. A reprint of Nunneley on Erysipelas was published some thirty years since with notes by Dr. John Bell, of Philadelphia, in which he gives most striking facts in regard to several epidemics in the United States, in which erysipelas and puerperal fever have appeared together. I will also refer to a valuable monograph on "Erysipelas and Childbed Fever" by Dr. Thomas C. Minor, of Cincinnati, published during the last year, and which I had the pleasure of reading on my voyage over. The work is based on a most painstaking and laborious study of the vital statistics of the census of the United States for 1870; and of a puerperal fever epidemic which prevailed in South-Western Ohio in the winter of 1872. The work is well worthy of perusal by all who assume to influence medical opinion on the subject of puerperal fever. This careful study of these vital statistics by Dr. Minor does not appear to show any connexion between the typhus fever, scarlet fever, septicæmia, and pyæmia, with puerperal fever. Epidemic scarlatina was very

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seldom associated with an outbreak of epidemic puerperal fever, but epidemic erysipelas was "invariably associated with an outbreak of epidemic puerperal fever, or *vice versâ*." I have but a single remark to add in regard to the question of causes of this disease. The argument of those who deny that puerperal fever is a distinct disease, rests mainly on the ground that the disease so called is the result of septic poisoning. Septic poisoning is a term now used very frequently and somewhat vaguely, but even those who contend that there is, properly speaking, no distinct disease of puerperal fever, do not claim that all the resulting disease from septic poisoning is one and the same thing, and that this disease should be called septicæmia. Is there anything improbable or unphilosophical in the hypothesis that septic poison, acting on a system in a peculiar state, such as never is found in the human system under any other conditions—the state which has been so graphically described in this discussion by Dr. Richardson and Dr. Farre—results in a distinct disease, which never is found except when the system is in this condition? Has any proof been offered by anyone, anywhere, that epidemic and endemic influences, nosocomial malaria, contagion, or infection does not develope this poison in such a system, and result in a distinct disease? We must find the answer in a study of the clinical phenomena and the anatomical lesions of the disease. If septic poisoning never occurs as an epidemic—I do not say endemic—among those who are suffering from traumatism; and if it never developes contagion in this class of subjects, and if septic poisoning in puerperal women does occur as an epidemic, and is contagious and infectious, are not these elements sufficient to warrant us in regarding the two diseases as quite distinct? The advocates of the septicæmia theory of puerperal fever, both on the Continent and in this country, have seen that they must accept this issue, and consequently they are driven to deny that puerperal fever ever occurs as an epidemic, or that it is contagious or infectious. One of your speakers at the last meeting said, "I do not believe that there is any specific condition justifying the name of puerperal fever," and he logically adds, "nor do I believe that there is any special miasm arising from the puerperal patient capable of being conveyed to another patient, nor do I think that there is any evidence whatever to show that there has been an epidemic of puerperal fever in the strict sense of that word. The author of the "Address in Obstetric Medicine," before the British Medical Association last year, said in that address, "I have not been able to find anything worthy of the name of evidence to prove its epidemic prevalence at any time or in any large district." The same author, in his work on the "Mortality of Childbed and Maternity Hospitals," says, "I feel certain, and I believe I can prove, that an epidemic of puerperal fever never occurred." He also denies with equal positiveness that the disease is ever contagious. Now, if during certain years or seasons puerperal women in a given territorial district die of a disease, call it puerperal fever, puerperal pyæmia, or puerperal septicæmia, in numbers fifty-fold or a hundred-fold greater in proportion to the births than they have in preceding years or than they do in following years, I think the profession generally would call this disease an epidemic. When the mortality from puerperal disease—call it puerperal fever or puerperal pyæmia—in that part of New York which is in the best sanitary condition of any part of the city, and in which are the residences of the most wealthy part of the population, in four months of the year 1873, is twenty times greater than it had been for twenty-five years before, and the percentage of deaths in proportion to births is more than double what it is in the parts of the city where the poor women are crowded in tenement-houses, and quadruple the proportion of deaths during the same period from the same cause in the lying-in hospitals, I think we are justified in saying that an epidemic exists in this part of the city. If in Cincinnati, Ohio, in 1873, the number of deaths from puerperal fever was 122, while the annual average of deaths from this cause for five previous years was 13·6, I think most men would say that the disease was epidemic that year. In view of all the similar facts abounding in medical literature, I will not borrow a phrase from one of the speakers at the last meeting, and say that those who deny that this disease ever occurs as an epidemic "must have minds which I believe to be not open to conviction," but I will say that such persons must attach a subtlety of meaning to the word epidemic, not consonant with the common sense. Please to observe that I use the article, and say *the common sense*; as otherwise the remark might seem discourteous. I will not detain you now by a discussion of the question of contagion, for all have undoubtedly fixed opinions on this point. Those who regard puerperal fever as a distinct disease believe it to be "communicable by contagion," while those who believe it to be only pyæmia or septicæmia in women after childbirth do not consider the disease contagious. Can a woman after childbirth be exposed to the danger of receiving the poison which produces typical septicæmia in larger doses than when she has retained within her uterus a portion of decomposed placenta? If puerperal fever is septicæmia, would not the disease under these circumstances appear in its most virulent forms? But we all know that this is far from the fact. One very important idea in this connexion was first distinctly enunciated by Dr. Barnes in this Society some years ago, and that is that septicæmia in puerperal women is not actively contagious. "When arising from decomposition of the placenta, it generally began and ended with the patient attacked." During this discussion Dr. Braxton Hicks has expressed a very similar sentiment, and I feel quite sure that all clinical observers will coincide with this statement. I will submit for your examination the following propositions:—(1.) The clinical phenomena of puerperal fever are quiet different from those which are met with in surgical septicæmia or pyæmia. (2.) These affections do occur in puerperal women, and the result is a disease which does not constitute a continued fever "communicable by contagion." (3.) When either of these affections complicate puerperal fever, they modify the clinical phenomena by symptoms which can be distinctly appreciated and described by any close observer. I will not take up your time by giving the evidence on which these propositions are based, because I think that this has been done in a work "On the Puerperal Diseases," which it will be indelicate for me to refer to in more definite terms. I will add only a few words in regard to the pathological anatomy of the disease now under discussion. On the first evening of the discussion, Dr. Richardson argued that there were no local lesions "which would lead us in the dissecting-room in any case to say this was a case of puerperal fever, as we should say this was a case of scarlet fever, or of typhoid, or of typhus fever." I think it would be impossible to prove by the anatomical lesions that scarlet fever, or typhus fever, or relapsing fever are distinct diseases. A child is put in bed at night apparently well. A few hours after it is awakened by vomiting, it is very delirious, its pulse is very rapid, and the temperature is six or seven degrees higher than is normal, and the child dies in the early morning without the slightest eruption on the skin. No anatomical lesions can be found in the dissecting-room to characterise the disease. But scarlet fever is epidemic in the neighbourhood, or another child in the same family is taken ill with well-marked scarlet fever within a few hours after the death, and any physician would feel warranted in registering the cause of death as scarlet fever. Such cases are not very rare, and I dare say have been met with by several gentlemen now present. Would the most able of the recent authorities on the continued fevers, would Sir William Jenner, or Murchison, or Hoffman, or Lebert insist that no one would have a right to register a death as resulting from typhus fever, or relapsing fever, unless certain characteristic anatomical lesions are found in the dissecting-room? All of these writers declare that these diseases have no pathognomonic lesions. It was asserted by the author of the "Address in Obstetric Medicine" that "pathologists believe that they have torn to tatters the view" that the disease we are now discussing "is an essential fever peculiar to puerperal women, as much a distinct disease as typhus or typhoid." When? How? Where? Show us the proof. Is there evidence that such pathologists have studied the disease anywhere except in hospitals and large cities, where it is very probably complicated with septicæmia or pyæmia? Of what value would be the researches of the ablest pathologists of Germany or England, on questions relating to the pathology of yellow fever, if such pathologists had no opportunity of studying this disease except in Germany and England? Have Spiegelberg, or Schneider, or Schmedeberg, or Mayrhofer, or Orth, or Heiberg, or Olshausen, or Fehling, or Cohnstein, or Biersky, or Von Haselberg ever studied puerperal fever as it is found in epidemics in rural districts, where pyæmia and septicæmia are rarely met with? German is a difficult language to acquire, and it gives an attractive appearance of learning to introduce such names, even if nothing be quoted from them. I am familiar with their writings, and would not undervalue the merit of their

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researches. But, so far as the elucidation of the question now under discussion is concerned, I think it is of equal importance that we should carefully study, for the clinical phenomena of the disease, your English classical writers—Hulme, Leake, Kirkland, Clarke, Gordon, Hey, Armstrong, and Robert Lee. The hint on this point thrown out by Dr. Farre at the last meeting seemed to me most appropriate and timely. What progress is made in science? How do "we free ourselves from error," or gain in scientific precision or accuracy of description, in giving to this disease a new name—"pyæmia," as Dr. Duncan would call it; while he confesses that it has no etymological signification in this disease, and, in fact, has no definite positive meaning? What propriety is there in giving to an obstetrical disease a name significant and appropriate to a surgical disease, unless it can be demonstrated that the two diseases are identical in their clinical phenomena and their anatomical lesions? The burden of proof to show this identity belongs to those who would call the disease puerperal septicæmia. Some think that the negative has already been established. I have neither the time nor the voice to discuss the other questions which have been proposed. With my warmest thanks for your courtesy in listening to me so patiently, allow me to close with the suggestion that it may be well for all of us who discuss puerperal fever to remember the exhortation of Oliver Cromwell when he lost patience with a Scotch assembly: "I beseech you, brethren, by the mercies of God, conceive it possible that you may be mistaken."

(To be continued.)

NEW INVENTIONS.

THE FLEXIBLE CLINICAL STETHOSCOPE.

The many difficulties that attend the use of the ordinary stethoscope in dispensary practice, and especially the inconvenience and dangers connected with its application in some of the most urgent cases among the lower classes, would seem to have suggested to the inventors of this instrument the idea of lengthening the tube indefinitely, while they secured the proper application of the chest and ear-pieces by various ingenious modifications. The result is that they have produced a stethoscope which promises to be not only convenient, agreeable, and safe, but superior to the common instrument under ordinary circumstances in several important respects.

The principle on which it has been constructed is that air is the conducting medium in all tubular stethoscopes; and that the law of acoustics, that the intensity of sound varies inversely as the square of the distance, does not apply to tubes. The stethoscope, accordingly, consists of a piece of silk-covered tubing, two feet in length, of nearly uniform calibre;

this being provided at the one end with an ear-peg, and at the other with a chest-piece. The ear-peg is made of a well-polished piece of vulcanite, which may accurately fit the external opening of any ear, without entering it and causing tinnitus. It presents a minute lateral perforation, which is intended to prevent the air from impinging unpleasantly upon the membrane when the chest-piece is moved, and to relieve the confusing noise produced on its application. By leaving the perforation uncovered, the observer avoids these inconveniences, and when the instrument is applied and he is about to listen, he closes the aperture with the finger, and the sounds are straightway transmitted to the ear. The chest-piece is screwed to the tube, and so its shape and size may be varied at pleasure. The same may be said of the length of the tube. Besides the advantages already mentioned, the following may fairly be claimed for this stethoscope:—1, the ease with which patients may be auscultated in otherwise inaccessible positions; 2, the comparative safety from infection; 3, the possibility of carefully regulating the pressure on the chest-piece, especially in the case of aneurisms, bloodvessels, etc., and in children and sensitive patients; 4, the construction of the ear-peg; 5, the ease with which the observer may use his eye and ear at the same time.

The stethoscope has been designed by Drs. Reid and Morison, of Canonbury, and constructed by Messrs. Arnold and Sons, Smithfield.

OBITUARY.

JAMES FERNANDEZ CLARKE, M.R.C.S.

We announced with great regret last week the death of our accomplished contributor, James Fernandez Clarke. There are probably few men whose career has been so full of varied and interesting experience, or who have been so well known to the profession and the public. Short of stature, of genial and pleasant address, and great mental and bodily activity, he was sure to be recognised at every scientific or political gathering at which our professional brethren were assembled. He was, as a practitioner, attentive, humane, and decided. He was beloved by the neighbours surrounding the neat and modest house in the once fashionable Gerrard-street, where he lived for many years; whilst his pen gave pleasure to the remotest circles from the homely common-sense and the shrewd observation with which he recounted his singularly large and varied experience of the medical world. His papers, published in our columns, and reprinted under the title of "Autobiographical Recollections of the Medical Profession," will always be referred to as vivid and authentic memorials of the history of the profession.

Mr. Clarke was born in 1812, at the town of Olney, "in the valley of the Ouse, about five miles due north of Newport Pagnel," a place whose memory is kept alive by the fact that Cowper, the poet, lived there for many years, and that the famous John Newton, who, from being a slave-hunting Liverpool buccaneer, became a pious clergyman, was the curate of the place, and, in conjunction with Cowper, published a series of hymns known as the "Olney Hymns," some few of which are familiar enough, being found in almost every collection.(a) We mention this because it is one of the things that influenced Clarke's character and career. He was descended from a family of some pretensions to opulence, and entitled to bear a coat of arms. His father and grandfather, moreover, were great and prosperous lace merchants, at a time when hand-made lace was produced in abundance in Olney and the surrounding villages. But no point in his ancestry was dwelt on with so much pride by Clarke as his descent on the mother's side from her grandfather Perry, the miller of Lavendon, a friend of Cowper's, who occasionally held forth at Nonconformist meetings. He was proud of his native place as a centre of Nonconformist teaching and missionary effort, and, when a schoolboy in London, used to go every Sunday to hear Edward Irving, a man whose eccentricities, or even insanity, had not then damped the effect of his weird physiognomy and fervid eloquence.

Early in life, Clarke was removed to London, and was a pupil at a school in the then pleasant rural village of Walworth. Next came the choice of an occupation for life, and in this his destination was fixed by one of the circle of friends who had surrounded his childhood at Olney. Amongst the Nonconformist ministers who visited that place was Mr. Churchill, who for more than half a century ministered at Thames Ditton. His son was John Churchill, then recently established as a medical bookseller in Princes-street, Leicester-square, and beginning to bring out that series of works which has since become so well known. "In the year 1827," says the venerable Mr. Churchill in a memorandum he has furnished to the writer, "a gentleman I had for some time known as connected with the *Sun* newspaper, asked my advice as to placing out his orphan nephew James Fernandez Clarke, who was leaving school." At that time Mr. Churchill was bringing out an excellently illustrated work on medical botany, in four volumes, under the joint authorship of his brother, James Morss Churchill, surgeon, of Park-street, Grosvenor-square, a genial and hospitable man, and Mr. John Stephenson, a general practitioner in High-street, Bloomsbury. It was to Stephenson that Clarke was assigned as an apprentice, and there he began professional work, not very happily. His master kept an open surgery, but really spent his time in rambling about Highgate and Coombe Wood, in search after botanical and other natural history specimens. He was a bachelor, an ardent naturalist, profound scholar, very parsimonious, silent

(a) For instance, "God moves in a mysterious way," "God of my life," "How sweet the name," etc.

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and abstemious, ate but two meals a day, to which he sat down in his shirt-sleeves, and was astonished at young Clarke's healthy appetite for plain food, such as bread and potatoes.

Luckily, Clarke did not remain here very long, but was made over to Mr. Charles Snitch, a surgeon in general practice in Brydges-street, Covent-garden. It was under this roof that Clarke's character was formed. He had plenty of work, and was kept hard at it. He was lucky enough to enjoy the run of Cadell's books (Cadell was then a publisher, and kept a circulating library in the Strand): thus he became well acquainted with modern literature. His master was one of the surgeons to the newly-appointed police (or Peelers or Bobbies, as they were called, after their founder, Sir Robert Peel), and thus he got an insight into the surgery of wounds and bruises, got a still more valuable insight into character, and was witness to the proceedings in at least one *cause célèbre*, for he assisted at the dissection of the Italian boy who had been murdered by Bishop and Williams, and sold to the dissecting-room of the newly established King's College. At that time, too, people lived in their houses of business; London was not then, as now, a city of "offices," frequented in the daytime by people whose homes are in the suburbs, but authors, actors, and newspaper editors and other celebrities in abundance were domiciled within a half-mile circle from Covent-garden. Clarke evidently had opportunities for both private and professional intercourse with the men who lived by literature and the stage, and thus began that familiarity with matters artistic and theatrical, and probably that readiness in reporting, by which he was distinguished in after life. Moreover, he seems to have come into contact with many of the most eminent physicians and surgeons of the day. At that time, as he well describes it in his admirable "Autobiographical Reminiscences," the practice of an apothecary or surgeon-apothecary was generally confined to his own neighbourhood; his remuneration was derived from the sale of medicine, of which the quantity sent out was enormous, and in most cases of consequence the aid of a consultant was had as a matter of course. Nevertheless, in those days some surgeon-apothecaries contrived to save or make ample fortunes.

All these things have now passed away; equally so have the medical schools, in which the apprentice who had been taught the practical work of life during five or six years in his master's shop and surgery, was "finished off" by a season or two of the dissecting-room and "walking the hospital." Forty years ago the best teachers were men who made it their business to teach, and lived by it, and who set up schools which were their own property—rough, coarse men, many of them, who naturally encouraged the gin-and-water and rowdy system, which for a time made the character of "medical students" disreputable. Chief among such schools was Dermott's in Little Windmill-street. The teaching was thorough, but the surroundings coarse. The teacher of medicine, midwifery, and forensic medicine was Michael Ryan, an Irish physician of Bohemian proclivities; Epps, afterwards a homœopathist, taught botany, chemistry, and materia medica. Clarke even thus early began to do good service with his pen, for he acted as amanuensis to Dermott, who dictated whilst he sipped gin-and-water; and he reported cases in the practice of Dr. Ryan, at the Westminster Dispensary, for publication in the *London Medical and Surgical Journal*, which about 1830 was edited by Ryan and published by Renshaw. In 1834 he sent a girl with necrosis to be under the care of Liston at the new hospital in Gower-street; he attended to see the operation, reported the case in Ryan's journal, and so pleased the great surgeon by his demeanour and report, that they became life-long friends; and he was specially introduced by Liston to Mr. Wakley, who gladly availed himself of his services in reporting and writing for the *Lancet*. Wakley, like other men of ability, was fortunate in the choice of his assistants.

From this time Clarke became a public man—we may say, a public favourite. He witnessed, as reporter, all meetings, and from his position was conversant with the men and their doings who have made themselves busy and conspicuous, useful or mischievous, during the last forty years. He was at first an able and concise clinical reporter. Then he undertook the reporting of the debates at medical societies—the sober old Medical Society of London, the more active "Westminster," and the more aristocratic "Medico-Chirurgical," in turns; and little by little, by a compound of courage and conciliation, he overcame the bitter opposition which at first was exhibited against reporters. After more than thirty years' service he retired from his office in connexion with the *Lancet*, and from time to time has published the reminiscences of his life and times in the *Medical Times and Gazette*. "During the stormy days of medical reform, when the *Lancet* in no measured terms attacked the various medical institutions and the more prominent medical men, Clarke had the good sense and tact not to be mixed up with these questions. I am not aware he ever made an enemy, and, as an illustration, in 1852 a number of the profession subscribed to present Mr. Clarke with a testimony of their regard and their estimate of his literary services to the profession. I was present at the meeting, which took place at Dr. Webster's residence in Brook-street, and the presentation was made by the venerable Dr. Clutterbuck; it consisted of an inkstand and a service of plate of the value of £260; the subscribers numbered 160 members of the profession." Here again we quote from the memoranda of Mr. Churchill, with whom Clarke maintained a friendly intercourse during nearly half a century, from the day when he was brought to the great publisher in Leicester-square, who said to him, "Young man, would you like to be a doctor? Do you think you could make a pill or spread a plaster?"

A few jottings more, and we must conclude. Spite of his literary labours, Mr. Clarke carried on a very extensive and lucrative practice; in fact, his pen-and-ink work was chiefly done in the evenings, and at times that most men would devote to amusement. He stuck to his work, was a model of punctuality, most rarely left town, took no annual holiday, and lived in the same house, or close by, for nearly forty years. But he was wonderfully active and alert, till within the last two years: then his spirits began to flag, and appetite to fail; and in July, 1874, a serious illness followed. He recovered from this to a certain degree, but continued depressed and melancholy, and said he was ready to die. At the beginning of June he tried the universally popular remedy—one that we seem driven to by a kind of natural instinct: he sought his native air, and revisited the scenes of his boyhood at Olney. "*Moriens dulces reminiscitur Argos.*" A transitory improvement in health and spirits ensued, but repeated attacks of hæmoptysis closed the scene. He died on July 6, and was buried in Highgate Cemetery. He rested his claims to fame on the merits of his "Reminiscences," as a compendium of the inner life of the profession; and in this, we believe, his expectation will be just. He published a volume of poems about 1830, but we suspect that they have not survived the ravages of time.

MEDICAL NEWS.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 12th inst., and when eligible will be admitted to the pass examination:—

Callender, John Hawkes, student of the Newcastle School.
Grasett, Frederick le Maitre, of the Edinburgh School.
Jones, William Francis, of the Dublin School.
Margetson, William Edward, of the Leeds School.
McDougall, Aymes Robert, of the Edinburgh School.
Noble, James Black, of the Newcastle School.
Owen, Richard Foster, of the Liverpool School.
Rhodes, William, of the Birmingham School.
Wilkin, Loftus Ralph, of the Dublin School.

The following gentlemen passed on the 13th inst., viz.:—

Bontein, Courthope Sims, student of St. Bartholomew's Hospital.
Bond, James William, of University College.
Continho, Joaquin Vincent, of University College.
Edmunds, Richard, of St. Bartholomew's Hospital.
Fagg, Thomas William, of St. Bartholomew's Hospital.
Folkes, Frederick Hyde, of the Manchester School.
Green, Thomas Beaufoy, of University College.
Gristock, William, of University College.
Harris, George Francis Angelo, of St. George's Hospital.
Huey, William, of the Liverpool School.
Irwin, John Arthur, of the Dublin School.
Jackman, William Thomas, of St. Bartholomew's Hospital.
Jee, Henry Christian, of Guy's Hospital.
Jones, Lloyd Middleton Bowen, of Guy's Hospital.
Jones, Robert, of the Liverpool School.
Kirtikar, Kánobá Ranchhoddás, of University College.
Lambert, John Spear, of St. Bartholomew's Hospital.
Liebstein, Herman John, of Guy's Hospital.
McArdle, Edward Lawrence, of the Liverpool School.
Newton, James, of the Manchester School.
Peake, Joseph, of the Glasgow School.
Pilkington, John Edgar, of the Manchester School.
Pratt, William, M.D. Liége, of the Aberdeen School.

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Robertson, George Scott, student of the Westminster School.
Shelly, Charles Edward, B.A. Cantab., of the Cambridge School.
Spranger, Francis Jefferies, of St. George's Hospital.

The following gentlemen passed on the 14th inst., viz. :—

Bernard, Alfred George, student of St. Bartholomew's Hospital.
Bradford, Arthur Somers, of St. Bartholomew's Hospital.
Burgess, William Milner, of St. Bartholomew's Hospital.
Claremont, Claude Clarke, of University College.
Collett, Robert William, of St. George's Hospital.
Craddock, Frederick Hurst, of St. Bartholomew's Hospital.
Dell, Joseph Francis, of Guy's Hospital.
Gardner, James Clarke, of University College.
Gipps, Alexander George Pemberton, of St. Bartholomew's Hospital.
Goode, Charles Fox, of St. Mary's Hospital.
Jewell, Charles Coleman, of University College.
Kay, William, of St. Bartholomew's Hospital.
Lyddon, Richard, of St. Bartholomew's Hospital.
Masters, John Alfred, of Guy's Hospital.
Nicoll, Thomas Vere, of St. Bartholomew's Hospital.
Rhys, Joshua, of St. Bartholomew's Hospital.
Richardson, Richard Tippetts, of the London Hospital.
Stevens, Arthur Frederick, of Guy's Hospital.
Sugden, D'Arcy, of St. Bartholomew's Hospital.
Trevan, Frederick Adolphus, of St. Bartholomew's Hospital.
Winterbottom, Charles, of St. George's Hospital.
Wolff, Alfred Abraham, of St. Thomas's Hospital.

The following gentlemen passed on the 15th inst., viz. :—

Atkey, William Thomas, student of University College.
Bentham, Edward Cooper, of University College.
Blaker, Thomas Fredk. Isaacson, of Guy's Hospital.
Cooper, Arthur Purton, of University College.
Cooper, Henry David, of University College.
Dening, Edwin, of University College.
Fletcher, Charles Wm. Currie, of St. George's Hospital.
Foster, William, of the Westminster Hospital.
Fox, Bonville Bradley, of St. George's Hospital.
Gabe, John, of the London Hospital.
Goodsall, Frederick Walter Wm., of St. Bartholomew's Hospital.
Grimbly, Richard H., of St. Thomas's Hospital.
Hough, Charles H., of the Cambridge School.
Michell, Henry Styman, of King's College.
Norton, Richard Robinson, of University College.
Revell, Richard Carter, of the Middlesex Hospital.
Scott, William, of the London Hospital.
Semple, Edward, of the Middlesex Hospital.
Shipton, Arthur, of King's College.
Thomas, David Edward, of St. Thomas's Hospital.
White, Robert Godfrey, of the London Hospital.
Willcocks, Frederick, of King's College.
Wilson, Edmund Munkhouse, of St. George's Hospital.

Eighty-three out of the 163 candidates failed to acquit themselves to the satisfaction of the Court of Examiners, and were therefore referred to their studies for three months.

The following were the questions submitted to the above candidates at the written examination on the 10th inst. (it was necessary to answer at least four, including one of the first two) :—1. Describe the physical and chemical characters of chyle, and the changes it undergoes in its course from the intestines to the thoracic duct. 2. Describe the structure of the fibres of a voluntary muscle, and of the heart; and the phenomena of contraction in voluntary and involuntary muscle. 3. Describe the course and relations of the occipital artery; and mention, in order, the parts which must be removed to expose it from its origin to the back of the head. 4. Describe the medulla oblongata; and trace the columns of the cord through the medulla to the centres above it. 5. Describe the relations of the pancreas, and the dissection necessary to expose it. 6. Describe the attachments, relations, and uses of the ligamentum teres of the hip-joint, and of the crucial ligaments of the knee-joint. The pass examination for the diploma of membership will be commenced this day (Friday).

The following visitors attended these examinations, viz. :—Messrs. Butlin, Walsham, and Cripps, of St. Bartholomew's Hospital; Lawson and Lowne, of the Middlesex Hospital; Mason, of St. Thomas's Hospital; Couper, of the London Hospital; Cock, of Guy's Hospital, etc. The following metropolitan hospitals are now represented on the Court of Examiners, viz. :—Messrs. J. Birkett and J. C. Forster, of Guy's Hospital; L. Holden and W. S. Savory, of St. Bartholomew's Hospital; F. Le Gros Clark, of St. Thomas's Hospital; H. Hancock, of the Charing-cross Hospital; T. B. Curling, of the London Hospital; H. Spencer Smith, of St. Mary's Hospital; J. Marshall, of University College Hospital; and T. Holmes, of St. George's Hospital. Mr. J. Birkett, the junior Vice-President, is chairman of the Court of Examiners.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 8 :—

Batterbury, Richard Legg, Haverstock-hill.
Blake, Andrew Henry, Castle-street, Berners-street, W.
Blake, Henry, Bedford.
Burton, Harry, Greenhays, Manchester.
Cooper, John Neild, Hyde, near Manchester.
Jones, Cyril Lloyd, 174, Blackfriars-road.

The following gentleman also on the same day passed his primary professional examination :—

Inman, Robert Edward, London Hospital.

APPOINTMENTS.

***** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that place.**

GODSON, CLEMENT, M.D., M.R.C.P. Lond.—Assistant Physician-Accoucheur to St. Bartholomew's Hospital.

GREENFIELD, W. S., M.B., M.R.C.P.—Physician to the Royal Hospital for Diseases of the Chest, City-road, *vice* Dr. Donkin, resigned.

MORRILL, A. H., M.R.C.S. Eng., L.S.A.—Resident Medical Officer to the Notting-hill Provident Dispensary.

SMITH, GILBART, M.D., M.R.C.P. Lond.—Physician to the Royal Hospital for Diseases of the Chest, City-road, *vice* Dr. Dobell, appointed Consulting Physician.

STAFFORD, JOHN FRANCIS, L.R.C.P. Edin., L.R.C.S. Edin.—Medical Officer for the Windlesham District of Chertsey Union.

BIRTHS.

BERTON.—On July 4, at Sydenham, the wife of Edwin D. Berton, M.B., C.M., of a daughter.

GARDNER.—On June 9, at Naini Tal, India, the wife of Surgeon-Major T. T. Gardner, Army Medical Department, of a daughter.

HULSEBERG.—On July 4, at Aldershot, the wife of Surgeon-Major Hulseberg, of a son.

MILLEE.—On July 9, at Brafield Church-road, Upper Norwood, the wife of R. M. Millee, M.D., B.A., of a daughter.

SUTCLIFFE.—On July 5, at Denmark-hill, Camberwell, the wife of John Sutcliffe, M.R.C.S. Eng., of a daughter.

MARRIAGES.

ADAMS—HARVEY.—On July 6, at H.M. Legation, Brussels, J. O. Adams, F.R.C.S., to Anne, daughter of the late Francis Harvey, Esq., of Thringstone, near Ashby-de-la-Zouch.

BOWMAN—CHARRINGTON.—On July 8, at St. Peter's, Onslow-gardens, South Kensington, John Frederick, second son of Wm. Bowman, F.R.S., 5, Clifford-street, Bond-street, W., to Cecilia, second daughter of Edward Charrington, Esq., of 28, Queen's-gate-gardens, South Kensington.

CAMERON—MACKENZIE.—On July 7, at Flowerburn House, Ross-shire, Allan W. Cameron, of Clunes, Lieutenant 78th Highlanders, to Ada Jane, daughter of Alexander R. Mackenzie, M.D., Fortrose.

FLETCHER—PORTCHETT.—On July 7, at St. John's Presbyterian Church, Tottenham, John Corbet Fletcher, M.D., 149, Camden-road, N.W., to Martha Parker (Pattie), daughter of J. S. Portchett, Esq., The Burrs, Hyde Side, Edmonton.

FREELAND-LEECH.—On July 8, at the parish church of St. Peter's the Great, Chichester, Wm. Bennett Barton Freeland, of Chichester, solicitor, to Mary Isabel, youngest daughter of Edward Leech, M.R.C.S. Eng., L.S.A., of Chichester.

HUTCHINSON—FRANKLIN.—On July 1, at St. Mark's, Notting-hill, William Hunter, third son of the late John Hutchinson, M.R.C.S., of Donington, Leicestershire, to Julia, youngest daughter of the late Henry Franklin, Esq., of Kingston, Jamaica.

KELLY—HYDE.—On July 8, at Holy Trinity Church, Yeovil, Charles Kelly, M.D., to Florence, youngest daughter of the late Rev. Wm. Hyde, M.A., rector of Douyatt, Somersetshire.

LEONARD—WINTLE.—On July 8, at St. Barnabas, West Kensington, the Rev. W. S. Leonard, vicar of Down Ampney, Gloucestershire, to Sophia Jane, only daughter of the late F. T. Wintle, M.D., of Headington-hill, Oxford.

MASSEY—COHEN.—On June 10, William Ernest, second son of Hugh H. Massey, M.R.C.S. Eng., L.S.A., of Camberwell-park, to Annette Henrietta, second daughter of Henry John Cohen, Esq., of The Firs, Camberwell.

PHILLIPS—ANDERSON.—On July 7, at Edinburgh, Robert Edward Phillips, B.A. Cantab., M.B., of Bromley, Kent, eldest son of the late Edward Phillips, M.D., of London, to Christian Gibson, second daughter of Major-General Anderson, C.B., late Royal Artillery.

SHIRCORE—DUNN.—On June 29, at St. Stephen's, Westbourne-park, Arotic Arratoon Shircore, of Calcutta, barrister-at-law, to Jane, youngest daughter of the late John Dunn, M.D., of Scarborough.

WARTNABY—GIMSON.—On July 6, at Witham, Essex, John Wade Wartnaby, of 1, Portland-terrace, Leicester, to Mary, youngest surviving daughter of the late Wm. Gimson, M.R.C.S., of Walton-by-Kimcote, Leicestershire.

DEATHS.

BIET, HUGH, L.R.C.P. Edin., F.R.C.S. Eng., L.S.A., at 26, Harcourt-terrace, West Brompton, on July 10, in his 62nd year.

BRAGGE, J. DE ROCHE, M.R.C.S. Eng., formerly House-Surgeon at the Bristol General Hospital and Islington Dispensary at Hawthorn, near Melbourne, Australia, on May 9, aged 58.

CROZIER.—Henry Acheson, M.R.C.S., L.S.A., at Arundel-street, Strand, on July 9, aged 74.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ADDERBURY, OXON.—Medical Officer to the Poor. Candidates must be duly qualified. Applications, with testimonials, to Lieut.-Col. Cobbe, West Adderbury House, Banbury, on or before July 20.

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BRISTOL GENERAL HOSPITAL.—Assistant House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, at the Hospital, on or before July 22.

CHELTENHAM GENERAL HOSPITAL.—Surgeon to the Branch Dispensary. Candidates must possess both a medical and surgical qualification, and be registered. Applications, with testimonials, to the Secretary, at the Hospital.

CONSUMPTION HOSPITAL, BROMPTON.—Resident Clinical Assistants. Applications, with testimonials, to the Secretary, on or before August 2.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—House-Surgeon. Candidates must be M.R.C.S. Applications, with testimonials, to the Secretary, on or before July 30.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Ophthalmic Surgeon. Candidates must be F.R.C.S. Applications, with testimonials, to the Secretary, on or before August 6.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Demonstrator of Anatomy. Applications, with testimonials, to the Registrar, on or before July 31.

METROPOLITAN FREE HOSPITAL, DEVONSHIRE-SQUARE, E.—Assistant House-Surgeon. Applications to the Committee of Management.

NORTH LONDON CONSUMPTION HOSPITAL, MOUNT VERNON, HAMPSTEAD.—Two Physicians. Candidates must be M.D. and F. or M.R.C.P. Applications, with testimonials, to the Secretary, 216, Tottenham-court-road, W.C., on or before August 5.

NORWICH DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before July 31.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Teacher of Physiological Chemistry. Applications to Dr. Wadham, at the Hospital.

ST. MARYLEBONE GENERAL DISPENSARY, 77, WELBECK-STREET, CAVENDISH-SQUARE, W.—Resident Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before July 19.

UNIVERSITY COLLEGE HOSPITAL.—Teacher of Operative Surgery; also an Assistant-Surgeon and an Assistant-Physician. Applications for the appointments, the first two of which may be held together, must be sent to John Robson, B.A., Clerk to the Council, on or before July 21.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Chapel-en-le-Frith Union.—Mr. A. V. Haslewood has resigned the Castleton District; area 39,231; population 2549; salary £25 per annum.

Hay Union.—Mr. J. E. Smith has resigned the Herefordshire District; area 19,023; population 2680; salary £45 per annum.

Lichfield Union.—Dr. E. T. Tibbits has resigned the Rugeley District; area 15,336; population 8195; salary £50 per annum.

Portsea Island Union.—Dr. Diver has resigned the Workhouse; salary £125 per annum.

Richmond (Surrey) Union.—The Mortlake District is vacant.

Staines Union.—Mr. C. Jones has resigned the Shepperton District; salary £20 per annum.

Swansea Union.—Mr. Thos. M. Jones has resigned the Llandilotalybout District; population 8062; salary £30 per annum.

Wolstanton and Burslem Union.—Mr. S. Goddard has resigned the Western District of the Parish of Burslem; area 937; population 15,992; salary £40 per annum.

APPOINTMENTS.

Caistor Union.—John Wm. Hembrough, M.R.C.S., L.S.A., to the Waltham District.

Charlton Union.—W. H. George, L.R.C.P. Edin., L.F.P.&S. Glasg., as Assistant Medical Officer at the Workhouse.

Frome Union.—Godfrey K. Sprowle, L.R.C.S. Ire., L.K.&Q.C.P. Ire., to the First District.

Spalding Union.—R. J. Swan, M.R.C.S. Eng., L.S.A., to the Gosberton District.

Stratford-on-Avon Union.—James J. Luce, M.D. St. And., L.R.C.P.Edin., M.R.C.S. Eng., L.S.A., to the Alveston District

Swaffham Union.—S. H. Wheatcroft, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., to the Oxborough District. J. Ewart, B.M. and M.C. Edin., to the Saham Toney District.

SUPERANNUATION ALLOWANCE.

Havant Union.—Mr. W. Stedman has, after twenty-three years' service as Medical Officer of the Union, been awarded a retiring allowance of £40 a year.

THE ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD.—At a special general Court of Governors, held at the Hospital yesterday (Tuesday) afternoon, Lord Charles Bruce in the chair, Dr. Gilbart Smith, M.R.C.P., and Dr. Greenfield, M.R.C.P., were elected Physicians to the Hospital, *vice* Dr. Dobell, elected Consulting Physician, and Dr. Donkin resigned. The usual quarterly council was afterwards held.

THE Governors of the Cheltenham General Hospital and Dispensary have been advertising for an honorary medical officer to the branch dispensary for the last three months, but not having succeeded, they have at length advertised for a paid officer, viz., £50 per annum for attending four days a week. We rejoice at this, for, although the amount is not large, the principle is right. There is no more need for honorary medical services to infirmaries than for honorary legal or other professional services; and if the profession would so will it, paid medical services would soon become the rule, and honorary medical services the exception, at all infirmaries, dispensaries, and hospitals for the sick.

CAUTION TO DENTISTS.—For some time past a well-dressed woman has been in the habit of calling on the leading dentists in this metropolis, and probably may soon favour others in fashionable provincial towns, using the name of a distinguished physician or surgeon as being that of her uncle, and receiving that gratuitous assistance so often given in such cases, in the way of valuable adjuncts to her beauty, probably only with a view of handing them over to another person so well known by the nickname "uncle."

REAPPEARANCE OF A FLOWER AT THE END OF TWENTY CENTURIES.—The effect of light, regarded as the revival of life in the vegetable world, has just been illustrated by the observations near Athens of Prof. Hendreich, under very curious circumstances. The mines at Laurium, concerning which of late years there have been such active diplomatic procedures, consist for the most part of the scoriæ produced by the workings of the ancient Greeks. These still contain a great deal of silver, which can be extracted by the superior appliances of modern times. Beneath these scoriæ have lain in a dormant state for at least 1500 years the seeds of a papaveraceous plant, of the genus *Glaucium*. But since the scoriæ have been removed to the furnaces, this plant has sprung up with its pretty yellow petals over the whole space which they covered. Unknown in modern times, it was described by Pliny and Dioscorides, and had disappeared from the face of the globe for fifteen or twenty centuries.—*Union Méd.*, July 6.

PRESERVATION OF FOOD BY COMPRESSED AIR.—Professor Paul Bert communicated to the Académie des Sciences some of the results of the experiments which he has long been engaged in conducting with compressed air. Specimens of meat submitted to a compression of forty-four atmospheres were found at the end of three weeks to be in a state of perfect preservation. Cutlets were declared to be in as good a condition as when quite recent, a little more tasteless perhaps. Eggs which had been beaten up and exposed to the compression on May 28 were found to be on June 28 as fresh as at first, while others beaten up at the same time and left in open vessels were frightfully stinking. Oxygen, then, at this strong tension either kills vibriones or at least prevents their development in organic matters. Fruits, as strawberries, cherries, etc., comport themselves in like manner, as also does moistened bread. The coagulation of milk is not prevented by compression, being only retarded. It thus seems that in oxygen of high tension we possess an agent for the preservation of animal and vegetable substances, which may prove of utility in scientific investigation, and perhaps even in commercial pursuits.—*L'Institut*, June 30.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

N. N.—*Medical Times and Gazette*, August, 1857.

L. A. C.—Much curious information regarding the history of the subject will be found in the work of the late Dr. Snow on Anæsthetics.

Leo.—Gasparo Tagliacozzi, a physician, lived above 300 years ago in Bologna. He was professor of anatomy and medicine. After his death a marble statue was erected to his memory in the anatomical theatre at Bologna, with the emblem of his art—a nose—in his hand. Hence the name "Tagliacotian operation."

Ralph J.—The Act for encouraging the establishment of public baths and washhouses in England was passed August 26, 1846, 9 and 10 Vict. c. 74.

Χρεώτης.—The term is not a very recent one. It is generally used to include the natural history of the whole nervous system; and, with regard to any particular part or organ, it implies the various nerve-fibres sent to it, their origin, function, etc.

Vena Cava.—We are sorry we cannot give you any personal reference. You will find many advertisers.

An Anxious Candidate.—On inquiry, we find that the result of the preliminary examination in Arts, etc., for the diplomas of fellowship and membership of the College of Surgeons was communicated to the several candidates last week.

Jaffery B.—Dr. Solander, the Swedish botanist, studied at Upsala, under Linnæus, by whose recommendation he came to England in 1760. He was employed at the British Museum, and was attached to that institution till he died in 1782. In 1768 he accompanied, with the sanction of the trustees of the British Museum, Captain Cook in his first voyage round the world. He returned in 1771, bringing with him treasures, which are still in the Museum.

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Edgar.—Erasmus Darwin, poet and physician, was born at Elton, near Newark, in Nottinghamshire. He graduated in medicine at Cambridge, but there he distinguished himself more by poetic exercises than proficiency in science. He never attained to any particular eminence as a physician.

Sil. G.— "No cook with art increased physician's fees,
Nor served up death in soups and fricassees."—*Garth.*

U., Stamford.—James Morison, the "Hygeist," was a man of good family in Aberdeenshire. He had attained a competence by merchandise in the West Indies before he acquired fame as a hygeist.

E. E., Salop.—The "sweating sickness," or the "swetynge sykenesse" as it is termed by the old chroniclers, broke out in London for the second time in 1503, but the disease exhibited a much milder character than it did during its first visitation. Numbers who were attacked by it recovered, and the physicians of the day attributed the cures to their own skill instead of the milder form of the epidemic. In 1517 the disease broke out in England for the third time with all its original virulence. It ravaged England for six months, and (as before) did not penetrate into Ireland or Scotland. Its last visit to England was in April, 1551.

COMMUNICATIONS have been received from—

Dr. C. Bell Taylor, Nottingham; The Registrar of Apothecaries' Hall, London; Vena Cava; Dr. Handfield Jones, London; Dr. Arthur Roberts, London; Secretary of the Chelsea Hospital for Women; Mr. Maunder, London; Dr. J. C. Cox, Sydney; Our American Correspondent; Professor Huxley, Edinburgh; Dr. Pollard, Dunkineely; Dr. Sheraton, Sedgefield; Dr. Gibb, Edinburgh; Mr. T. M. Stone, London; Dr. Bantock, London; Mr. C. Lowther Kemp, London; The Registrar-General, Edinburgh; Dr. Ralfe, London; Dr. B. W. Richardson, London; Mr. J. Chatto, London; Dr. Druitt, London; Mr. J. Vose Solomon, London; Dr. Gavin Milroy, Richmond, Surrey; Mr. H. Morris, London; Mr. W. D. Wilkes, Salisbury; Mr. Seymour Haden, London; Dr. Henry Marais, Honfleur; Dr. C. Godson, London; Dr. Roberts, London; Mr. W. Lancaster, Bradford; Dr. W. Gardiner, Ashton-under-Lyne; Mr. J. E. Hughes, Nevin; Mr. C. F. Maunder, London.

BOOKS AND PAMPHLETS RECEIVED—

Carlin on Baldness, its Cause and Cure—Trask on Injections of Tincture of Iodine into the Cavity of the Uterus in Hæmorrhage after Delivery—Constitution and General Duties of the Army Medical Department—Lady Medical Students, Madras—Whitmore's Report of the Health of the Parish of St. Marylebone—Ling's Educational and Curative Exercises, by Dr. M. J. Chapman; fourth edition, edited by A. Georgii—Earth to Earth, by F. Seymour Haden, F.R.C.S.—The Financial Reform Almanac for 1875—De la Genèse du Choléra dans l'Inde, par le Dr. Tholozan—Annali Universali di Medicina e Chirurgia, vol. 232, fasc. 696.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—New York Medical Journal—The Medical Enquirer—Manchester Guardian—Bradford Observer—Chester Courant—Boston Journal of Chemistry—Guy's Hospital Gazette—Indian Medical Gazette—The Morningside Mirror—The Electrical News and Telegraphic Reporter.

APPOINTMENTS FOR THE WEEK.

July 17. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

19. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

20. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

21. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

22. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

23. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Queekett Microscopical Club, 8 p.m. Annual General Meeting.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 10.

BIRTHS.

Births of Boys, 1186; Girls, 1144; Total, 2330.
Average of 10 corresponding years 1865-74, 2045·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	738	662	1400
Average of the ten years 1865-74	681·2	632·2	1313·4
Average corrected to increased population	...	...	1405
Deaths of people aged 80 and upwards	...	...	41

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	15	1	3	...	4	2	29
North... ...	751729	...	3	5	1	7	...	2	...	39
Central ...	334369	...	2	3	...	9	...	...	1	24
East	639111	...	10	12	...	13	...	2	1	47
South... ...	967692	...	10	23	1	21	1	...	2	40
Total	3254260	...	27	58	3	53	1	8	6	179

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·872 in.
Mean temperature	58·5°
Highest point of thermometer	76·5°
Lowest point of thermometer	45·6°
Mean dew-point temperature	53 5°
General direction of wind	N.E. & S.W.
Whole amount of rain in the week	0 54 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 10, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending July 10.	Deaths Registered during the week ending July 10.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2330	1400	76·5	45·6	58·5	14·72	0·54	1·37
Portsmouth ...	122632	27·3	94	37	...	...	...	...	...	...
Norwich	82842	11·1	35	15	69·0	47·0	56·2	13·44	0·56	1·42
Bristol	196186	44·1	130	66	75·0	45·2	58·3	14·61	0·51	1·30
Wolverhampton ...	71718	21·1	47	27	75·7	47·1	58·7	14·83	0·61	1·55
Birmingham ...	366325	43·6	293	167	76·0	48·8	58·3	14·61	0·93	2·36
Leicester	109830	34·3	88	45	77·2	45·5	59·6	15·34	0·65	1·65
Nottingham ...	92251	46·2	55	48	73·9	44·1	58·1	14·50	1·21	3·07
Liverpool	516063	99·1	402	226	73·9	47·9	56·6	13·67	0·67	1·70
Manchester ...	356626	83·1	268	164	76·0	46·0	59·9	15·50	1·62	4·11
Salford	135720	26·3	118	63	73·9	42·2	57·7	14·28	1·12	2·84
Oldham	87437	18·7	80	46	...	...	...	...	...	...
Bradford	168305	23·3	123	67	74·4	48·5	59·1	15·06	0·29	0·74
Leeds	285118	13·2	224	117	75·0	47·0	59·0	15·00	0·49	1·24
Sheffield	267881	13·6	207	124	74·0	45·0	58·4	14·66	0·63	1·60
Hull	133932	36·8	112	58	70·0	42·0	55·9	13·28	0·86	2·18
Sunderland ...	106342	32·2	69	38	78·0	46·0	59·1	15·06	0·50	1·27
Newcastle-on-Tyne	137665	25·6	111	71	73·0	48·0	55·6	13·12	0·21	0·53
Edinburgh	211626	50·5	147	84	77·0	43·0	60·1	15·62	...	...
Glasgow	534564	88·6	383	238	73·5	46·1	58·3	14·61	0·15	0·38
Dublin	314666	31·3	187	106	74·4	43·3	59·7	15·39	0·62	1·57
Total of 21 Towns in United Kingdm	7742889	37·0	5503	3207	78·0	42·0	58·3	14·61	0·67	1·70

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·87 in. The highest was 30·17 in. on Sunday evening, and the lowest 29·19 in. on Friday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 61.)

The higher *Odontophora*—the *Gasteropoda* and *Pteropoda* of Cuvier—fall into two divisions, according to the structure and arrangement of the parts of the foot. In the one division it may be a simple disc, or it may be divided into three portions—an anterior (the *propodium*), a middle (the *mesopodium*), and a posterior (the *metapodium*),—and may be still further complicated by the development from its sides of muscular expansions, apparently analogous to the lobes of the foot in *Dentalium*—the *epipodia*. But whatever the shape of the foot in these Mollusks, its margins are not produced into tentacula, and its antero-lateral portions do not extend at the sides of the head, and unite in front of the mouth.

In the other division—the *Cephalopoda*,—the margins of the foot are produced into tentacula, and the antero-lateral regions of the foot extend over, and unite in front of, the mouth, in such a manner that the latter is placed in the centre of the discoidal foot.

In the former division, the embryo is, as in the *Scaphopoda* and *Polyplacophora*, a "veliger" in all *Pteropoda*, in all those *Gasteropoda* which breathe the air dissolved in water (*Branchiogasteropoda*), and in some of those which breathe air directly (*Pulmogasteropoda*). But, in the *Cephalopoda*, no velum is formed, and the animal acquires the general characters of the adult before leaving the egg.

A shell-gland is often, if not always, present in the embryo of the higher *Odontophora*, and in all Pteropods and Branchiogasteropods the mantle secretes a cuticular shell, which, however, may exist only during the larval condition.

The Pteropoda.—In this group of small pelagic animals there is no distinct head, the eyes and tentacles remaining rudimentary. The epipodia are large muscular expansions, by the flapping of which the Pteropods swim; but the rest of the foot is always small, and often rudimentary, in correspondence with the small size of the neural face of the body.

The hæmal face, on the contrary, is always produced, as in the *Cephalopoda*, into a relatively large visceral sac; and in some (the *Thecosomata*) this visceral sac is co-extensive with the mantle, which is protected by a shell. In others (*Gymnosomata*) the mantle early disappears, and there is no shell.

In the *Thecosomata*, the free lobe of the mantle, which incloses a spacious pallial cavity, usually lies on the posterior aspect of the visceral sac, as in the *Cephalopoda*, and the rectum terminates in it on one side of the middle line. In these there is a simple neural flexure of the alimentary canal, as in the Cephalopods, although the turning of the rectum to one side destroys the symmetry of the body. In *Spirialis* the intestine appears to be bent round to the anterior face of the visceral sac, the mantle-cavity accompanying it, so that the opening of the mantle is placed on the anterior, instead of on the posterior, face of the visceral sac. There are no distinct gills, but, in the *Thecosomata*, the lining of the mantle-cavity subserves the function of respiration.

The heart consists of a single auricle and a single ventricle. The auricle lies close to the pallial cavity, and receives the aërated blood from its walls. The ventricle is sometimes directed forwards (as in all *Gymnosomata*), and sometimes backwards, so that nearly related forms are sometimes opisthobranchiate, sometimes prosobranchiate. The branches of the aortic trunk soon terminate in lacunæ, by which the blood is conveyed back to the walls of the mantle-cavity. A contractile sac with delicate walls, which opens on one side into the pallial chamber, and on the other into the pericardial sinus, represents the organ of Bojanus.

All the *Pteropoda* are provided with an ovotestis—a racemose gland, in the ultimate cæca of which both ova and spermatozoa are developed,—and are consequently hermaphrodite.

The Branchiogasteropoda.—In all the members of this group, the development of which has hitherto been studied, the intestine is twisted round on to the anterior face of the pallial sac, in such a manner that the alimentary canal has a completely hæmal flexure, in the veligerous embryo. Hence, in the adult, the intestine springs from the hæmal or dorsal, and not from the ventral or neural, aspect of the stomach. The heart is generally composed of a ventricle and a single auricle, but sometimes there are two auricles.

The *Branchiogasteropoda* fall into two distinct series, of which the one is hermaphrodite—the genital gland being an ovotestis—and invariably opisthobranchiate, while the other is unisexual and usually prosobranchiate. In each series there are some forms which are provided with a large mantle, with a small or absent visceral sac, and are nearly symmetrical (*Phyllidia*, *Patella*, *Fissurella*); and others in which the mantle is altogether abortive (*Nudibranchiata*, *Firola*). These "Chlamydate" and "Achlamydate" Branchiogasteropods correspond with the *Thecosomata* and *Gymnosomata* among the Pteropods.

The Chlamydate Branchiogasteropods are usually provided with branchiæ, which either take the form of numerous lamellæ, or of two plume-like organs, sometimes reduced to one. In the Achlamydate forms, true gills are usually absent, though they may be replaced functionally by processes of the hæmal body-wall.

Among the *Opisthobranchiata*, *Phyllidia* is nearly symmetrical, the anus being situated at the posterior end of the body, and there is a large mantle, devoid of a shell. There is no pallial cavity, and the branchiæ are numerous lamellæ, placed on each side of the body, between the free edge of the mantle and the foot. In *Aplysia* the mantle is relatively small, and develops an internal shell, and the branchiæ, the anus, and the reproductive apertures are on the right side of the body. In this genus there are very large epipodial lobes, by the aid of which some species propel themselves like Pteropods.

The *Nudibranchiata* have no mantle, and the anus is usually on the right side of the body; sometimes, however, as in *Doris*, it is terminal. In the pelagic *Phyllirhöe*, the foot aborts, as well as the mantle, and the body has the form of an elongated sac.

The gastric portion of the alimentary canal becomes complicated by division into several portions, some of which are provided with chitinous or calcareous plates, or teeth, in *Aplysia*, *Bulla*, and other genera. In many Nudibranchs, as *Eolis*, the liver is represented by a much-branched tubular organ, the cæcal ultimate ramifications of which end in the elongated dorsal papillæ, the apices of which contain thread cells.

In the series of the *Prosobranchiata*, the great majority are not only Chlamydate, but there is a spacious branchial chamber, and the pallial wall of the body is produced into a conical "visceral sac," which contains the stomach, liver, and genital organs. It is usually asymmetrically coiled, and is protected by the shell. No Opisthobranch possesses a visceral sac of this kind. On the other hand, no Prosobranch is, like *Phyllidia*, symmetrical, with the anus at the posterior end of the body.

The *Prosobranchiata* have, at most, rudiments of *epipodia*, but the rest of the foot acquires a much greater development than in the *Opisthobranchiata*, and a chitinous or shelly plate—the operculum—is frequently developed from the dorsal or hæmal aspect of the metapodium. The differentiation of the foot attains its highest degree in the so-called *Heteropoda*, in which the propodium, mesopodium, and metapodium differ widely in form,—the propodium being broad and fin-like, and constituting the chief organ of locomotion in these free-swimming oceanic animals.

In the Limpets (*Patellidæ*), the visceral sac forms merely a conical projection of the hæmal surface, and the numerous lamellar, or filamentous, respiratory organs, are lodged between the free edges of the mantle and the sides of the body.

In the other Chlamydate *Prosobranchiata*, except the *Cyclostomata*, there are two plumose gills lodged in a pallial chamber situated on the anterior face of the visceral mass, which is usually large and spirally coiled. Sometimes the two branchiæ are equal or nearly equal in size (*Aspidobranchia*). Sometimes one is so much smaller than the other as to be nearly abortive (*Ctenobranchia*). *Ampullaria* has a pulmonary cavity as well as gills. On the other hand, the *Cyclostomata* have no branchiæ, but breathe air by means of the parietes of the pallial chamber, whence they are ordinarily reckoned among the *Pulmonata*.

In the *Heteropoda* there is a gradual reduction of the mantle,

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from *Atlanta*, in which the mantle and shell have the ordinary proportions, and the departure from the ordinary Gasteropod type is but little greater than that observed in *Strombus* and *Pteroceras*, through *Carinaria*, in which the mantle is much reduced, and the shell is a mere conical cap, to *Firola*, in which the mantle and shell are wanting in the adult, and which, therefore, corresponds with the Achlamydate *Pteropoda* and *Opisthobranchiata*.

The principal modifications of structure in the *Prosobranchiata* are the following :—

1. In many genera of the *Ctenobranchia*, and especially among carnivorous forms, the mouth is situated at the end of a long proboscis, which contains the odontophore, and a great part of the long œsophagus. This proboscis is protruded and retracted by special muscles.

2. In the *Aspidobranchia*, when the two gills are equally developed (*e.g.*, *Fissurella*, *Haliotis*), the heart has two auricles and a single ventricle. The latter invests the rectum, and thus closely resembles that of the *Lamellibranchiata*.

3. It is probable that the blood-vascular system always communicates with the exterior, through the organs of Bojanus, and, in many Prosobranchs, openings in the foot lead into canals, which are in free communication with, and probably form part of, the blood-vascular system.

4. The *Cyclostomata* have no gills, but breathe the air directly by means of the lining membrane of the pallial sac. Unlike the other *Prosobranchiata*, they are terrestrial animals, with the habits of snails.

5. The eggs are often laid in capsules secreted by the walls of the oviduct. Each capsule contains a considerable number of ova, but of these only a few become embryos, and devour the rest in *Purpura* and *Buccinum*.

The Pulmonata.—These are odontophorous Mollusks which breath air directly, by means of a respiratory membrane furnished by the wall of the pallial cavity.

In some (the *Peroniadæ* and *Veronicellidæ*), the body of the slug-like animal is very nearly symmetrical; the anus and the lung-sac being situated close together at the posterior extremity of the body. The mantle is large, and extends over the whole hæmal or dorsal surface. In all the other *Pulmonata*, the pulmonary and the anal apertures lie on the right side of the body, and the mantle is provided with at least the rudiments of a shell. The pallial region is sometimes very small in proportion to the rest of the body, and then forms a flattened disc, as in the Slugs.

In some *Limacidæ* and *Testacellidæ*, and in the *Janellidæ*, the mantle is so much reduced that these slugs are almost "Achlamydate"; but more usually it is large, and produced into an unsymmetrically coiled visceral sac. In this case, the mantle-cavity lies on the fore part of the sac and the anus opens into it. Thus, in all these ordinary *Pulmonata*, the termination of the intestine is twisted from its normal position at the hinder end of the body, forwards to the right dorsal or hæmal aspect of the body.

When a visceral sac exists, the stomach and liver lie in it. The intestine, which springs from the stomach, passes forwards on its neural aspect, so that the alimentary canal has primitively a neural flexure, but afterwards inclines to the hæmal side.

When the pulmonary sac is posterior, or the pallial region small, the ventricle of the heart is anterior, and the auricle posterior, and the animal might be said to be *opisthopulmonate*. On the other hand, when the pallial region is large, and gives rise to a visceral sac, with the concomitant forward position of the pulmonary sac, the auricle is inclined more or less forwards and to the right side, and the apex of the ventricle backwards and to the left side. The animal is thus more or less "*prosopulmonate*."

The mouth is commonly provided with a horny upper jaw, as well as with a well-developed odontophore. Large salivary glands are usually present.

The heart consists of a single auricle and a single ventricle. The aortic trunk, which proceeds from the apex of the latter, divides into many branches, but the venous channels are altogether lacunar. An organ of Bojanus lies in the current of the returning blood, close to the pulmonary sac.

There are usually two simple eyes, often lodged upon the summits of retractile tentacula.

The *Pulmonata* are hermaphrodite. The generative gland is an ovotestis, and is composed of branched tubuli, from the cellular contents of which both ova and spermatozoa are developed.

A narrow common duct leads from the ovotestis, and, soon dilating, receives the viscid secretion of a large accessory gland. The much wider portion of the common duct beyond the attachment of this gland is incompletely divided by longitudinal infoldings into a sacculated, wider, and a straight, narrower, division. The former conveys the ova, and the latter the spermatozoa. At the end of this part of the apparatus, the wider portion, which represents the oviduct, passes into the vagina, which opens at the female genital aperture, while the narrower portion of the common duct is continued into a vas deferens, the end of which is connected with a long invagination of the integument—the penis.

In connexion with the female genital aperture, there are certain accessory glandular structures—the so-called *prostate*; a *spermatheca*, or sac with a long neck for the reception of the semen of the other individual when copulation takes place; and, lastly, a short muscular sac, in which pointed chitinous or calcified bodies—the "*spicula amoris*"—are formed. This is termed the *dart-sac* or *spicular sac*.

The process of development appears to present a considerable range of variation in the Pulmonata. Semper(a) states of a species of *Vaginulus*, that, after the process of cleavage, the embryo assumes the form of a cylinder, at one pole of which the rudiments of the tentacula and of the lips appear, while, at the sides, a longitudinal ridge indicates the edge of the mantle, and marks off the more convex pallial region from the flat foot. No shell is formed.

In *Limax* and *Helix* the embryo presents two saccular dilatations of the integument with rhythmically contractile walls. One of these is seated immediately behind the head, on the hæmal aspect of the body; the other at the extremity of the foot. Before the heart appears, these contractile sacs force the blood of the embryo backwards and forwards. The embryo of *Limax* has no external shell.

In *Lymnæus* (b) the vitellus undergoes complete division, and the resulting blastodermic vesicle undergoes invagination to produce the endoderm. Only the middle part of the invaginated endoderm becomes the alimentary canal, however. The lateral portions (which take on the form of rounded sacs) may not improbably, as in the Brachiopods, give rise to the perivisceral cavity.

The mouth is produced by the formation of an opening in the coalesced endoderm and ectoderm, at a point near the anterior end of the body. From each side of the mouth a transverse ciliated ridge of the ectoderm is developed, and represents the edge of the velum in other molluscan embryos. Behind this, and on the opposite side of the embryo to that on which the mouth is placed, a raised patch of the ectoderm represents the mantle.

The foot commences as a papilla immediately behind the mouth. An involution of the centre of the pallial ectoderm gives rise to a shell-gland, but the proper shell is developed independently of this, as a cuticular secretion from the whole surface of the mantle.

Thus the embryo of *Lymnæus* possesses an incompletely developed velum, and is, in all essential respects, similar to the veligerous embryo of Lamellibranchs, Pteropods, and Gasteropods; while the slugs have neither the velum (unless it be represented by the anterior contractile sac) nor the embryonic shell.

There is no trustworthy evidence of the existence of the opisthobranchiate Gasteropods before the epoch of the Trias, but it is to be remembered that the great majority of these animals have no shells. Of the rest of the preceding groups of Odontophora, representatives are known as far back as the middle of the Palæozoic epoch, while *Pteropoda*, *Heteropoda*, and *Prosobranchiata* occur in the Silurian formations. Among the *Prosobranchiata*, the *Patellidæ* and the *Aspidobranchia* are the characteristic forms of the older formations, the *Ctenobranchia* appearing later, and acquiring their present relative abundance only in the later secondary, and the tertiary epochs.

The Cephalopoda.—The bilateral symmetry which is so obvious in the *Polyplacophora* and the *Scaphopoda* is but little disturbed in this group of the Mollusca. The mouth and the anus are situated in the median plane, which divides the body into corresponding halves; the branchiæ, two or four in number, are disposed symmetrically on each side of this plane, as are the tentacular prolongations of the margins of the foot.

(a) "Entwickelungs-geschichte der *Ampullaria polita*."
(b) Lankester. "Observations on the Development of the Pond Snail, *Lymnæus stagnalis*."—*Quarterly Journal of Microscopical Science*, vol. xiv., New Series.

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The hæmal face of the body, however, is not flat, as in the groups which have just been mentioned, but is elongated perpendicularly to the neural face, so as to form a sort of sac, invested by the mantle. On the posterior, or anal, face of the sac, the mantle incloses a large cavity, in which the branchiæ are protected. On the anterior aspect of the sac, on the contrary, the mantle may have no free edge, or at most forms a comparatively small flap.

The integument is provided with *chromatophores*, which are sacs with elastic walls, full of pigment, and provided with radiating muscles, by which they may be drawn out to a size many times greater than that which they possess in their contracted state. In their dilated condition, the colour proper to the contained pigment becomes plainly visible, while in their contracted state they appear as mere dark specks. It is to the successive expansion and contraction of these chromatophores that the Cephalopoda owe the peculiar play of "shot" colours, which pass like blushes over their surface in the living state.

But that which particularly distinguishes the Cephalopoda, is the form and disposition of the foot. The margins of this organ are, in fact, produced into eight, ten, or many tentaculiform processes; and its antero-lateral portions have grown over and united in front of the mouth, which thus comes, apparently, to be placed in the centre of the pedal disc. Moreover, two muscular lobes—the *epipodia*,—developed from the sides of the foot, unite posteriorly, and, folding over, give rise to a more or less completely tubular organ—the *infundibulum*,—the open end of which projects between the posterior face of the body and the pallial wall of the branchial cavity, and serves to conduct the water out of the latter.

The aperture of the mouth is provided with a hard beak, like that of a bird, the two divisions of which are anterior and posterior. Of these, the anterior is always the shorter, and is overlapped by the other.

Within the cavity of the mouth is an odontophore, with a toothed lingual ribbon; and the long gullet passes back on the middle line to open into the stomach, which is situated near the end of the mantle-sac. From the stomach, the intestine, more or less bent upon itself, passes towards the neural aspect of the body, and ends in the median anus. Hence the alimentary canal has a well-marked neural flexure.

The heart is placed on the hæmal side of the intestine, and receives the blood by branchiocardiac vessels, which correspond in number with the gills, and, as they are contractile, may be regarded as auricles.

The gills themselves have no cilia, and are in some cases, if not always, contractile. The venous blood, on its way back to the heart, is gathered into a large longitudinal sinus—the *vena cava*—which lies on the posterior face of the visceral sac, and divides into as many afferent branchial vessels as there are gills. Each of these vessels traverses a chamber which communicates directly with the mantle-cavity, and the wall of the vessel which comes into contact with the water in this chamber is sacculated and glandular. Each chamber, in fact, represents an organ of Bojanus. The pericardium, and the sacs in which the testes and ovaria are lodged, communicate with the pallial cavity, either directly or through these chambers.

The nervous system consists of cerebral, pedal, and parietosplanchnic ganglia, aggregated around the gullet, and connected by commissural cords. In addition to these, there are buccal, visceral, and pallial ganglia on the nerves which supply these parts.

Eyes, olfactory organs, and auditory sacs are always present.

An endoskeleton formed of true cartilage is developed in the region of the principal ganglia, and sometimes furnishes them with a complete investment. It gives attachment to the most important muscles.

In some Cephalopods additional cartilages appear in the mantle and in the funnel.

The sexes are distinct, and the reproductive organs are unlike those of other Mollusks. They consist, in both sexes, of lobed or branched organs, the cellular contents of which are metamorphosed into ova or spermatozoa, and which are attached to one point of the wall of a sac which communicates with the pallial cavity by two symmetrically disposed oviducts in the females of some species; but in most female and almost all male Cephalopods it has only one duct, the termination of which is usually situated on the left side, but may be median. In the female, oviducal glands secrete a viscid fluid, which invests the ova, and connects them, when laid, into variously shaped aggregations. In the male, a gland of similar character furnishes the material of the cases, or *spermatophores*, in which packets of spermatozoa are contained, and which sometimes possess a very complicated structure.

The males are distinguished from the females by the asymmetry of their tentacula, one or more of which, on one side, are peculiarly modified. In some genera (*e.g.*, *Argonauta*) the male is much smaller than the female, and the modified tentacle (*Hectocotylus*), charged with spermatophores, is detached and left in the mantle-cavity of the female when copulation takes place.

Almost all Cephalopods possess a pallial shell, which is either external or internal. In the former case, the body is lodged within that part of the cavity of the shell which lies nearest its open end, and the rest of the cavity is divided into chambers, which contain air, by transverse septa. The septa are perforated, and a prolongation of the mantle—the *siphuncle*—is continued through the series of perforations as far as the apical chamber of the shell. The internal shells of the Cephalopods may have very various forms, and may even be chambered and siphunculated, but, in this case, the chamber nearest the mouth of the shell is small, and incapable of lodging the body.

So far as the development of the Cephalopods is yet known, the yelk undergoes partial division, and the blastoderm, formed upon one face of it by the smaller blastomeres, spreads gradually over the whole ovum, inclosing the larger and more slowly dividing blastomeres. The mantle makes its appearance as an elevated patch in the centre of the blastoderm, while the future tentacula appear as symmetrically disposed elevations of the periphery on each side of the mantle. Between these and the edge of the mantle two longitudinal ridges mark the rudiments of the epipodia, while the mouth appears in the middle line in front of the mantle, and the anus, with the rudiments of the gills, behind it. The rest of the blastoderm forms the walls of a vitelline sac, inclosing the larger blastomeres.

The pallial surface now gradually becomes more and more convex, the posterior margin of the mantle growing into a free fold, which incloses the pallial chamber and covers over the gills.

The epipodia unite behind, and give rise to the funnel, while the antero-lateral portions of the foot grow over the mouth, and thus gradually force the latter to take up a position in the centre of the neural face, instead of in front of it. The yelk-sac gradually diminishes, and the contained blastomeres are finally taken into the interior of the visceral sac, into which the alimentary canal is gradually drawn.

(To be continued.)

THE LUMLEIAN LECTURES: ON LIFE AND ON VITAL ACTION IN HEALTH AND DISEASE.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

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LECTURE III.

Construction by Bioplasm (continued).—Bioplasm in Disease—The Degradation of Bioplasm—Disease Germs—The Highest Form of Vital Action—Bioplasm of Nerve Tissue—Bioplasm of the Brain—Mind and Vital Power.

MR. PRESIDENT AND GENTLEMEN,—One of the most remarkable examples of inherited constructive power, and one which, as it seems to me, is especially worthy of our consideration with reference to many abstruse questions relating to the transmission of vast power through the agency of infinitesimal particles, is the bioplasm of the spermatic particle. The powers derived from the organism which produced it, are by this tiny speck of living matter transferred to bioplasm, through which its influence is brought to bear upon vast quantities of living matter.

The bioplasm of a human spermatozoon, which, perhaps, hardly weighs as much as the one-hundredth part of a single red blood-corpuscle, may stamp with unmistakable individual characteristics several tissues and organs, which, in their fully developed state, weigh many pounds. Moreover, the influence of the power thus conveyed extends over many years, and is as distinctly manifest in the action as in the structure of tissues. This influence may not be clearly evident until many

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years have passed since the minute particle of bioplasm left the organism that produced it. But how are we to explain the association of such far-reaching constructive power with molecules of such minute size? With what properties of ordinary matter can these powers be placed in comparison?

The special particles of matter endowed with the powers under consideration are produced in one particular organ which does not attain its power of production until many years have passed since its development commenced. Surely no one would consider it reasonable to attribute the powers manifested by the spermatozoon to the properties of the elements of which its minute speck of bioplasm is composed. No properties of any elements, that have been discovered, are, in any way, comparable with those manifested by this wonderful particle. Mr. Darwin has therefore endeavoured to explain the marvellous properties in another way. But let us consider what insuperable objections immediately present themselves to the acceptance of his hypothesis of pangenesis.

Here is one of the very smallest living particles, carrying the most extensive powers—powers which may reach to every tissue in the being that is to be formed. It is nevertheless suggested that the spermatozoon may be composed of millions of particles, one or more having been detached from every component element of the tissues of the parental organism. But this is not all, for every one of millions of spermatozoa must be considered as having been formed in the same way.

Now concerning the manner in which the supposed particles meet together to form the spermatozoon. We are asked to conceive that particles are being continually detached from each anatomical element of each tissue, and that they pass from every part of the body where they were formed, and move with unerring precision towards the gland tubes, where they collect together in sets without confusion, thus to form the spermatic particle. If several particles from the same locality came together, they must separate again, and find their way to the collections which were deficient in these particular particles. By what means all these millions of particles find their way to the precise spot which is their proper distination—how they sort themselves, or by what means they are sorted, how at last they arrange themselves in proper order in the minute particle of bioplasm which they are supposed to constitute, has not even been suggested. But this is not all. The hypothesis assumes that particles are detached from each anatomical element. But from what *part* of the cells they are supposed to come, is not stated. Now, these anatomical elements are complex in structure, and many are composed of several kinds of matter. Many are growing, and the matter of which they consist is in very different states in different parts at different periods. As I have shown, the outer parts of the cells and certain of their contents are, in many cases, non-living. Now, if non-living particles were to collect in the manner assumed, the resulting collection would not be anything like a spermatozoon; and it is not conceivable that such a collection of non-living particles could, in any way, have vital powers communicated to them after they had collected together. On the other hand, if we assume that the minute particles from the different anatomical elements are detached from the bioplasm, our difficulties will still be found to be insuperable, for the bioplasm is surrounded by the formed material, and we should have to assume that minute particles of bioplasm passed through even the thickest and hardest formed material in a direction the opposite of that in which nutrient fluid was flowing. We must further conceive such living particles as making their way into the intercellular spaces, and directing themselves, or being drawn, into the bloodvessels or lymphatics, or working their way through the tissues in the most direct course towards the seat of their development. By what means they find their way, why they do not take up nutrient material and grow so large as to be stopped in their course, how it is that many are not lost and impacted in growing parts, it is impossible to conjecture. Upon the whole, I think it will be difficult for anyone to accept this doctrine if he tries to realise the occurrence of the phenomena implied by the terms of the hypothesis.

Lastly, I have to consider whether it is probable that in living things, especially in those having an organism of complex structure, there is any agency which exerts *a directive influence* over the whole, as some have supposed. It has been suggested that a general directing agency might be influential in regulating and governing the phenomena contemporaneously proceeding in all parts of a living body which result in the formation of very different structures, somewhat as a number of workmen are controlled and directed by a central authority placed over them. And, certainly, the facts of the case do seem to demand some such postulate; for, as each part grows and undergoes development, changes occur in other parts not anatomically connected with the first, but otherwise related, though separated, perhaps, by a considerable distance. But the more carefully we consider the question, the less shall we feel inclined to accept any hypothesis which involves the idea of supervision on the part of any central power acting in the organism. There is, in fact, no centre from which such power could act, and there are no means by which it could be conceived to operate upon tissues at a distance. I cannot even admit that any facts known to us justify the belief that one cell is capable of acting upon adjacent cells. I do not believe that any particle of living matter is capable of influencing the phenomena of any other particle, except, perhaps, by taking up more than its own share of pabulum, in consequence of an unequal distribution. I have elsewhere adduced reasons for rejecting Virchow's views upon this matter. It is difficult to conceive how one living particle can "excite" increased or diminished action upon the part of adjacent living particles; and I cannot think that under any circumstances do particles of living matter act in sympathy or in antagonism with neighbouring particles.

It will be asked—How, then, are the facts to be explained? If the development of any particular tissue be carefully studied, as may be done by comparing specimens taken at different stages of growth, the observer will be able to form a conception of the phenomena which succeed one another in an orderly manner, until, in place of the bioplasm particles of the embryo, he finds a highly elaborate arrangement of parts performing a definite office; but I fear I shall fail in my attempt adequately to represent the series of pictures which would be formed and combined into a moving panorama in the mind of one who had thus studied.

At first, all that is to be seen is a number of masses of bioplasm which divide and subdivide. Each bioplast, by virtue of its inherent vitality, continues to produce successors in regular series and at a certain rate; and a limited range of change in external circumstances being, as it were, allowed for, does not affect the result.

After the process of multiplication has continued for a certain period of time, each portion of bioplasm undergoes change upon the surface, and produces formed material. The arrangement and shape, assumed by each particle, will, in some measure, be determined by the growth of neighbouring masses, and the pressure that may be exerted, as well as by a number of other circumstances. Indeed, the general form of the organ or tissue is determined chiefly by the inherent vital powers of each individual portion of bioplasm out of which it is formed, but, in part, by the growth of contiguous organs or structures. Whether the elementary part shall be drawn out like tendon, muscle, or nerve, flattened, many-sided, or oval, like certain forms of epithelium, will depend upon its connexions, which were determined at a very early period, and whether it be subjected to stretching or pressure. If free to grow equally in all directions, as in fluid, the mass will certainly be spherical. Many questions, however, that might be asked with reference to many of the matters to which I have very briefly adverted, cannot, in the present state of our knowledge, be answered, and are likely to remain unanswered for a long period of time. But I venture to think that if scientific men substitute conjectures for answers, and confidently recommend to the public their own speculations as if they were scientific conclusions based upon evidence, it is the duty of other scientific men to examine the propositions, and to carefully criticise them. From what has lately fallen from some of those attached to the doctrine of evolution, it would almost seem as if they considered that their views were to be accepted by us without even the slightest examination. Against this idea one cannot too strongly protest, and especially when one finds the most far-fetched hypotheses advanced and pressed upon the people as worthy of being accepted and believed as actual truths. No objection ought to be made to the free discussion whether, for instance, certain instincts constitute the foundation of the moral faculties, but it would be monstrous to assert that such had actually been proved to be the case. In the same way, attempts might be made to force people who had not the knowledge to enable them to form a judgment upon such a question, to believe in the truth of the hypothesis that man has resulted by direct descent

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from lower forms. Now, one can conceive that if but one clear case could be made out in which it had been clearly proved that two distinct species of any kind of animals had descended from a common progenitor, the evolution hypothesis would be received almost without opposition; but at present no evidence advanced is perfectly conclusive, and people ought to be allowed to discuss the matter freely without condemnation. "*Aut Darwin aut nullus*" is a method of argument that seems to me by no means more convincing than the assurance on the part of a philosopher that he would prefer to have descended from an amiable beast than from a savage man.

BIOPLASM IN DISEASE, AND THE DEGRADATION OF BIOPLASM.

Having considered the changes taking place in simple living matter, and those wonderful phenomena which succeed one another with perfect regularity and in perfect order, until the formation of the organism, with its complex tissues and organs, is accomplished, let me ask your attention to vital phenomena of a different kind, which result in degradation as regards formative power, although there is *increase*, not diminution of those changes to which I would restrict the term *vital*. We can trace the formation of the living disease-particle from normal living matter, and may see exactly how it results from an alteration of the conditions under which the life of normal bioplasm is carried on. Not only so, but if I have interpreted the observations aright, I shall be able to show how the disease-carrying germ is produced in the living body as a consequence of abnormal changes going on in successive generations of bioplasm particles; these morbid living particles having invariably originated, as I believe, in normal bioplasm.

If the bioplasm of man or one of the higher animals grows more rapidly than in the normal state, its power of forming tissue and of developing structure is impaired. If any structure whatever is produced, it is soft, incapable of discharging its function properly, it is weak, and it does not last. It has been produced too quickly to attain power of resistance. But if the rapidity of the growth of bioplasm is very considerably increased, no tissue at all results. Bioplasm produced by descent from that which grows and multiplies quickly, does not regain formative power. Rapid increase is associated with loss in constructive power, but, as I have remarked, *vital activity* is increased, if by the phrase we mean to imply that more pabulum undergoes conversion into bioplasm, within a given time, than in the normal state; and I know no other meaning applicable to the words.

If the bioplasm of any tissue in a state of inflammation or fever be compared with that of the same tissue in health, it will be found that the bioplasm masses have considerably increased in size. In every kind of inflammation and in all ordinary fever, bioplasm grows. It is, in fact, the increase of the bioplasm that constitutes the malady and gives rise to the characteristic phenomena of the disease. I shall not describe the changes as they may be observed in the tissues, for I have already considered this part of the subject in my Report on the Cattle Plague, published in 1866, in "Disease Germs," and a brief account has been given in one or two other works. The essential change, both in inflammation and fever, seems to be *increased nutrition of bioplasm*. An inflammation, as I have remarked, may be regarded as a local or circumscribed fever, and a fever as a general inflammation. The growth of the bioplasm in ordinary fevers does not proceed far enough to end in pus-formation, because the general changes in the blood, in the nervous system, and in other parts of the body, cut short life long before the whole organism could pass into a state of general suppuration; but how often do we find a sufficiently marked tendency to such a state in the extensive and too often wide-spread suppurations occurring in tissues and organs of persons who just escape death from severe attacks!

Now, what is the cause of the increased nutrition and growth of the bioplasm? In fevers and in every form of inflammation the normal phenomena in the bioplasm undergo a striking change. The bioplasm of healthy tissues, which is living very slowly, taking up little nutrient matter, and slowly being converted into formed material, perhaps gradually diminishing, but never increasing in size—suddenly, quickly,—that is, perhaps within a few hours,—increases greatly in amount. It may divide and subdivide into several masses, all of which grow rapidly and take up a large quantity of nutrient matter. So far from the production of formed material of tissues going on under these circumstances, not only is this change for the time suspended, but much of the formed material last produced, and still in a soft and imperfectly developed condition, is taken up by the bioplasm which produced it, and the latter, in fact, grows at the expense of the structure of the body. Much tissue may in this way be destroyed, and portions of organs completely removed, never to be replaced. The body is thus permanently damaged, for the parts destroyed could not be reformed unless they were developed anew, and this in man and the higher organisms is impossible. The power of new formation, however, does exist, and to a wonderful extent, in many of the lower animals, the fully formed lobster being able to develope a new claw, the salamander and axolotl new limbs, and the lizard a new tail. The muscles, nerve-fibres, vessels, and all the complex tissues entering into the formation of these organs, be it observed, are developed from formless bioplasm, in the same manner as they are formed during the embryonic period of existence. Man cannot develope a new finger—not even a nail or a tooth—if these structures, with the matrix from which they grow, be removed after their development is completed. Not even a bone will be replaced if, with the bone itself, all the soft tissue which takes part in bone-formation be removed. But new vessels, new nerves, new epithelium, new fibrous and some other tissues may be developed even in man long after he has reached maturity. Vessels and nerve-fibres are, however, formed in continuity with, and from the bioplasm of, already existing tissues of the same kind. A low form of epithelium and connective tissue, with the exception of certain textures found occasionally in the ovary, are probably the only tissues which are formed in the adult from bioplasm, which we can be sure has not been derived from that belonging to the tissues. The above may be, I believe, developed from bioplasm which has been produced by the white corpuscles of the blood.

I must, however, leave this interesting question, and revert to the consideration of the cause of the enlargement of the masses of bioplasm in fever and in inflammation; but we may first inquire what would happen if the living matter did *not* increase—if pus were *not formed*, and perhaps much tissue destroyed? Although the inflammatory process in question is undoubtedly destructive, the tissue destroyed is as nothing compared with the amount of texture that would be totally destroyed by decomposition if the phenomena of inflammation did not occur. The bioplasm particles would die, and that regular flow of fluid to and fro in the very substance of all the tissues being deranged, the bioplasts near the part affected would also die, and the organic matter of these, with that of the tissue and organic matter present, would undergo decomposition. The resulting products would diffuse into the neighbourhood, and extensive mortification would ensue. The blood would stagnate in the neighbouring vessels, its bioplasm would die and undergo decomposition. In such cases it too often happens that the death of the organism very soon follows. If, however, a part of the body mortifies, and inflammation occurs around the dead tissue, life may be saved and the dead mass detached. But in this case there must be rapid growth and multiplication of bioplasm between the part that is dead and the healthy tissues.

(*To be continued.*)

EXAMINATIONS.—The following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the 172 candidates at the pass examination for the diploma of Membership of the College of Surgeons on the 16th inst., when candidates were required to answer at least four, including one of the first two, out of the six questions, viz.:—1. Describe the ischio-rectal fossa, mentioning the structures which bound and occupy that space. 2. If the throat be cut across between the os hyoides and the thyroid cartilage down to the vertebræ, what parts would be divided, and in what order? 3. In a case of severe compound fracture of the leg, what indications would lead you to infer that traumatic gangrene had commenced? and what would be your treatment under such circumstances? 4. State the diseases which give rise to extravasation of urine, and the treatment to be adopted in its progress. 5. Describe the treatment of an incised wound penetrating the knee-joint; mention the consequences which may follow such an injury, and the treatment which may be required. 6. What are the symptoms and appearances of a well-marked case of syphilitic iritis? How would you treat it? What may be the unfavourable permanent results?

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ORIGINAL COMMUNICATIONS.

ON THE PREVENTION AND TREATMENT OF SCARLATINA

AND OTHER INFECTIOUS DISEASES BY THE INTERNAL ADMINISTRATION OF DISINFECTANTS.

By DAVID J. BRAKENRIDGE, M.D., F.R.C.P.E.,
Assistant-Physician to the Royal Infirmary, late Physician to the Royal Hospital for Sick Children, Edinburgh.

The limits of this paper forbid any discussion of the relative merits of the various theories entertained regarding the nature of the poisons of infectious diseases. This is of the less importance, however, as the principal object I have in view in the present communication is to record certain facts, which, whether they be in harmony or at variance with a theory, cannot have their truth or practical value in any way affected thereby. The following fragmentary remarks are introduced merely to lead up to the line of practice adopted and advocated.

The whole phenomena in infectious diseases are, I believe, best embraced and explained by the germ theory. Whether the minute particles of living matter which constitute disease-germs consist of animal or of vegetable bioplasm, is a question which remains to be solved. Probably the latter view is the correct one. There certainly does appear to exist a close analogy between the behaviour of such disease-poisons on the one hand, and ferments on the other.

On this hypothesis we can readily understand how certain chemical agents, which have been found to destroy the life or inhibit the activity and multiplication of those organisms which are invariably associated with fermentation and putrefaction, and coincidently, if not consequently, to arrest these processes themselves, should have been successfully employed to prevent the spread of infectious diseases.

It has, thus, long been the practice to subject to the influence of such agents as permanganate of potash, chloride of lime, sulphurous acid, carbolic acid, etc., all liquid and solid substances supposed to be impregnated with the poison of an infectious disease. And striking results have been obtained by mixing the air itself—the medium through which the minute germs might be wafted into the body—with disinfectant gases.

A very universal accord has long been, and still is, given to the belief that by such means infectious diseases can be more or less disarmed of their virulence, limited in their spread, or even altogether prevented.

When fever breaks out in a house, a sense of comparative security accompanies the free and judicious use of disinfectants. Even the prudent physician is careful, in such a case, before leaving the sick-room, to wash his hands with Condy's fluid or carbolised soap.

Supposing, however, that our means of disinfection, external to the body, were perfect, it would still be impossible to keep an individual, in all his surroundings, perpetually thus protected. We are constantly called upon, not merely to prevent the spread of disease, but to cure actual attacks which threaten life. Attention has, therefore, been much directed of late to the following question. When a case of infectious disease has actually occurred, can any disinfecting influence be brought to bear upon the disease-germs within the body? Is it possible, in short, to disinfect the living tissues? Admitting the analogy between disease-action and putrefaction or fermentation, it must be allowed that, if we can so disinfect the tissues of a living animal, that when it is put to death they will resist putrefaction, there is no reason why we should not hope to be able by suitable means to arrest or prevent a zymotic disease.

Professor Polli, of Milan, administered to animals, without any ill effects, large doses of the sulphites of the alkalies and alkaline earths. These animals were killed, and it was then found that, whilst an animal killed under ordinary circumstances rapidly putrefied, those animals to which the sulphites had been administered showed no signs of putrefaction.

Dr. Sansom fed two guinea-pigs "with pills composed of arrowroot mixed with sodium sulpho-carbolate. No other food was given. In four days the little animals had consumed 275 grains of the salt. No obvious effect was produced, except a slight looseness of the evacuations." The animals were then killed, and it was found that "the flesh showed a marked tendency to resist putrefaction."(a)

(a) "The Antiseptic System," p. 330.

In the Royal Hospital for Sick Children, and more recently in the scarlet fever wards of the Royal Infirmary, I have for some years had considerable opportunities of studying scarlet fever. It has been my practice to leave the disease to follow its natural course, and to content myself with the treatment of symptoms or complications when these called for interference. Last autumn, however, a succession of very severe and rapidly fatal cases occurred within a short period. I then determined to test fairly the value of the internal administration of disinfectants; for this appeared to me to be the only method of treatment which had any theoretical value to recommend it. Of the various substances employed for this purpose, the sulpho-carbolate of sodium, originally proposed by Mr. Crookes, and afterwards more widely introduced by Dr. A. E. Sansom, seemed to be the most suitable. The advantages of this salt may be gathered from the following account of its action, which is given by Dr. Sansom in his valuable work on "The Antiseptic System":—

"It was found that twenty-grain doses of sodium sulpho-carbolate could be readily administered to adults. So free from taste was the solution, that many said it seemed only like water itself. The dose was increased in several cases to sixty grains, administered every four hours. The only direct effect noted was a slight tendency to vertigo or dizziness. The odour of carbolic acid could be readily detected in the breath. The urine of a patient who had taken 360 grains of sodium sulpho-carbolate in twenty-four hours, was collected and examined. It presented no evidence of the presence of carbolic acid, but contained a considerable quantity of sodium sulphate. It showed a marked tendency to resist putrefaction.

"It would appear, therefore, that sodium sulpho-carbolate administered to a living animal is rapidly absorbed and projected throughout the system. In the blood or the tissues the double salt is decomposed, the sodium sulphate being set free in the tissues, and ultimately excreted by the kidneys; the carbolic acid, also liberated in the textures eventually, for the most part escaping by the lungs. It is probable, also, that some portion of the carbolic acid is eliminated by the urine. It follows that the administration of sodium sulpho-carbolate is an indirect means of administering carbolic acid; and inasmuch as at least one-fourth of the weight of the sulpho-carbolate employed consists of carbolic acid, we find that an amount equalling from fifteen to ninety grains per diem can be administered of the latter. It is obvious that the direct administration of this amount of carbolic acid would, from its nauseous character and its difficulty of manipulation, be not readily accomplished; and there would be a danger of the toxic action of the latter being manifest—a result which does not occur when the sulpho-carbolates are administered. One would imagine that, in this latter case, there is a gradual evolution of carbolic acid, which at no time is in sufficient amount to manifest its poisonous action."(b)

Commencing with moderate doses of the sodium sulpho-carbolate, I soon found that, as stated by Dr. Sansom, from twenty to thirty grains, every two hours, could be easily taken by adults for a considerable length of time, without any inconvenience or physiological disturbance of any kind.

I have never in any case encountered vertigo, dizziness, or any symptom that could fairly be attributed to the salt. For the last seven months, every case that has been brought into the Infirmary, or has occurred in my private practice, has been at once put on this treatment. I have now treated upwards of sixty cases in this way, without having had one death.

The following is an analysis of fifty cases so treated in the Royal Infirmary. Of these not one failed to make a perfect recovery. Nineteen were males, and thirty-one females. Their average age was 17·5 years. The average duration of the disease before treatment was commenced was 4·4 days. Dating from the outset of the disease, convalescence with normal temperature had commenced—

In	18	cases in	6	days.
„	18	„ „	8	„
„	5	„ „	10	„
„	4	„ „	14	„
„	2	„ „	17	„

In only three cases was recovery long delayed by sequelæ, and in these the sodium sulpho-carbolate treatment was commenced on the sixth, tenth, and fourteenth days of the fever respectively,—too late to prevent the after-effects of the disease. In forty cases no complication interfered with the

(b) "The Antiseptic System," p. 330.

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quick and quiet subsidence of the fever. Albuminuria was observed in five cases: in three of these it merely amounted to a passing trace; in the remaining two it was persistent, and accompanied with blood and renal casts. These two cases are included in the three above-mentioned, in which the treatment was commenced late. Rheumatic pains, which were easily controlled, occurred in three cases. In three there was inflammatory swelling of the cervical glands, which in one strumous child resulted in abscess. In only two cases was any delirium noted: in one it was severe; in the other very mild. In forty-six cases the temperature and pulse fell steadily after the treatment was put in force. In only four was any rise over the first recorded evening temperature noted; in all of these it was insignificant in amount, and of short duration. Only one case came under treatment on the first day of the disease; the eruption was coming out, and was well marked. There was another case of scarlet fever in the same house. Treatment was at once commenced, and next day the eruption had disappeared, and the pulse and temperature were normal, and remained so. In another case, on the ninth day of the disease the medicine was suspended, the supply having run short. On the same evening, the temperature, which both on that morning and on the previous evening had been 100°, rose to 103°.

The patients who are taken into the Royal Infirmary are for the most part adults. But that the disease does not always run a mild course in such cases may be inferred from the fact, that of twenty-four patients admitted into the scarlet fever wards of the Infirmary during August, September, October, and November, 1874—the four months immediately preceding the commencement of the treatment by the sodium sulpho-carbolate,—no fewer than six died.

Up to this point, the results I have obtained by this method of treating scarlatina entirely support the favourable opinion which Dr. Sansom formed of it from his own experience. I have, however, ventured to go still farther than, in so far as I am aware, anyone who has used internal disinfectants has gone. So marked an influence did this remedy seem to exert on the actual disease, and so well was it tolerated in full doses, and for a considerable period, by all my patients, old and young, without exception, that *I determined some time ago, whenever I met with the disease in my private practice, to give the sodium sulpho-carbolate to all individuals exposed to the infection who were not protected by a previous attack.* For I argued, if by internal disinfectants we can destroy or inhibit fever-germs after they have multiplied indefinitely, and produced their pathological effects within the body, may we not reasonably hope that, by previously disinfecting the tissues of the body, the germs which first find their way into them will be much more easily destroyed or paralysed? I therefore hoped thus to be able either to modify or prevent attacks of infectious disease.

To be able so to control the activity of the disease-germs on their entrance into the body, that the resulting attack should with certainty be rendered mild and safe, instead of severe and dangerous, and the patient thus be protected against a future attack, appeared to me the more desirable end to be aimed at. For to prevent the attack altogether, however desirable this might be at the time, would be to leave the individual still liable to the disease. The results which I have up till now actually obtained have exceeded my utmost anticipations, and require, I am fully aware, to be recorded and received with due caution.

I have administered the sulpho-carbolate of sodium for the above purpose in doses varying, according to age, from five to thirty grains three or four times a day, and sometimes, when well borne, more frequently, to those exposed to the poisons of scarlet fever, diphtheria, and measles. It was given in seven families to twenty-two individuals exposed to the poison of scarlet fever; in three families, to fifteen individuals exposed to the poison of diphtheria; and in three families, to eight persons exposed to the poison of measles. The diseases have not in a single instance extended beyond the individuals first affected. In the cases of scarlet fever, the patients, as well as those exposed to infection, were treated with full doses of the sulpho-carbolate; and in this way the infection may have been lessened. The cases of diphtheria and measles were treated on ordinary principles, and the absence of any spread of the diseases in these instances must be attributed either to accident or to the protection afforded by the sulpho-carbolate. I think it right, however, to mention that, although the mortality from scarlet fever has been considerable during the last eight months, I have been informed by several of my professional brethren that cases have not been uncommon in which the disease has remained confined to the member of the family who first took it, and that in some instances the other children, although freely exposed to the poison, have all escaped. I am therefore far from feeling that I have proved, even to my own satisfaction, that by the internal use of a disinfectant we can entirely prevent or modify attacks of infectious disease. The results I have obtained in the above cases are, however, I think, sufficiently remarkable to be recorded, and I now publish them in the hope that during the severe epidemic of scarlet fever which we are likely to encounter during the coming autumn and winter, the plan which I propose, and have to a limited extent tested, may be fully and fairly tried. The question has this further interest attaching to it—that upon its success or failure hinges the whole question of the value of internal disinfection. For if this method is not decidedly effectual at the very outset of the disease, when the poison is small in amount and quiescent, can we expect much benefit from it after the disease-germs have multiplied enormously, and their mischievous effects upon the system have commenced? I have as yet employed only the sodium sulpho-carbolate for the purpose of internal disinfection. Other substances may yet prove equally or more useful, and the plan should be applicable to all the so-called zymotic diseases.

CASE OF IMPERFORATE ANUS, WITH COMMUNICATION BETWEEN THE BOWEL AND URETHRA.

By WILLIAM D. WILKES, M.R.C.S.,

Surgeon to the Salisbury Infirmary.

A dairyman's wife, living near this town, was delivered before assistance could come, on May 15 last. She is about forty years of age, and has had three children, all boys; the eldest is seven. She had puerperal mania after the birth of the first born.

On the 16th the nurse told me that the infant (a large one) had no passage from the bowels. I found a small hole in the site of the anus, which admitted a probe about half an inch. This I enlarged with scissors. No meconium followed; but on the third day it escaped from the penis.

I passed a small gum catheter up the foramen in the anus; it went a short distance into the cellular tissue over the coccyx, and gave no clue to the existence of any bowel. The lower part of the pelvis was very small in proportion to the rest of the body. The tubers of the ischia were close together, and the genital organs were in their natural situation. No impulse or bulging could be felt in the perineum when the child cried. The diagnosis was imperforate anus communicating with the urinary tract.

Dr. Blackmore and Mr. F. Fawson Lee kindly saw the child with me, and we told the parents that the only thing we could do was to cut the child in the fork, and try and find the bowel, and if that did not succeed, to open the bowel from the left groin, but we did not hold out any great promise of success. They declined the operation, and the child died on the 25th (the tenth day). Fæcal matter continued to pass by the urethra, but the child wetted the napkins at distinct times, the urine being stained with the stools remaining in the passage.

Post-mortem Examination (on the 25th, fourteen hours after death).—The abdomen only was examined. We found the small intestines contracted; the cæcum in its usual place, but much pushed back; the ascending, transverse, descending colon, and the sigmoid flexure also much contracted, and apparently empty; the sigmoid flexure had a long mesocolon, was placed high up towards the promontory of the sacrum, and passed obliquely over to right groin, where it became immensely distended as the rectum, the distended gut being behind the abdominal wall in the *right* groin in front of the cæcum; it then descended into the pelvis, occupying the whole of it, and ended by joining with the neck of the bladder and the urethra. The bladder was contracted and empty above the pubes; it lay over the rectum, and was firmly connected with the front part of its lower end. When the bladder was raised you saw the urachus and the ureters, the latter entering it at its base. The right kidney was very large, weighing one ounce seven drachms; the left was

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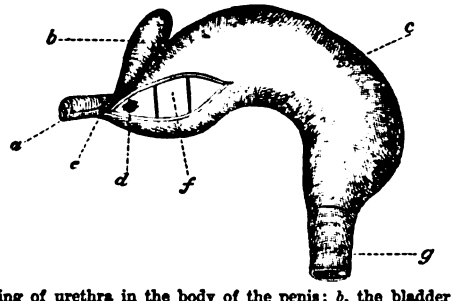
atrophied, weighing only one drachm, and appeared like a supra-renal capsule. On further dissection, after removal of parts, the rectum was distended with solid fæcal matter, and in the *cul-de-sac* at its extremity it had an orifice resembling the mouth of the cervix uteri, about the size of a No. 3 catheter. A probe passed for an inch or so into the membranous part of the urethra, and the passage from the bladder joined it there, forming a common outlet for both organs in the penis.

Remarks.—An incision from the perineum would have opened the peritoneum to puncture the gut; Amussat's operation would have found with difficulty a contracted colon with a mesocolon, about the size of an ordinary cedar pencil; Littré's operation in the left groin would have been equally unsuccessful, as the sigmoid flexure was quite as small—was far away, and crossing to the right groin. The only operation to have been of any service would have been in the right groin; but that would not have relieved the distended lower end of the rectum, and fæcal matter would have still passed from it by the urethra. The result of the post-mortem examination justified the forbearance of pressing any operation on the parents. The child gradually weakened, without any great abdominal distension or peritonitis, until its death. Its suffering was not great, and was relieved by occasional doses of ten minims of paregoric in water.

Dr. Blackmore has made me a sketch of the relative positions of the parts after removal, which I gladly add with his permission.



a, Opening of urethra in the body of the penis; *b*, the bladder; *c*, the distended rectum; *d*, small opening at end of rectum communicating with the membranous portion of urethra at point *e*; *e*, opening of rectum into urethra; *f*, rectum opened to show opening at *d*; *g*, end of sigmoid flexure.

THE CURE OF WEBBED FINGERS.

By PHILIP FOSTER.

In my first case of this kind, some eight or nine years ago, I adopted a method of treatment which was perfectly successful, but seemed too simple and likely to suggest itself to the professional mind to render any publication of it necessary. After dividing the web with the knife, a fold of lint, smeared with unguentum simplex, was placed between the raw surfaces, and retained in its place at the commissure of the fingers by being attached to a piece of string, the ends of which were passed up, one on the dorsal and the other on the palmar surface, to the wrist, and there secured to a band round it. The wound was dressed in this manner until quite healed. As a means of preventing the re-establishment of the web nothing could possibly have answered better, and a clean cut with the knife seems preferable to division by the elastic ligature, being less likely to give rise to local and constitutional irritation, both of which in Dr. Martin Vogel's case (*Medical Times and Gazette*, May 15, page 532), treated by the latter method, were severe. The proper form of the cleft between the fingers could be insured, where this is a desideratum, by using a firm material, such as wire, properly moulded, instead of string.

Leeds.

A New Medical Term.—In an article on the correspondence of the celebrated socialist Proudhon, Dr. Pellarin, in quoting a passage—"Awhile ago I thought myself convalescent, I should rather say *dévalescent*, for I am tending not towards health, but towards sickness,"—says that his readers (*Union Méd.*, June 10) ought to feel obliged to him for noting this creation of so expressive a word by Proudhon.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

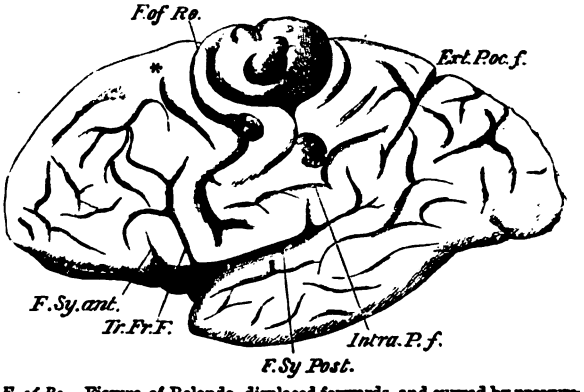
LONDON HOSPITAL.

CASES OF PARTIAL CONVULSION FROM ORGANIC BRAIN DISEASE, BEARING ON THE EXPERIMENTS OF HITZIG AND FERRIER.

(By Dr. HUGHLINGS-JACKSON.)

(*Continued from page 661, vol. i. 1875.*)

The drawing below is intended to illustrate the report of the post-mortem examination of the brain of the patient whose case (Case 18) is reported at page 661 of the last volume of this journal. Both for that report and for the drawing I am indebted to my colleague, Dr. Gowers.



F. of Ro.—Fissure of Rolando, displaced forwards, and curved by pressure of tumour behind it. *Ext. P.oc.f.*—External parieto-occipital fissure. *F. Sy. Post.*—Posterior (horizontal) limb of the fissure of Sylvius. *F. Sy. ant.*—Anterior limb of fissure of Sylvius. *Tr. Fr. F.*—Transverse frontal fissure (præcentral sulcus). *Intra-P. f.*—Intra-parietal fissure, displaced downwards by the pressure of the tumour.

KING'S COLLEGE HOSPITAL.

CASE OF LYMPHADENOMA.

(Under the care of Dr. JOHNSON.)

For the notes of the following case we are indebted to Mr. G. Batterbury, Medical Registrar:—

Thomas W., aged fifty-three years, shoemaker, was admitted as an in-patient under the care of Dr. Johnson, on April 23, 1875. With the exception of a chronic discharge from the nostrils, patient has been perfectly healthy up to the present attack, which began ten months ago. At that time he noticed a small lump on the outer side of the right clavicle, and shortly after a similar lump appeared in the corresponding situation on the left side. Both lumps enlarged gradually. Shortly after, a swelling began in front of the throat. The glands at the sides and back of the neck, and those in the supra-spinous fossa, next became enlarged. About three months ago the glands in the axillæ also became swollen. The swelling has gradually increased in all the parts affected up to the present time. During the past ten months he has suffered from great debility, and has lost flesh. He has never had much colour, so that he has not noticed that he has become paler than before. About six months ago he suffered from difficult breathing, which continued for about a month. This, he says, was relieved by cod-liver oil. Three months ago one of the swollen glands under the left ear became red and burst, and has continued to discharge a little matter every day since. A week ago, difficult breathing recommenced, and the dyspnœa has increased up to the time of his applying for hospital relief. He has had some difficulty in swallowing for the last three months, but not so bad as to prevent his taking solid food until within the last three days. Since three days ago the dysphagia has increased considerably, so that he has been quite unable to swallow solids, and has had some difficulty even with liquids. For the last three weeks the hands have been swollen, and he has been very drowsy for the same period.

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Present Condition.—The patient is a pale, but fairly-nourished man; he is rather deaf, and his voice is impaired. Breath offensive. His eyes have a watery appearance, and there is considerable effusion under the left conjunctiva. The whole of the upper half of the body is œdematous, the swelling of the left arm and hand being excessive. The superficial veins of the chest and neck are enlarged and varicose. He complains of great weakness and drowsiness; also of a choking sensation, and of difficulty in swallowing. The glands of the neck and submaxillary region are all considerably enlarged, forming tumours varying from the size of a walnut to that of a Tangerine orange. One of the enlarged glands under the left ear is red and inflamed, and there is a crust upon it. Patient says it discharges every day. The glands in the axillæ are also enlarged. There is no swelling of the glands of the groin. No pain on pressure over the tumours. The chest expands very slightly on inspiration; resonance normal. On auscultation it is found that there is nowhere free entrance of air. At the back, over the upper dorsal vertebræ, tracheal breathing can be heard. Heart-sounds normal. There is some scrobicular pulsation. Hepatic dulness is less than normal, the upper line of dulness being nearly an inch below the usual situation. Splenic dulness is not increased. On examination of the blood there is no increase in the number of white blood-corpuscles. Urine acid, not albuminous. Pulse feeble, 72, and temperature 98°. Ordered camphor mixture; brandy, beef-tea, and milk diet.

The patient continued in much the same condition, suffering from considerable dyspnœa and drowsiness, and unable to take his food, until April 30, when he died.

At the post-mortem examination it was found that all the enlarged glands were soft and pulpy, and, on section, presented an appearance like brain-substance. In the upper part of the chest there was a large mass lying in front of the trachea and pressing on it. The internal organs generally were healthy.

SEAMEN'S HOSPITAL, GREENWICH.

A CASE OF SCURVY—SOFTENING OF THE SCORBUTIC DEPOSITS—MULTIPLE ABSCESSES—PERICARDITIS—RECOVERY.

(Under the care of Dr. RALFE.)

For the notes of the following case we are indebted to the late House-Physician, Mr. A. Duncan, M.B.

W. M., aged twenty-one, was admitted into the Seamen's Hospital, under Dr. Ralfe, suffering from scurvy, February 13, 1874. His general health has always been good; for the last four years he has been at sea; there is no history or appearance of syphilis; he has never suffered from rheumatism. Twelve months ago he had an attack of fever at Sheffield, which laid him up for nine weeks. For the last six months, during the voyage out and home to Philadelphia, he has been living almost entirely on salt meat, with very few vegetables. About five weeks previous to his admission he began to suffer from diarrhœa, which was prevalent throughout the ship on account of the bad drinking-water. This diarrhœa lasted about a fortnight, and as it ceased the gums became tender, and spots came out on his legs; his knee- and ankle-joints became stiff; hard swellings also formed at the backs of the thighs. About a week after the appearance of these symptoms he knocked his left arm, and the skin at once sloughed, leaving the muscle exposed; bedsores also began to form on his back. The patient is positive that the swelling and stiffness in the muscles of the thighs were present before the injury to the arm.

February 14.—The patient presents a very unhealthy appearance. The countenance is of a dull earthen hue; gums anæmic and spongy; purpuric spots are scattered over the legs. There is a large exudation, hard and firm to the touch generally, amongst the muscles of both thighs posteriorly; at one circumscribed spot in the right thigh fluctuation is perceptible. A large sore exists on the upper arm, exposing the triceps muscle for an inch and a half square. The right axillary and the glandulæ concatenatæ are swollen. There are eight bedsores scattered over the back and hips. Chest-sounds normal. Pulse 140, very weak; temperature 100·6. Ordered lime-juice twelve ounces, wine eight ounces; extra diet, with greens. Mist. pot. tart. ferri ʒj. ter die.

27th.—During the last week the morning and evening temperatures have fluctuated from 2° to 3°. Night-sweats; breath sweetish. The swelling in the left thigh has now commenced to soften, and in both fluctuation is distinct. Axillary swelling increasing. The bed-sores are healing, and a line of cicatrisation is commencing round sore over the triceps. Wine increased to sixteen ounces. To take acidi nitromur. dil. ʒss., quinæ sulph. gr. iv., inf. cinchonæ ʒj., ter die.

March 10.—Has had cough for the last few days, which has been increasing; no abnormal sounds in lungs; breathing only feeble. On auscultating the heart a rasping sound, systolic, can be heard over two spots at the cardiac region—viz., over the pulmonary cartilage and the space above it, and at the extreme limit of the apex-beat,—not audible elsewhere. Relative cardiac dulness in third space. Complains of great pain to-day in right popliteal space, and a fresh abscess is beginning to form in the lower border of the right gluteal fold. Bowels relaxed. Fluctuations of temperature 3° to 4°; lowest morning 98·8°, highest evening 103·6°.

12th.—Cardiac dulness now reaches to second rib; the rasping sound no longer audible at the apex, or below level of third rib, but above the rib is heard loudly. Heart's beat perceptible in fifth and sixth spaces. The abscess in the right axilla pointing at the outer boundary, was opened to-day, and eight ounces of pus evacuated. The glandulæ concatenatæ of the right side are rapidly enlarging. Fluctuations of temperature 4° to 5°; lowest morning 97·8°, highest evening 103·8°.

14th.—Gluteal abscess opened this morning; six ounces of pus evacuated.

24th.—Abscess in left posterior thigh opened, and twelve ounces of pus evacuated.

25th.—Abscess on right side of neck opened, and four ounces of pus let out; all the abscesses are washed out with carbolic acid, and are discharging freely.

31st to April 8.—Fluctuations of temperature 3° to 4°; lowest morning 96·6°, highest evening 101·4°. No discharge from left thigh or neck. On the 5th the abscess in the posterior part of right thigh opened, and eight ounces of pus let out.

8th to 14th.—The axillary, gluteal, and abscess in right thigh discharging freely. Pulse 150, very feeble; temperature 103°. Ordered tinct. digitalis ♏x. to the quinine mixture.

18th.—Temperature decreased; lowest 98·6°, highest 100°. Drainage-tubes to be inserted in gluteal abscess and right axilla. Præcordial dulness more marked; slight prominence of left axillary fold; relative cardiac dulness up to clavicle; wavy cardiac pulsation visible from clavicle to apex-beat.

19th to May 23rd.—The various abscesses continue to discharge freely. Temperature about normal, except when any of the abscesses become blocked. General condition improving. The most forcible cardiac impulse is felt in fourth space in the nipple line. The impulse, however, can be felt as low as the sixth rib, about one inch external to the nipple. A friction fremitus has now become perceptible over the whole cardiac area. A double rasping sound is also audible all over, from above nipple to clavicle. At apex the first sound has lately become rather blowing. Cardiac dulness extends from first rib to third rib absolutely, relatively to clavicle.

30th.—The last drainage-tube removed.

June 13.—Quinine reduced to two grains.

16th.—No discharge from any of the abscesses.

July 12.—Has gained rapidly in flesh and strength; is now quite fat. Feels no pain in chest, nor shortness of breath. Pulse 86. Examination of the chest before the patient's discharge gave the following results:—*Patient standing up:* Left side of the chest fuller anteriorly than the right. Superficial veins well marked on both sides anteriorly, but most apparent on the left. Præcordium slightly prominent; faint wavy impulse apparent. Point of greatest impulse in fourth space, just above fifth rib, about one inch internal to nipple. No friction fremitus palpable. On the left side, dulness begins in second space, is well marked at third rib, is of triangular form, and extends down to costal margin. External line of area of dulness descends skirting inner side of nipple to join base of triangle, about three-quarters of an inch external to nipple. No friction sound audible now, though a week ago it was plainly heard in the second space. *Patient lying down:* Friction fremitus can be felt from about centre of cardiac dulness up to second rib. Fremitus synchronous with heart's action. Cardiac dulness begins relatively above second rib, and extends down to sixth rib, somewhat quadrilateral; the external line skirts outside the nipple to join base about three-quarters of an inch to one inch external to nipple.

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Rasping sound audible over second left interspace close to sternum, rendered more distinct by pressure, synchronous with cardiac movements; not audible at apex or in arteries of neck, or at back. No blowing sounds audible. On turning over to the left side, the greatest impulse shifts from an inch internal to nipple to an inch external.

13th.—Patient discharged; promised to visit as an out-patient, but did not do so.

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Medical Times and Gazette.

SATURDAY, JULY 24, 1875.

A REVIEW OF THE DEBATE ON PUERPERAL FEVER.—No. III.

The term "puerperal fever," if continued for a time from habit and for convenience, must have received its death-blow during the late discussion, and it may be well to consider its probable successor (or we would rather say successors) in any future nomenclature of disease. Dr. Farre suggested substituting the plural for the singular, and saying "puerperal fevers," or, what he thought might be better still, "post-partum fevers"; but it has been pointed out that the diseases which would gather under this grouping are not *all*, strictly speaking, fevers. We think a better suggestion was made—viz., to call each of the varying diseases by the name which, either by its clinical symptoms during life or by post-mortem appearances, gave the leading features to the case, preceded by "post-partum"; thus we should have in the register "post-partum erysipelas," "post-partum peritonitis," etc. This brings us naturally to a consideration of those sources of information from which we have culled in the past, and the paths which this careful re-examination of the subject has marked out for future research.

Before considering these, however, we would briefly allude to what seems to us an omission which somewhat mars the completeness of the discussion—viz., the very slight reference which the majority of the speakers made to the subject of treatment—the only points which received any attention being the possibility of cutting short one form of the disease by prompt intra-uterine injections, combined with the removal of any decomposing materials from the uterus and genital passages. In this respect the debate stands in curious contrast beside the writings of most of the older authors who have dealt with this subject, treatment with them occupying a very prominent place. How far the variety of modes of treatment which they recommend, each with such certainty, but with the most contradictory results, or the scant attention the subject received from Mr. Wells in his questions, is to be credited with this omission, we cannot say. Possibly those best able to speak from experience had found the results of treatment so little encouraging, that they preferred to forget them. In any case, this branch of the subject was conspicuous by its absence; and prevention, which is certainly better than cure, did not receive much more notice.

Another special point, which must strike anybody who carefully reads the discussion, is the elaborate care many of the speakers take to distinguish two classes of cases which arise without any specific origin—first, those arising from decomposition of the discharges, etc., where a method of contagion can be traced; and second, a class of cases in which, because no such method can be traced, they would have us believe none was present. We venture, however, to predict that if ever the golden age arrives when we can speak with the authority born of knowledge on the causes and varieties of these terrible diseases, we shall find the mysterious so-called "autogenetic" cases conspicuous by their absence. And here we would point out that, in all probability, those cases which have been brought forward as depending on chill, mental emotions, etc., are merely caused indirectly by these agencies, the *materies morbi* being present before the chill, etc., though the state of the patient prevented it from acting. It was in abeyance, but the chill or the shock of some kind lowered the vital power, and the waiting evil stepped in. A common-place illustration of a similar course of events must be familiar to all—viz., the varying risk from the infectious fevers, according as the person is in robust health, and has taken a meal, or encounters the infected air, tired and weary, and with an empty stomach.

Returning to the consideration of the paths which future inquirers have had indicated for them to tread, we find three main sources of information clearly pointed out for us by Dr. Fordyce Barker. First, the causes; and these we must examine by a careful tracing of each separate case to its apparent source, and by the aid of the chemist and microscopist unravel the minute anatomy (if we may call it so) of the source when found.

Having carefully tabulated all we can learn on this head, we must turn to the clinical features, and compare them with whatever knowledge we have gained under the first head, and then we must also carefully watch the behaviour of the disease when met with various remedies and modes of treatment; and if, unhappily, the case terminate fatally, we must carefully compare the morbid anatomy with all and each of the facts we have observed and noted down from the above-named sources. Then, having a perfect record of one case, we can compare it with others in our own hands, or in those of friends. If diligent inquirers in various fields, and with varying aptitude for special branches of the research, would thus carefully tabulate facts on a uniform plan, we believe ten years would find us much more advanced in our knowledge as to cause, prevention, and cure than we are at present. We hardly share, however, the sanguine hopes of Dr. Richardson as to our means of counteracting the blood-poisons by special remedies.

Another point, on which the discussion has plainly shown us that our knowledge is imperfect, is the actual condition of the parturient woman during utero-gestation, and after ordinary delivery. A series of careful observations on the temperature, pulse, respiration, and excretions during fixed periods before labour, and after, would not be difficult to collect, and would be of immense value. To these might be

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added a careful record of the chemical and microscopical characters of the lochia under varying conditions. It is by no means one of the least curious features of the late debate to note through what different spectacles those speakers who have touched on these points have seen the physiological condition of the puerperal patient: some insisting that she is in a condition of bare equilibrium, ready to be upset on the slightest provocation; while others consider the work of Dame Nature so perfect that they regard the peculiar state of the blood—the secretion of milk, and the involution of the uterus—as so many safety-valves, instead of elements of danger. We suspect the truth will, as usual, be found between the extreme opinions. The hyperfibrinated condition of the blood being, to some extent, neutralised by the hæmorrhage, which occurs even in a simple case; while any excess of blood is required for the formation of the milk, and to enable Nature to replace the degenerating uterine muscular fibres with new muscle. In short, if we could shield the parturient woman from all outward sources of infection, we believe parturition would be as safe, in or out of hospital, from the hydra-headed post-partum diseases, as our surgical patients now are under careful management from the dreaded foes of the past—pyæmia and septicæmia. We venture, in conclusion, to hope that, should another generation have to discuss this subject, both the prevention and cure will be found on a firmer footing than they are at present; built, in fact, on that sure foundation—a knowledge of the cause.

COSMOPOLITISM AND LONGEVITY OF THE JEWISH RACE.

For all Christians the history of the "chosen race," in their great past and in the time present, must have an exceptional interest; but, putting all question of religious faith entirely on one side, and looking on the matter purely as one of history, the study of their position and characteristics must, we imagine, possess great attraction for all students of mankind. We therefore do not hesitate to call attention to some learned and able papers on the great "present and material advantages" of the Jewish race, which appeared in the *Jewish Chronicle* in March last, from the pen of Dr. Maurice Davis. After pointing out that naturalists of high rank, and distinguished physiologists and observers, such as Prichard, Baron Larrey, and others, have assigned to the Jews a very perfect and advanced physical development, and have claimed for them "the exclusive property of cosmopolitism," Dr. Davis goes on to give proofs of the truth of these propositions. M. Boudin, in an article in the *Journal de la Physiologie* (April, 1860), draws from his investigations a number of important conclusions, the first and the two last of which are that, "It is nowhere proved that the different human races are cosmopolitan, as has been believed up to this time, and that a great number of facts tend to establish even the contrary"; "That the Jewish race can become acclimatised and perpetuated in all climates"; and "That the Jewish race obeys statistical laws of birth, diseases, and mortality completely different from those to which the other populations submit, in the midst of which it lives"; and in support of these conclusions our able professional brother brings forward statements and opinions from the writings of Professor Paul Broca, M. Jacquinot, Dr. Knox, and even Dr. Theodor Waitz, and from Dr. Stockton Hough, Dr. Mapother, Dr. Stallard, and other authorities. And it must be admitted that the authorities adduced go far to prove the statements of Lamoignais and Boudin, that the Jew occupies every part of the world, and nothing can destroy him; that "not only is he acclimatised under the tropics, but he has also lived during a long series of centuries in the only country in the globe situated 400 metres below the level of the sea—in the valley of Jordan,"—and that, in many countries where he may be studied and compared with other people amongst whom he lives, a difference more or less pronounced is always discovered in the proportion of births and deaths, in that of the sex of the births, and in the degree of predisposition for different maladies.

One marked and unvarying peculiarity of the Jewish race seems to be that the proportion of male children born is greater than among Christians in the same places; the excess of male births being, it is said, 18 per cent. among the Jews, while among Christians it amounts to only 6½ per cent. But there is, however, a markedly smaller proportion of males of all ages among the Jews than among the general population; and this is considered to be due, most probably, to the greater longevity of the females among the Jews. The Jews are generally a remarkably healthy race. Dr. Stallard, in his work on "London Pauperism," noticed that they are remarkably free from scrofula. Dr. Mapother and other authorities have also recorded their freedom from prevalent epidemics—from cholera, plague, typhus, dysentery. It is said that they suffer little from "intermittent fevers, convulsions, mesenteric wasting of children, and inflammations of the respiratory organs"; and M. Eisenbaum "insists on the extreme rarity of croup in Jewish children." Dr. Stallard states, also, that the mortality among Jewish children in London from one to five years of age is much lower than among Christian children during the same period of life. On the other hand, it is allowed that Jews suffer frequently from non-inflammatory skin diseases, and some other affections. M. Lévy has estimated that the mean average duration of life among the Jews exceeds that among Christians by about five years; and Dr. Davis says, on the authority of Dr. Stallard, "the average duration of life of the Christian in London is thirty-seven years, of the Jew forty-nine." These facts—if they are facts—are very remarkable, and one result from them should certainly be that the Jew ought to be able to insure his life at lower rates than a Christian can; though we do not know whether or not this point has ever been raised by Jews when insuring their lives. This greater longevity is due no doubt to many causes: to the care and solicitude with which the Jews tend their children, their aged and infirm, and their poor; to their habits of morality and temperance; to the fact that they do not engage in mining, and some other hazardous or unhealthy occupations; and to the care with which they observe some of the hygienic measures and precautions prescribed by the Mosaic laws. Some of these advantages are balanced, or more than balanced, by the almost universal habits of the Jews to reside in large towns and cities, and by the rarity with which they engage in agricultural pursuits; and additional causes of their longevity are suggested in the fact that they are obliged to keep two days of rest in each week, and in the valuable properties of the "well-preserved qualities of an unmixed race." To this last fact—the jealous care with which the "chosen race" have kept themselves pure and unmixed—Dr. Davis and other writers chiefly attribute, we think, the cosmopolitism of the race, their longevity, and all their most marked and characteristic physical and intellectual powers and gifts.

INTRAVENOUS INJECTION OF AMMONIA IN SNAKE-BITE.

The report of the Government Commission in India, as to the value of Professor Halford's treatment of snake-poisoning by the intravenous injection of ammonia, has naturally attracted a good deal of attention on the part of the medical profession in Australia, among whom the subject is regarded as a question of personal interest, apart from its scientific importance. At the request of the Medical Society of Victoria, Professor

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Halford has prepared a digest of his experiments on animals with the intravenous injection of ammonia, and obtained reports of all the cases of snake-bite known to him in which his treatment has been adopted. This digest and report were read and considered at a special meeting of the Society in March last. In introducing the subject to the notice of the members, the President, Dr. Bowen, said that the report of the Government Commissioners was calculated to throw strong doubt upon the competency or honesty of nearly forty practitioners in the colony, many of whom are men of known talent and experience. He believed that the intravenous injection of ammonia was a powerful agent in treating not only snake-poison, but also various other blood-poisons, and in his opinion Professor Halford's method had been treated unfairly both in India and at home. The Commission reported that a large proportion of the bites of Australian snakes were, under the usual conditions, altogether ineffective, and that 75 per cent. of the dogs bitten by the tiger and black snakes (Australian) recovered; but, according to Professor Halford's experiments, of thirty-one dogs bitten, twenty-seven died and only four recovered. From a careful perusal and consideration of Professor Halford's experiments, and the cases that would be submitted to the Society, he felt justified in drawing the following conclusions:—"1. That the bites of Australian poisonous snakes are extremely deadly. 2. That the symptoms are the same here (Australia) as in India; that they differ somewhat in animals and man; that they are distinct in character from those of alcoholism. 3. That ammonia is the best form of stimulant to exhibit; that the intravenous injection is the best method for its administration." These conclusions, it will be remembered, are directly opposed to those of the India Commission, which briefly were as follows:—"That effective poisoning after the bite of an Australian snake is the exception rather than the rule, and that in the case of the most poisonous species a large proportion of bites are ineffective. That although the virus of the Australian and Indian snakes acts in precisely the same manner, that of the cobra is proportionately more powerful and more rapidly mortal than that of Australian snakes. That the intravenous injection of ammonia possesses no antidotal or remedial power; indeed, it rather expedites than retards the tendency to death." These being the conclusions of the India Commission, after a series of well-conducted experiments and patient investigation, it follows that on one side or the other the experiments cannot have been carefully conducted or accurately observed, or fallacious deductions have been made. We cannot believe that the Commissioners had any desire to treat Professor Halford unfairly, or would knowingly pass an unmerited verdict on his mode of treatment. There is no doubt that their only object in the inquiry was to elicit truth, and it has yet to be shown that their conclusions are not fully borne out by the investigations and experiments conducted by them. On the other hand, it appears to be equally certain, from the forty-two cases reported by Professor Halford, that the intravenous injection of ammonia has been followed by immediate reaction and restoration to consciousness in several cases where death appeared to be imminent from the bite of Australian snakes. In some of the cases, though, it seems possible that the state of the patient may have been in part due to the free exhibition of brandy and other alcoholic stimulants. Seeing the conflict of evidence, it is satisfactory to find that the members of the Victoria Medical Society declined to pronounce a positive opinion on the merits of the intravenous injection of ammonia, and that they have determined to appoint a subcommittee to investigate the subject, independently of Professor Halford, such committee to take action in the early part of the next Australian summer. It is said that during the winter months the snakes are less venomous than in the early months of summer, and that their poison becomes exhausted in captivity. The latter fact is advanced as a reason why the snakes sent from Australia for the experiments of the India Commission were found to be comparatively harmless.

THE WEEK.

TOPICS OF THE DAY.

THE importance of extreme vigilance on the part of our port sanitary authorities has lately been well illustrated. A seaman from a vessel lying off Deptford, manned by Lascars, was sent to the Seamen's Hospital at Greenwich, but as he was found to be suffering from small-pox, he could not be admitted. The port sanitary officers were immediately communicated with, and Dr. Harry Leach, the medical officer of health for the port, at once proceeded to inspect the ship. Under his directions, the patient was removed, without loss of time, to the Stockwell Hospital, in the Greenwich ambulance. The crew were then ordered out of the vessel, and their kits, beds, and bedding were, without delay, fumigated and disinfected; all the men were revaccinated, and shore-leave was stopped until it should be ascertained that no other cases of the disease were likely to occur. These stringent measures were perfectly successful, and no further outbreak is reported; it is not, however, difficult to understand how a want of proper supervision, and prompt action, may be the means of allowing an epidemic to be introduced into the metropolis; and we cannot too strongly point out the necessity for instant and firm action whenever similar cases occur in our ports.

Latest accounts from Syria report that at Hama the outbreak of cholera has remained stationary; several cases and deaths have been registered daily. Dr. Dillon, the resident sanitary officer of the Turkish Government at Mossul, who had been sent to Hama by the authorities, himself fell a victim to cholera on the 19th of last month, only three or four days after his arrival there. The disease is stated to be undoubtedly true epidemic cholera; it is extending to the surrounding villages, and cases have shown themselves at Alleppo, Damascus, and Antioch. The Central Board of Health in Constantinople is to send off immediately a medical commission to the cholera districts of Syria.

Our attention has been called to a letter which appeared in the *Dublin Daily Express*, in May last, on the subject of the lax manner in which the Public Health Committee for that city have been performing their duties. The letter in question was communicated by the honorary secretary of the Dublin Sanitary Association, and asserts that, although a case of typhus fever occurred at a certain place early in March last, no steps were taken by the Health Committee to disinfect the room which the sick person occupied until April 2, when their attention was called to the circumstance by the Association. We should be inclined to imagine there must have been some misunderstanding about the case in question; if not, the spread of epidemic diseases in Dublin city would seem rather to be encouraged than checked by its Public Health Committee.

The Manchester and Salford Sanitary Association has presented a petition to the House of Lords, in which various suggestions are made with reference to the Public Health Bill now before Parliament; briefly, the recommendations are as follows:—That all cases of fever, etc., shall be speedily brought under the notice of the sanitary authority of the district; that all medical men attending such fever cases shall be bound to give immediate notice thereof to the local sanitary authority; that proprietors of houses in which fevers, etc., occur shall be duly informed of the same, so that they may take all sanitary precautions; that the proprietors of houses shall be bound to give notice of any outbreak of

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fever, etc., when no medical man is in attendance, and that the local sanitary authority receiving such notice shall send printed directions for the disinfection of clothing, etc., by various methods, some of which shall be within the reach of the poorest persons. Various penalties are proposed to be enacted for non-compliance with these regulations; and, finally, it is suggested that every local sanitary authority shall make monthly returns to the Local Government Board of all cases of fever or other infectious disease within the Act, of which they receive notice as above-mentioned. It is not intended, we understand, that the work shall be done gratuitously.

On the 6th inst., at a special general meeting of the governors of the Bradford Infirmary and Dispensary, Mr. Harry Meade, whose term of office as honorary surgeon to the above institution had expired, was re-elected to the post for a further period of ten years. At the same time, Dr. Bell and Dr. Goyder were appointed additional honorary medical officers to this Infirmary.

We have to record the appearance of a new scientific publication entitled the *Electrical News;* it is issued weekly, and is designed to supply the want, said to have been long felt, of a periodical which, without degenerating into unscientific records of unimportant events, shall keep the electrician advised of whatever is daily occurring of peculiar interest to himself. It is edited by Mr. William Crookes, F.R.S., and promises to produce articles which shall be of value, not only to those who study electricity as amateur experimentalists or scientific inquirers, but also to those whose daily life is bound up with the advancement of practical knowledge in all departments of the science, such as electricians, telegraphists, electrotypers, electro-platers, etc.; and to this class of society it will no doubt prove a most useful and interesting publication.

Few voyages leave such disastrous records behind as that of the *Mary Evans*, commanded by Captain McCracker. This vessel sailed from Congou to Rotterdam with a cargo of palm oil and nuts, and put into Falmouth on the 15th inst. with six of her crew dead from fever, and two sick; the master and steward were the only persons able to undertake the duty of managing the ship.

Diphtheria does not appear to have been entirely eradicated at Woolwich. After all the sanitary improvements which have been carried out, the child of a soldier was attacked by this disease, and died last week. This fact would suggest that the root of the evil, whatever it is, has not yet been discovered.

An army circular has been issued this month on the constitution and general duties of the Army Medical Department. From a careful perusal thereof it does not appear that anything novel is introduced, but we note that the details of the duties have been much abbreviated, and a great deal of extraneous matter taken out. The orders for medical officers "attached" to corps are also added, as well as regulations relating to station-hospitals. These latter regulations are of course intended to meet the change from the regimental to the station-hospital system. At the same time, a new dietary for army hospitals has been compiled and circulated, showing what extras are authorised, and a fresh diet-table has been prepared for the guidance of medical officers in charge of military hospitals.

Two deaths have recently occurred from the administration of chloroform, and, singularly enough, in both cases the patients were about to be operated on for disease of the eye. The first case was that of a seaman aged twenty-seven, at the Ophthalmic Hospital, Gray's-inn-road. Whilst on a voyage to China he had been wrecked, and in saving himself had received an injury to the right eye. Mr. Wilkinson decided to operate, and the man was admitted into the hospital on Thursday, the 15th inst. On the following morning chloroform was administered, but after a lapse of three minutes his face became discoloured. Artificial respiration was at once resorted to, but without avail. The post-mortem examination showed that death resulted from cardiac syncope. The other case took place at Addenbrooke's Hospital, Cambridge. The wife of an innkeeper of Soham was admitted on the 14th inst., suffering acutely from the effects of an accident to one eye. Learning that nothing but the removal of the eye would afford relief, the patient decided to undergo the operation, provided chloroform was administered to her; this was accordingly given, but with fatal results. Every means was used to restore animation, but the patient never rallied. Professor Humphry, who was to have operated, stated at the inquest that the chloroform had been administered by Mr. Wherry with great care and caution, and he very rightly took the opportunity of observing that the public should know that the benefits of anæsthesia cannot be had without the attendant risks; and all agencies for producing unconsciousness are attended with some degree of danger. The jury returned a verdict that deceased died while under the influence of chloroform, and that the same was carefully and properly administered. Mr. George Pollock, of St. George's Hospital, has, through the *Times*, made these two deaths an opportunity for directing public attention to the specially great danger attending the use of chloroform as an anæsthetic as compared with ether. Mr. Pollock acknowledges that the question, whether or not it is right to any longer use chloroform, which is dangerous, rather than ether, which is safe, has been brought forward in the leading medical journals, but he thinks it necessary to rouse the public to take an active interest in the matter. For ourselves we most fully recognise the fact that a very serious risk always attends the full use of chloroform; we never see it given to anæsthesia without anxiety, and we are prepared to maintain that its use in any minor operation is quite unjustifiable; but we are not prepared to say with Mr. Pollock that ether is "absolutely safe," and that the use of it, when pure, has "never been known to destroy life." The question is, however, as Mr. Pollock says, a big one, and one demanding much more notice than we can give it on this occasion.

Dr. George Buchanan has been elected President of the Society of Medical Officers of Health, on the retirement of Dr. Letheby.

A METHOD OF INCREASING THE SOLUBILITY OF SALICYLIC ACID.

An objectionable property of the new antiseptic, and threatened rival of carbolic acid—salicylic acid—is its insolubility in cold water, so that it has been, till now, impossible to obtain a stronger solution of it than 1 part to 300; while the alcoholic solution and the pure acid are too irritating to be applied directly to a wound. Those, therefore, who are specially interested in comparing the antiseptic properties of the two acids, will be glad to know that the solubility of the latter is enormously increased by the addition of borax to the water, so that as much as ten parts of the acid can be dissolved in 100 parts of water, if eight parts of borax be present. This discovery we owe to Dr. H. Bose, assistant in the Surgical Clinic at Berlin, who has contributed a paper of much interest to the *Berliner Klinische Wochenschrift* (No. 28, July 12), to which we are indebted for the following details. The solution should be made by first dissolving the borax with the aid of heat, and then gradually adding the salicylic acid to the boiling fluid. Since commercial samples of both these drugs are not chemically pure, a small amount separates, and requires to be filtered off on cooling. The filtrate is a clear yellowish or light-brown fluid, according to its concentration. The proof that the addition of borax does

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not convert more than a part of the salicylic acid into salicylate of soda—a salt devoid of antiseptic properties—is easily shown; for if we dissolve 6·9 parts of the acid in 100 parts of boiling water, and then add 2·89 parts of bicarbonate of soda, the carbonic acid in the latter is set free, while the soda combines with the salicylic acid, and on cooling there is such an abundant deposition of the excessive acid that the whole liquid becomes nearly solid, owing to the formation of crystals. Now if the whole be reheated until the acid is completely dissolved, and then 3·58 parts of boracic acid added, no deposit of any kind occurs on cooling. The most suitable strength in which the above solution can be used for direct application to wounds, is, according to Dr. Bose's experience, one which contains from 2½ to 5 per cent. of salicylic acid, and 2 to 4 per cent. of borax. Solutions containing more than 5 per cent. of acid are too irritating, and give rise to a very abundant capillary hæmorrhage if applied to the surface of a fresh wound. Dr. Bose speaks highly of the result obtained with the boro-salicylic dressing in a number of cases of removal of small tumours. The operations were all performed without the spray, and only the sponges and forceps used were cleansed antiseptically with the above solution. The wound was thoroughly washed with the same liquid, and then a thick layer of salicylic wadding, also soaked with it, was laid on its apposed edges, so as to reach several finger's-breadths beyond them, and fixed by means of a bandage; catgut was used to tie any vessels requiring ligature. In those cases where the edges of the wound could not be accurately brought together, Dr. Bose put in catgut sutures, and then filled the spaces between the edges with the salicylic solution by means of a small syringe, and applied the wadding over all. The greater number of the cases thus treated healed by first intention, without the formation of a drop of pus.

Among a number of casual injuries treated with the above solution, one especially deserves to be briefly described. A workman managed to cut into the back of the metacarpo-phalangeal joint of the left forefinger with a saw, so as to divide the extensor tendon, to open the capsule of the joint obliquely, and to tear the cartilage of the head of the metacarpal bone with the teeth. He applied for relief half an hour after the accident. Dr. Bose tied one artery, which was spurting, with catgut, and then kept the wound filled for several minutes with the solution of borax and salicylic acid. He then united the ends of the tendon with four catgut sutures, and finally closed the wound with other sutures of the same material. It was then dressed as above described, and the extended fore and middle fingers were bandaged together on a splint, which only fixed the finger-joints, and did not interfere with the movement of the hand. The patient was kept in bed, but, though he was slightly feverish on the first three days, there was no pain or swelling in the hand to necessitate an examination of the parts, and the dressing was not removed for *fourteen* days, when the wound was found completely healed. Dr. Bose concludes his paper by stating that he has as yet no experience of the value of the boro-salicylic acid solution in dressing *large* wounds, and that he has not found it invariably successful in the case of small ones, but he thinks that the frequency of small wounds in practice, the simplicity of the method, and the facility with which healing by first intention can be obtained by it, render it worthy of a passing notice.

UNQUALIFIED MEDICAL PRACTICE IN ISLINGTON.

The adjourned inquest on the body of Emma Jane Plain, an infant nine months old, whose death occurred under the circumstances detailed in our last issue, was held before Dr. Hardwicke on Monday last. It will be remembered that the deceased child, who was suffering from diarrhœa, was taken by its mother to a provident dispensary in Copenhagen-street, Islington, where it was seen by a man named Kerr—who is unqualified to practise,—and that it died on the following morning, after taking three doses of the medicine prescribed by him. At the suggestion of Kerr, Mr. T. J. Kane, L.R.C.P. Edin., was sent for, but, as he did not see the child alive, he refused to certify as to the cause of death, and hence the present inquiry. The case was adjourned from the previous Monday, in order that the attendance of Mr. Kerr and Mr. Kane might be secured. On the reassembling of the Court, Mr. Merriman, solicitor, said he appeared on behalf of Mr. Kerr, and, before he could permit his client to be examined, he must ask permission to cross-examine Mr. Derry Jones, who made the post-mortem examination of the deceased, and whose evidence, as reported, was the most preposterous ever given in a court of justice. The coroner said he was not compelled to allow a cross-examination; he would first take Mr. Kane's evidence. This gentleman, having been sworn, stated that he was called by the father of deceased to visit the child. The father said he had been referred to him by Mr. Kerr. He went and found that the child was dead. He refused to give a certificate of death. Mr. Kerr was not acting as his assistant, and he had no connexion whatever with the Provident Dispensary in Copenhagen-street. The coroner, having read the notes of Mr. Jones' evidence, given by him at the first hearing, and which was to the effect that the child died from exhaustion consequent on diarrhœa, and that, in his opinion, the treatment prescribed by Mr. Kerr was improper, Mr. Merriman was permitted to cross-examine Mr. Jones. The cross-examination was conducted with a view to show that the treatment prescribed by Kerr was that recommended in such cases by Dr. Tanner and Dr. Watson. Mr. Jones explained, however, that the extracts quoted by Mr. Merriman referred to the treatment of diarrhœa in adults, and were not intended to apply to infantile diarrhœa. Mr. Kerr was then examined, and said that he possessed no medical qualification; he attended lectures at the Manchester Royal Infirmary, but had not gone through the full course of study. He saw the deceased at the dispensary as a patient, and prescribed castor-oil, milk, brandy, and a mixture containing liquor ammoniæ acetatis. He gave the mother Dr. Kane's card, and told her to fetch Dr. Kane if the child became worse. In reply to the jury, Kerr said he had sent cases to Dr. Kane on previous occasions. He did not keep cards on purpose. A juryman asked how he obtained the cards, whereupon Dr. Kane interposed, and said that he believed he had given Kerr one or two cards at his request, but there was no understanding between them as to patients. In reply to further questions, Kerr stated that he attended confinements and simple cases; but, acting on the advice of his solicitor, he refused to state whether he was proprietor of the dispensary, or whether any qualified medical man attended to give advice. The coroner having summed up, the jury returned a verdict of "Death from natural causes," and appended the following opinion:—"The jury also further desire to draw attention to the fact that the deceased received medical treatment from a dispensary in Copenhagen-street, and that advice and medicine were given by an irresponsible and unqualified practitioner. They desire to add that dispensaries under the management of unqualified practitioners are fraught with danger to the community." Mr. George Brown, honorary secretary of the British Medical Defence Association, attended and watched the case on behalf of the Society.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

The thirteenth annual meeting of this Society was held in the Council Chamber on July 13. The yearly report submitted by the Secretary showed that the Society had made a great advance during its past session. The members had increased from forty to fifty, and their attendance at the ten

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meetings of the session had been nearly one-half greater than that of previous years. The communications submitted to the meetings, of which upwards of thirty had been made, had shown more general research and originality than previously. One evening of the session had been devoted to a general discussion upon the subject of vaccination, its benefits and dangers. The result determined the Society to repeat such discussions upon some debated medical subject every succeeding session. A number of important morbid specimens had been added to the pathological department. The Society in all respects, financially and otherwise, was pronounced to be in a most prosperous condition. The following gentlemen were elected as office-bearers for the ensuing session:—*President:* E. Bronner. *Treasurer:* W. Whalley. *Secretary:* D. Goyder. *Committee:* R. H. Meade, J. Foster, P. E. Miall, J. Dunlop. *Pathologists:* M. Lee, A. Rabagliati. *Auditors:* W. H. G. Buckley, C. H. Taylor.

ROYAL COLLEGE OF PHYSICIANS.

At a meeting of the College, held on the 19th inst., a petition was brought forward for consideration, signed by seventeen lecturers on psychological medicine in England and Scotland, praying that students of medicine may be permitted to substitute, if they so desire, a three-months course of clinical instruction in the wards of a lunatic asylum for the same period of attendance in the medical wards of a general hospital. The petitioners state that—"there are, on the narrowest computation, four hundred men now engaged in the specialty of mental disease, either as officers or as medical attendants, at the asylums and other receptacles for the insane in the United Kingdom of Great Britain and Ireland, this number having greatly increased of late years;" and that there is an increasing difficulty in procuring qualified assistants for asylums, owing to the fact that students cannot, without a sacrifice of time which they can hardly afford, avail themselves of the opportunities for studying a class of diseases with which at present they have little or no practical acquaintance; and that "many medical men of skill and repute have declined to give an opinion and certify in cases of insanity, in consequence of the disastrous results into which a faulty certificate may lead them. It is also pointed out that the University of London has the following regulation:—"Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice." The petition had been considered by the Censors' Board, and its "prayer" recommended to be granted; and we are glad to be able to report that the College approved of the recommendation of the Board. We cannot agree with the statement of the petitioners that such diseases as "epilepsy, paralysis, softening and tumours of the brain, chorea, hysteria, hypochondriasis, and others" are "not usually seen in general hospitals," for we should say that all of them, except perhaps the "others," are very commonly seen in general hospitals; but we heartily approve of the "prayer" of the petition, and trust that the rest of the medical examining boards, to all of which it has been presented, will meet it in the same spirit as the Royal College of Physicians of London has. At the same time a letter was received from the Colonial Office, directing the attention of the College to a review of reports on leprosy, and requesting to be informed whether anything therein contained was of such significance as to modify their formerly expressed views on the subject of leprosy. The matter was referred to the former Leprosy Committee.

It appears that the peace of the College is at length disturbed by a question long discussed outside—viz., the right of medical men who are members or licentiates of a college of physicians, but not graduates in medicine of any university, to assume the title of Doctor. Several communications have been received on the subject; and, we believe, gentlemen who are affiliated to the College as licentiates, but have no M.D. or M.B. degree, claim to be addressed as "Dr." So-and-so in letters received from the College. A committee was appointed to consider and report on the matter, and we certainly do not envy them their task.

THE BENGAL MEDICAL COLLEGE.

The fortieth session of the Medical College of Bengal closed on March 31 last. From the annual report, which has just come to hand, we learn that the College is increasingly popular and successful. The students of the College are divided into four classes—the Primary, or English Class; the Hospital Apprentice Class; Paying Students' Class; and Native Medical Pupil, or Military Class. In the Primary, or English Class, 319 students resumed their studies at the commencement of the session; in addition to which there were 161 new admissions, and 36 re-admissions, making a total of 516, which is the largest number of students in this class since the foundation of the College. The Hospital Apprentice Class numbered 46 students, of whom 16 passed their examinations, 2 were transferred to regimental duty, 1 deserted, and 1 resigned the service. The Class of Paying Students numbered 378, of whom 109 were new admissions. The total strength of the Native Medical Pupil Class was 128. Of these, 27 passed their final examination, 16 were removed for misconduct, 2 were transferred to regiments, and 1 allowed to leave the service. Of the remainder, all who were available—numbering 76—were transferred on June 10 to the Temple Medical School at Bankipúr. Of the English Class, 43 presented themselves for the final examination of the Calcutta University, of whom 13 passed; 166 offered themselves for the "first" examination, but of these only 38 passed, 2 being placed in the first division. The Bengali Classes are now educated at the Campbell Medical School, Sealda, under the superintendence of Dr. Woodford. The full strength of the classes last session was 818, of whom 112 passed their examinations. These figures show that the medical colleges in India are doing a great work in annually sending out into Indian society such large numbers of educated medical men.

The presentation of prizes to the successful students of the above College took place in the Senate House of the Calcutta University on June 15, on which occasion Dr. Norman Chevers, Principal of the College, presided. Among the advanced students, 13 were awarded watches, medals, and surgical cases as prizes, and 1 obtained a scholarship of twenty rupees a month. To the students in the English Class, 26 certificates of honour were awarded; and in the Military Class—which is chiefly composed of Mohammedans—a gold medal was given to Shaik Nizamudin for general proficiency, and 34 other students obtained diplomas and prizes. After the presentation of the prizes, the President gave an eloquent address, in which he spoke of the duties of students and teachers in a college, and the best mode of proceeding with medical studies, strongly advising his hearers to cultivate the faculty of original observation.

NOTEWORTHY INQUESTS.

Two or three inquests were held last week which elicited some peculiar remarks from the coroner who presided over them. The first was held upon the body of a woman aged fifty, the wife of a French polisher, who, owing to her habits of intemperance, had been living apart from her husband; she continued to get drunk, and had been in prison several times. The husband reduced the allowance he made her, in the hopes of checking her propensity for drink, but this only made her worse. On Monday last, after taking a room in Lower Garden-row, St. Luke's, she was found in a fit, her head resting on the hob, and her left arm round a kettle, the boiling contents

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of which had severely scalded her. She was removed to the infirmary, but died soon afterwards from the effects of the burns and scalds. Dr. Hardwicke remarked that this was another of those cases which showed the necessity of placing inebriates in asylums. The system had been tried in Ameria with great success, many persons who had relapsed into drunken habits having voluntarily applied for re-admission, whilst others had been entirely cured. In this country, as in America, not only would these asylums be self-supporting, but they would also to a very great extent relieve the rates for the support of enlarged workhouses and prisons. Further, drink filled three-fourths of our lunatic asylums, and the children of drunkards, if not imbecile, were weak, attenuated, and unfit for either mental or physical work. Great difficulty was already experienced in obtaining men fit for the army and constabulary, and two or three generations hence what would be the result? He hoped the public would take up the subject in earnest.

Another inquiry was held before Dr. Hardwicke on the body of a child three weeks old, stated by Dr. Porter, the medical officer who saw it, to have died from suffocation from the want of fresh air while in bed with its mother. Dr. Porter deposed to having made a post-mortem examination, to which objection was taken by the coroner, who observed that, when doctors saw well-marked cases like this, in which there were all the appearances of suffocation, they ought to be able to give a satisfactory certificate of death without resorting to post-mortem examination. Dr. Porter contended that he had no previous knowledge of the case, and that, therefore, he had done right. Dr. Hardwicke thought medical men ought not to stretch a point in order to have post-mortem examinations, and he should object to them where no sound and valid reason could be shown for their having been performed, as he did not wish to swell out the costs of his inquests by unnecessary post-mortem fees, although he had no desire to stop them where they were really necessary.

A third inquest was held by Dr. Hardwicke on the body of a woman aged forty-nine, who inhabited part of a room at 16, Fullwood's-rents. The apartment, though small, was occupied by four men and two women. Death was proved to have been caused by fainting of the heart, attributable to overcrowding and want of fresh air. The jury, after recording their verdict, very properly forwarded to the sanitary authorities of the district a paper calling their attention to the indecent overcrowding which had thus been brought to light.

INTERNATIONAL CONGRESS OF OPHTHALMOLOGY.

THE following circular, signed by the Provisional Committee appointed in London in 1872—viz., Cornelius R. Agnew, M.D., Henry D. Noyes, M.D., and Daniel B. St. John Roosa, M.D.—has been issued:—

"The International Congress of Ophthalmologists will meet in New York City on Tuesday, September 12, 1876, at twelve o'clock noon. The following extracts from the rules of the Congress will give an idea of the general character of the Society, and of the terms of membership:—

"'1. The object of the International Periodic Congress of Ophthalmology is to promote ophthalmological science, and to serve as a centre to those who cultivate it. It will entertain no discussion foreign to this object.

"'2. The number of members is unlimited.

"'3. Every member must be either a doctor of medicine, or of surgery, or of science, or possess some other equivalent degree, or be distinguished for his scientific knowledge.

"'4. Candidates for admission into the Society shall be admitted on presentation of their diploma or of their scientific title, unless ten members demand a ballot.

"'5. The sessions of the Society shall take place every fourth year, and be limited to ten days.

"'11. The Society gives no diploma. Before the opening of each session a card available for admission to all the meetings, and signed by the President and Secretary, shall be given to each member on payment of his subscription (fixed at two dollars), and upon signature of his name on the register of those attending the meeting.'

"The Committee are making all efforts to secure a large attendance, and one that will leave its mark upon the progress of scientific ophthalmology. The co-operation of the profession of Great Britain in securing these objects is earnestly desired."

TESTIMONIAL TO MR. PRESCOTT HEWETT.

AT a meeting held at St. George's Hospital, on July 17, 1875, Mr. Cæsar Hawkins in the chair, it was moved by Mr. Charles Hawkins, and seconded by Mr. Henry Lee—"That this meeting takes the opportunity of Mr. Prescott Hewett's resigning the office of Surgeon to St. George's Hospital, to present him with a memorial, in recognition of his services in the advancement of medical science, and of the influence his character has had on the profession and the public." It was moved by Mr. George Pollock, and seconded by Mr. Brudenell Carter—"That a committee be appointed, with power to add to their number, to carry out the above resolution; that subscribers be restricted to members of the medical profession, and the subscription be limited to one guinea from each person." It was moved by Sir James Paget, and seconded by Mr. T. Holmes—"That the chairman be requested to forward the resolutions to Mr. Prescott Hewett." It was moved by Dr. Blandford, and seconded by Dr. Barnes—"That Mr. Charles Hawkins be requested to act as treasurer, and Mr. James Rouse as hon. secretary, to the committee." On the motion of Dr. Pitman, a vote of thanks was carried to the chairman.

PARLIAMENTARY.—PUBLIC HEALTH BILL—PHARMACY BILL, ETC.

IN the House of Lords, on Thursday, July 15,

The report of amendments to the Public Health Bill was brought up and agreed to, after Lord Aberdare had moved an amendment in Clause 298, which was negatived, to the effect that where the ratepayers failed to call attention to the fact that the local authorities had made default in providing sufficient sewers, etc., the Local Government Board should construct the necessary works and charge the cost upon the localities. The noble lord said his reason for making this proposal was that in many cases ratepayers, on account of the cost which would be thrown upon them by making sewers, etc., and for other reasons, would refrain from taking action in reference to matters of this kind.

The Duke of Richmond reminded the noble lord that it was not absolutely necessary that action should be taken by ratepayers. Any person in a district could take the necessary steps. Another reason for objecting to the amendment was that it would lay upon the Local Government Board a work which they could not properly perform, and would arm them with a power which they ought not to possess.

In the House of Commons,

The Pharmacy Bill as amended was considered.

The Public Health for Scotland Act of 1867, with amendments, passed through Committee.

The Amendments Bill to the Animals' Contagious Diseases Act of 1869 was read a second time.

ENORMOUS HAILSTONES.—M. Colladon, writing to the Académie des Sciences on the recent dreadful storm that has done so much harm at Geneva, Lausanne, and Lucerne, states that the hailstones were of extraordinary dimensions. Most of them measured from ten to twenty millimetres in diameter, many of them being much larger, and some of them reaching sixty millimetres, while one attained a diameter of one decimetre (nearly four inches). At some points it seemed as if artillery were discharging hailstones, some of them weighing not less than 300 grammes (nine ounces troy). Many were hemispherical in shape, having exactly the appearance of lemons that had been cut in half. The discharges of lightning succeeded each other with unexampled rapidity, and at Geneva, from 11 p.m. to midnight, there were counted at least two or three discharges per second—so that in the course of the hour from 8000 to 10,000 must have taken place.—*L'Institut*, July 14.

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LETTERS FROM MADRAS.

No. XVI.

MORE ABOUT LEPROSY: DR. MACRAE'S EXPERIMENTS ON THE DIFFERENCE BETWEEN TOUCH AND SENSE OF PAIN AND OF HEAT IN ANÆSTHETIC LEPROSY; HIS NOTES ON THE SPONTANEOUS CURE OF LEPROSY; RECENT EXPERIMENTS IN TREATMENT; DR. DOUGALL'S AND DR. BHAU DAJI'S.

I HAVE visited the Leper Hospital more than once, in order to revive those views of the strange facts in this strange disease that were so kindly pointed out to me by Dr. Van Someren last year. Dr. Van Someren, by the way, is now promoted to be Deputy Surgeon-General, and resigned the charge of the Leper Hospital to Dr. Macrae, who in turn, after some months' incumbency, has left it in consequence of promotion. Dr. Macrae made good use of his time, and has embodied his experience in some "notes," which I have been allowed to peruse and to make an extract therefrom, which well deserves a prominent place in a medical journal.(a) Suffice it to say that he has availed himself of the effects of leprosy on the nerves, to analyse the power of the nerves in transmitting the sensations of touch, of pain, and of temperature, which appear to be distinct functions, and one of which seems to be capable of being impaired, whilst the others are not.

Let me refer, here, to Dr. Macrae's experiments on treatment, in which he strikingly corroborates the views already held, and published in the *Medical Times and Gazette*,(b) by Dr. Van Someren. I may premise that there are, as Dr. Macrae says, four well-marked varieties of the disease—the tubercular; the anæsthetic; the mixed tubercular and anæsthetic; and the atrophic, in which fingers or toes become absorbed and atrophied with or without either tubercles or anæsthesia. In the mixed variety, the patient may have the tubercles long before the anæsthesia, or the anæsthesia before the tubercles, and either or both may be combined with atrophy. As to causes, inheritance is the best established.

I find that nobody here believes in contagion *simpliciter*, but there are some who think it may be contracted by sexual intercourse, or by a child who suckles a leprous wet-nurse. Of the remedies proposed of late, the oil of cashew-nut is one (Beauperthuy's method), and there is no doubt that it is very effectual in removing tubercles, which it does by exciting vesication and suppuration of the surface under which the tubercles waste and are replaced by a shining cicatrix. The objection to this treatment is that it is very painful, and not radical. (See Van Someren, *ut supra*.)

There are three other remedies, the Gurjun oil (Dougall's method), the Chaulmoogra oil (Bhau Daji's), and the Neradee Muttoo;(c)—all three dark resinous bodies resembling the balsam of Peru, or copaiba, in consistence, and of oleo-resinous composition and powerful smell. They are used in combination with lime-water, which converts them into a soapy mass of the consistence of putty; and they are both administered by the mouth, and rubbed into the skin. It was a curious sight to see a row of forty or fifty lepers in a verandah, licking up the solidified oil, which, looking like a dab of putty, is served out to each on a leaf; and rubbing themselves with another larger portion of the oil, served out on another leaf.(d) Dr. Macrae had the experiment tried thoroughly, both as to the dose to be given internally, and as to the friction, which each patient is obliged to keep up perseveringly for two hours twice a-day, and to bathe the whole body in water once. The hospital diet, which is good, was not altered during the treatment. I note the following results of treatment, recorded in Dr. Macrae's paper, under the internal and external use of the Chaulmoogra, and Neradee Muttoo oils in succession:—Case 1. Tubercles disappeared; touch-sense restored. 2. Tubercles disappeared; no return of touch- or of pain-sense. 3. Tubercles on face lessened, but appearing on arm during treatment; hair growing again on eyebrows; touch- and pain-sense improved. 4. Tubercles on face and skin generally improved; touch-sense greatly improved. 5. General improvement of tubercles, and fresh growth of hair. Under the Gurjun treatment, on Dr. Dougall's plan, the following results were noted:—Case 6. Tubercles lessened; sensation improved. 7. Tubercles much improved; touch-sensation not so. 8. Tubercles lessened; touch- and pain-sensation improved. 9. Anæsthesia much improved.

It is difficult for anyone who has not seen a gang of these poor deformed, distorted, mutilated creatures, with their minds as torpid as their senses are benumbed, to estimate the interest that there is in the study of the various means proposed for their cure.

Apropos of this, let me quote what Dr. Macrae says of spontaneous cure, or cessation of leprosy:—

"*Spontaneous Cessation (Cure?) of the Disease.*—In a few of the patients the disease had come to a standstill, so that no change had taken place for several years. The case of a native named Rayappen is to the point. He had been in the hospital for twenty years. Ten years ago his hands and feet were mere stumps, and pain-sensation was lost everywhere. There had been no change since then. He is now in fair health of body and mind. This appears to me to be a case of *cure*, just as a man with cicatrices and cretified remains in the apices of his lungs may be said to have recovered from phthisis. There are at least three other cases in the hospital in whom there have been no active indications of the disease for two or more years."

As to general results, Dr. Macrae confirms the opinion of his predecessor Dr. Van Someren, of Dr. Paul, Dr. Dougall, Moodeen Sheriff, Succaram Aijoon, and all other impartial observers. It is, that benefit follows quickly upon almost any kind of treatment which involves good diet, occupation, and hope. Dr. Macrae thinks that it would be well worth while to try the effect of pure olive oil (medicated sufficiently to have its simple nature disguised from the patient's knowledge). He points out, as Dr. Dougall does, that four hours of daily occupation in rubbing the skin diligently can hardly fail of a beneficial effect—especially when combined with hope—upon a malady so intimately connected with the state of the nervous system, and so marked by torpor of mind and body, as leprosy. It is to be regretted that the weather this winter has been cold for Madras, and that the patients, if exposed under a verandah, stark naked, for two hours, whilst rubbing themselves, were liable to fever and diarrhœa. Anyhow, this report of Dr. Macrae's observations on the nervous function and on treatment will interest all who treat leprosy anywhere on the globe's surface.

I may say, in conclusion, that Surgeon-General Balfour, on behalf of the Madras Government, has published a "Report on Certain Forms of Skin Diseases observed in the Madras Presidency," in reply to the queries circulated by Drs. Tilbury Fox and Farquhar. This contains the chief facts and latest observations.

P.S.—It seems that the Governor-General of India in Council looks with no favour on Dr. Carter's scheme for the isolation of lepers in special asylums. "If it be admitted," it is said, "that leprosy may be 'stamped out' by isolating the affected—that it has been stamped out in Europe generally, and is now in process of being stamped out in the same way in Norway," still the Governor-General believes Dr. Carter's scheme to be impracticable. There are no less than 100,000 lepers in India, and the Government could not build hospitals for these, nor turn them into sick paupers. The Governor-General in Council speaks as anyone does who is called upon to spend money. Meanwhile there is no doubt that lepers breed lepers—certainly by inheritance, possibly by intermarriage, and just possibly by contagion. Therefore the shutting up would do some good. In the next place, the treatment by the oils will hardly be carried out effectually, save in such institutions.

(a) Dr. Macrae's Notes shall appear next week.
(b) See *Medical Times and Gazette*, 1874, vol. i.
(c) The Gurjun, or wood oil, is yielded by the *Dipterocarpus lævis*; the Chaulmoogra by the seeds of the *Gynocardia odorata*; and the Neradee Muttoo by the seeds of the *Hydrocarpus inebrians*. (*Vide* Moodeen Sheriff's "Supplement to the Pharmacopœia of India.")
(d) Dr. Dougall mixes one part of Gurjun oil with three of lime-water for the ointment, and equal parts of each for internal use. The dose of Gurjun oil is two drachms twice daily.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—The next meeting of this scientific body will commence on August 19 at Nantes, and the Minister of Marine has placed a ship of war at its disposal for an important excursion. Many foreign *savants* have announced their intention of attending, and all communications should be addressed to the Secretary, 76, Rue de Rennes, Paris.

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A COUNTY COURT VERDICT.

THE case of recovery by artificial respiration after tracheotomy, published in our last impression, comes before us again this week in another phase. It formed the subject of a trial before a judge and jury at the Marylebone County Court, on Tuesday last, Mr. F. Otley Lovell having sued Herr Behrens, the father of the patient, for fees due for attendance during the time the successful treatment, with which our readers are acquainted, was being carried out. Mr. Lovell, as it was proved by the evidence, was called in during the night of March 1, after the operation had been performed by Dr. Richardson, to take charge of the patient, to prevent, as far as possible, choking up of the tracheotomy-tube from accumulation of secretion, and, if the necessity should arise, to set up artificial respiration with the apparatus supplied by Dr. Richardson, and in the manner practised by him. As Mr. Lovell had already once before performed the same duties for a similar case, he was particularly well qualified for the task, and he undertook it at once. The case, as we know, was one of intense trouble and anxiety: the tube was blocked and had to be removed and replaced some twelve or thirteen times during the attendance; the artificial respiration had to be resorted to; and, on the whole, Mr. Lovell's account showed an attendance of 132 hours, during which period either he or his brother—also a qualified practitioner—held responsible charge of the details of practice. At the close of the attendance Mr. Lovell charged for his services at the rate of five guineas for every twenty-four hours devoted by himself and his brother in the service of the patient. This sum being objected to as exorbitant by Mr. Behrens, Mr. Lovell, actuated by a desire to be liberal, reduced it to three guineas for each twenty-four hours, or to the lump sum of £17 7s. for the whole time of attendance. Payment of the smaller sum was also declined, and the amount was therefore sued for at the county court.

The trial excited much interest, many members of the profession being present. Evidence on behalf of Mr. Lovell was given by Dr. Richardson, Mr. Timothy Holmes, Dr. Cleveland, and Mr. Webb, all of whom maintained that the original charge of five guineas for twenty-four hours of attendance was of itself perfectly fair, and that three guineas was as moderate a sum as could possibly be asked. The defendant's advocate tried to reduce the value of Mr. Lovell's services by asking Dr. Richardson, in cross-examination, whether he really meant that he (the witness) included Mr. Lovell in the consultations. "Certainly," was the answer. "And do you mean that you accepted from him any suggestions?" "Some very useful suggestions," was the prompt reply. After this no argument of the same kind was brought forward, neither was the amount disputed for the time named; but it was insisted on, this being the only possible defence, that the plaintiff and his brother were not actually in the room and house of the patient the whole period of 132 hours, and the evidence of a nurse and of Mr. Behrens was taken on this point. But as there was no conflicting medical testimony, and as it was not pleaded that the defendant was unable to pay the fees, the defence practically broke down. Some amusement was caused in court by the counsel for the plaintiff, Mr. Peterson, asking Mr. Behrens, who is so well known as an operatic bass singer, how he would like to sing a song every hour for twenty-four hours for the sum of three guineas. The shaft, which went straight home, told well; and the summing-up of the judge, Mr. Serjeant Wheeler, which touched in singularly graceful terms on the labours of our profession, and the true mode in which they ought to be estimated, left the jury an easy task. The jury declared at once for the plaintiff, and costs were allowed.

THE Council of Medical Professors at Vienna, at its last sitting, appointed Dr. Mayerhofer Extraordinary Professor of Gynæcology, and Dr. Rosenthal of Neuropathology and Electro-therapeutics. Dr. Wertheim will probably also be appointed an Extraordinary Professor of Dermatology and Syphilis.

A FIBROMA MOLLUSCUM CYSTICUM ABDOMINALE.

By PROFESSOR VIRCHOW.(a)

A SHORT time since, Dr. Kugler, of Stettin, forwarded me from Pomerania a retro-peritoneal tumour which Mr. Spencer Wells, who had extirpated it, regarded as of great rarity. According to Dr. Kugler's report, seven litres (twelve pints and a half imperial) of pus were discharged from the cavity of the tumour; the right ovary, which accompanied the tumour, as well as the left, which remained in the abdomen, being quite healthy; and, in fact, the right ovary, which, with the abdominal half of the tube, was in contact with the tumour, and had been separated at its attachment to the ligamentum ovarii, exhibited no disease, and was small, flat, and compact.

The tumour itself, after the discharge of the pus, had collapsed into a flat, roundish mass, measuring thirty centimetres in diameter, and six or seven in thickness. Lying loose over the greater part of its tolerably even surface, indicating their former positions, were layers of soft, slightly œdematous, and very vascular fatty and connective tissue. Besides the larger opening, which led into a great cavity, there were two ruptured places, through which protruded large lumps of a soft, flocculent-looking substance. Internally, the surface of the cavity, which was rather eccentrically placed, and about the size of a head, had in nowise the appearance of an ordinary cyst, its very thick wall seeming to consist at its outer part of a coarse reticular structure, and inwardly of irregular fibrous layers in a state of suppuration. The meshes were very loose, and traversed by broad vessels and numerous disseminations, which proved, on microscopical examination, to be collections of nucleated cells almost of a sulphur-yellow colour. The appearance strongly reminded me of the condition of the pleura in one of the forms of chronic empyema.

Beyond this condition, the rest of the tumour consisted of very well-preserved, fresh tissue, the yellow-punctuated colouring only being observed at a few places. The somewhat thinner exterior wall to some extent resembled the wall of the uterus after delivery, and consisted of a very firm fibrous tissue, with wide vascular apertures, very succulent, and of a white or greyish-white colour, the direction of the fibrous masses being for the most part parallel to the surface. The thicker mass of the other portions consisted of strong white bundles, in the midst of which large vessels were visible, and of a more transparent, almost gelatinous, intermediate tissue. The bundles were very elastic, so that when torn or divided they retracted easily, and became thicker. At these spots the mass assumed a softer appearance, occasionally almost resembling cerebral substance. Microscopical examination exhibited fibrous tissue, but without any trace of organic muscular substance. The fibres were delicate and soft, but less wavy than in ordinary connective tissue. Under acetic acid the tissue did not become clear, and in direct light appeared of a dirty white; and although the fibres disappeared, there remained a peculiar granular, striped appearance. No filamentous or membranaceous deposit occurred, so that no peculiar mucus (*Schleim*) was present. When sections were made of the solid bundles, after the application of acetic acid, fine spindle-shaped and branched cells (*Netzzellen*) were observed; but in the intervening soft tissue, like in many soft uterine myomata, large round cells in great number were found, having here and there a strong disposition to fatty metamorphosis. The structure of the vessels was most remarkable. The capillaries, which were proportionally very large, as well as the numerous small veins, exhibited, after the use of acetic acid, a distinctly cellular structure of their walls, large clear nuclei being distributed over the whole field in regular oblong series.

We have to do here with that form of tumour for which I have introduced the term "fibroma molluscum" (*Geschwülste*, Band. 1, 323), and which occurs most frequently in the sexual apparatus. Such a tumour of the mons veneris I described long since (*Gesammelte Abhandlungen*, p. 463) as a cystoid. Soft uterine myoma and myosarcoma offer much resemblance to it (*Geschwülste*, Band. 3, 199, 202), especially in regard to softening, inflammation, and ulceration. Analogous forms

(a) *Archiv für Pathol. Anatomie*, B. lxiii., Heft. 4.

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occur not merely in the ovary itself, but also in the ligaments and the vicinity of the ovary (*Geschwülste*, Band. 3, 221, 228). How far the foregoing case is to be ranked with these, I cannot decide, as I do not possess any exact information as to the situation of the tumour. But the fact that the operation was undertaken would seem to imply that some connexion with the ovary also existed.(b) Among all these cases this one exhibits a truly remarkable example of the cystoid metamorphosis of a tumour in itself solid. The successive cystic formation and inflammatory action resemble the formation and subsequent inflammation of subcutaneous bursæ.

FROM ABROAD.

M. Lorrain's "Medical Paradoxes."

Under the above title, M. Revillout furnishes (in the *Gazette des Hôpitaux*, July 10) an account of some ingenious observations made by the able professor at La Pitié. The first of these, "*infantilism and feminism*" *in relation to phthisis*, were delivered in reference to a case of slightly advanced phthisis, accompanied by fistula in ano, in a man sixty-eight years old. This man, whose muscular system is tolerably developed, stated that in his younger days he had been renowned for his muscular power, while so juvenile was his appearance that his age was not believed. He has scarcely any beard, and his chest, arms, and legs are entirely devoid of hairs. His skin has nowise the appearance of that of an old man—wrinkled, discoloured, faded, or scaly,—but it resembles that of a young man or a woman, being smooth, elastic, rose-coloured, and almost transparent. His hair is delicate and silky, and of a light chesnut—one of M. Lorrain's signs of feminism. Until the present year his health has been good, his cough having commenced only some months since, and his fistula appearing still more recently.

Should this man be regarded as an example of the recent accidental occurrence of phthisis in an old person? On the contrary, in M. Lorrain's opinion, he has been *potentially* phthisical from his birth. In other words, phthisis is a diathesic affection, like gout, and the individual brings the germ with him at his birth. It forms an inseparable part of his constitution, and influences his physical development and aspect, even when the diathesis does not yet exhibit itself by any pathological manifestation. Phthisical subjects of this kind may often attain extreme old age, and even die centenarians, without tubercle having become developed; or they may only fall ill in an advanced age, as in the present patient, who must be regarded as a *phthisique vieilli*, in whom the disease, hitherto latent, has awaited old age before developing tubercles. If this be a sound hypothesis, it is evidently of importance to be able to recognise the attributes of the temperament accompanying latent phthisis; and these attributes M. Lorrain designates by the terms *infantilism* and *feminism*. The condition of the hair and skin, the length of the eyelashes, the delicacy of form, the habitual slenderness of the limbs, and the disappearance of the muscular masses amidst the surrounding cellular tissue—all these give an appearance of a woman to a young man who is the subject of this diathesis. The delay in development after puberty, the very youthful appearance, and in men the rarity and delicacy of hairs, with the slight virility in the general aspect; and in women, the long persistence of delicacy of feature, the slight prominence of form, etc.—all seem to prolong adolescence beyond its natural term. And it is in phthisical subjects that the age is so easily disguised, six, eight, or ten years less than the reality being attributed to them, while they are the last to become decrepid.

If, under this theory, the field of phthisis, already so vast, undergoes enlargement, it is not without its compensation. Thus the subjects of this diathesis are not necessarily condemned to become tuberculous, any more than are the children of the gouty necessarily the victims of gout. The essential thing for them is the management of their hygiene. The strength should be husbanded, the better to resist the menacing danger. Most essential are ample nourishment, and the stimulation of active reparation and functional activity by exercise, change of air, and a tonic regimen. All should be avoided, also, that may play the part of an occasional cause, by temporary irritation of the respiratory organs, etc. The cold and fatigues of every kind to which the soldiers were exposed in the late war, carried off large numbers by phthisis. According to the general opinion, this was phthisis accidentally acquired; but, in M. Lorrain's view, many of these were examples of "native" phthisis, which, perhaps, might never have become manifested without accidental circumstances.

2. *The Rheumatic Diathesis.*—Another hypothesis advanced by M. Lorrain is that persons born with the rheumatic diathesis have generally red hair, a skin that easily sweats, and odorous perspiration. This, then, is also a diathesis capable of recognition by the mere aspect of those subjected to it, by certain traits characterising a potential disease. Just as long eyelids, delicate hair, and other attributes of what is termed beauty belong to the phthisical, so does the reddish colour, which, as regards the hair, has become so much in fashion, indicate the rheumatic. M. Lorrain, however, only advances this as a hypothesis, which needs many more facts for its confirmation. "But, true or false, the hypotheses of an ingenious observer are always worth knowing—they set others investigating, and observations that come under their notice are well sifted in order to find out what they may contain that is well founded or probable; and oftentimes one may be led to discover unexpected truths even unconnected with them."

3. *The Urinary Secretion and Dropsy.*—At first it seems strange that M. Lorrain should designate as a paradox a formula which he has deduced from long and patient observation with the most exact instruments. Every individual, according to M. Lorrain, ought to daily secrete a determinate quantity of urine, which for him represents the normal quantity of health. If this weight increases, the individual gets thin in proportion; while if it diminishes he becomes dropsical. If he is dropsical, and if by means of a diuretic we augment the quantity of urine above the normal, the weight of the body will diminish to an amount equal to that of the excess. This is illustrated by the case of a woman suffering from dropsy from heart disease. In her, infusion of digitalis produced abundance of urine in a very short time. Before taking it, she passed only 600 or 700 grammes of urine in the twenty-four hours, in place of 1500 grammes (supposed to be her normal quantity), and in consequence increased daily in weight. But from the time when the urine exceeded 1500 grammes, she lost each day proportionally of her weight, and at the end of a week she had lost nine kilogrammes. Adding up the figures which during this period represented the quantity of urine in excess of the daily normal amount of 1500 grammes, a total of nine kilogrammes and twelve grammes was the result. This observation appears more exact than it really is, inasmuch as the 1500 grammes had not been ascertained to be her normal quantity of urine from actual previous observation, but was assumed to be such because the most common normals are found to range between 1200 and 1500, so that the choosing this last figure was a matter of chance. In this case, M. Lorrain attributed to the digitalis no other effect than that of producing diuresis, and in his opinion its action in dropsies is always the same, of whatever nature they may be. The urine always diminishes at the same time that the anasarca appears, this relation holding good whether we have to do with disease of the heart, albuminuria, or any other cause. Digitalis, so to say, has the power of changing the direction of the liquids which have issued from the circulation, conducting them towards the kidneys. Thus, the diuresis continues as long as there is an effusion of liquids, and then ceases in spite of the continuance of the digitalis, which may be also administered in the normal state without increasing the quantity of urine.

A fact but little known, and one which has its important bearing upon practice, has been brought out forcibly by M. Lorrain, who for years past has been in the habit of weighing his patients—viz., that the symptom dropsy always implies the more or less notable diminution in the secretion of urine. But the converse does not prevail, for the urine may diminish without dropsy at once ensuing. Such is the case in a great number of acute diseases; and then we also find the body diminishing in weight, without the possibility of discovering in the urine the lost weight. Other elements

(b) We are informed by Mr. Spencer Wells that the tumour was distinctly retro-peritoneal, being merely connected with the ovary and the tube by loose connective tissue. The ovary was only removed in order that the hæmorrhage might be more effectually and easily controlled. It is of interest to add that the patient operated upon in the middle of Pomerania has recovered under the care of her medical attendants, Drs. Schoenfeldt and Kugler, of Stettin.—*Translator.*

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enter into these complex questions, and this is why M. Lorrain terms his statements "medical paradoxes."

Jaborandi.

The *Gazzetta Med. Lombardia* for July 17 contains a paper read at the Lombardy Institute by Dr. Ambrosoli, in which he gives an account of a second series of trials which he has made of the properties of jaborandi in more than fifty hospital and private patients. In a former paper he had stated that he had found this substance almost inert; but this turns out now to have arisen from his trials having been made with an article which, although obtained from the Central Pharmacy at Paris, was not the genuine one. From the trials he has made with a different supply, he comes to the following conclusions:—

1. Jaborandi is a plant of a bright green colour, of a warm, aromatic taste, and of a sharp, not unpleasant, odour, resembling that of the leaves of the laurel. A native of Brazil, it belongs to the family of the *Rutaceæ*; and, according to James, it was in the last century employed in the treatment of various diseases, the nature of which, however, is not indicated. The celebrated botanist, Prof. Garovaglio, who has examined some specimens submitted to him by the director of the hospital at Pavia, maintains that the name of "jaborandi" given to this plant is inexact, since it is bestowed on a great number of varieties, each of which has its special name. It is, therefore, of importance to establish which of these it is, the leaves of which possess sudorific and sialogogic properties; for it is because the variety of the plant which really possesses active properties has not been specified, that it has come to pass that different experimenters have not obtained the same results. 2. An infusion of five or six grammes in water, drunk either cold or tepid, the patient being in bed and warmly covered up, produces, in from fifteen to twenty minutes, and rarely after one or two hours, a profuse sweating over the whole body, which is prolonged from four to fourteen hours, and which may be renewed on successive days without an additional dose having been taken. 3. Besides the sweating, there generally occurs, half an hour after taking the jaborandi, an abundant viscous, ropy salivation, which, by reason of the large quantity of liquid with which it fills the mouth, impedes speech. The quantity of saliva secreted varies from one to four glasses (*bicchiere*); and during its secretion the mucous membrane of the mouth is a little hyperæmic, and the salivay glands are somewhat swollen. 4. On examination of the saliva and the sweat induced by jaborandi, urea, but not uric acid, is found in notable quantities. In some individuals abundant and prolonged salivation has been produced, as also copious bronchial secretion. 5. When the sweating and salivation commence appearing, the pulse is increased by some beats, the temperature rises some tenths of a degree, and the respirations are more frequent. After one or two hours from the commencement of the administration, the pulse and respiration diminish in frequency, and the temperature may become lowered by even four degrees (centigrade). These facts predicate that we have to do with a powerful modifier of febrile action—one that is, perhaps, more prompt in its action than quinine and digitalis. 6. Jaborandi is destined to speedily occupy an eminent position among the sudorifics, sialogogues, and moderators of febrile action; and many useful indications for its employment will present themselves.

In consequence of Professor Dumreicher having declined the office of Rector of the Vienna University for the year 1875-76, Professor Langer has been chosen to hold it instead.

A Good Example.—The Sanitary Committee, Birmingham, have recommended that the salary of Dr. Hill, as medical officer of health and public analyst, shall be increased from £650 to £1000 per annum.

The Committee of the Birmingham and Midland Hospital for Women have elected Miss Mary Edith Pechey to the vacant post of House-Surgeon. Miss Pechey received her medical education at the University of Edinburgh. The *Birmingham News* says that her certificates show that in all the usual subjects, surgical and medical, the lectures in which are open to lady students, she not only passed with credit, but obtained high honours; but it is not stated whether or not the lady has any medical qualification. We suppose she has a degree from some foreign university.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, June 27.

Death of Dr. Demarquay: His Life, Character, and Works.

On Monday last, the 21st inst., Dr. Demarquay, the celebrated surgeon, was removed from this world, amidst the regrets and sorrows of all who knew him. His death, which took place at Longueval, a small village in Picardy, was caused by secondary peritonitis, the result of perforation of the stomach, which was the seat of a cancerous affection.

Dr. Demarquay was Surgeon to the "Maison Municipale de Santé," and member of the Academy of Medicine. He took his degree in 1847, but before doing so he occupied a very humble position in life. He had been a common waiter at a café, and it was only by dint of hard work and perseverance that he had attained the eminent position he occupied at his death. His works are well known, and his reputation as a surgeon is world-wide. His name is familiar to the Parisians, to whom he rendered the greatest service during the siege of 1870-71, as one of the chief surgeons to the ambulances. To the English public he was, perhaps, equally well known, not only for his professional qualifications, but as member of the French Medical Section of the last Universal Exhibition held in London.

Dr. Demarquay died a bachelor, and had just completed his sixtieth year. He leaves a large fortune and several bequests; among others, £4000 to the Faculty of Medicine, the interest of which is to be devoted to an annual prize, which will be open to competition. A legacy of £400 was left to one of his friends, to enable him to publish, in a collected form, all his loose manuscripts.

GENERAL CORRESPONDENCE.

SUPERFICIAL SUTURES in LACERATED PERINEUM.

Letter from Dr. Robert Barnes.

[To the Editor of the Medical Times and Gazette.]

Sir,—Several communications have lately appeared in your journal, describing as something new the use of superficial sutures to the vaginal or internal wound in the operation for restoring a lacerated perineum. Almost all recent operators and writers on this subject seem to ignore the priority of Mr. Charles Brooke. Twenty-seven years ago I assisted this surgeon at an operation where he used three or four internal sutures, securing them by his beads, like the external or deep sutures. The operation was perfectly successful. Mr. Brooke insisted upon this measure as an important part of the operation, as it secured the perfect linear union of the vivified mucous membrane. Following his example, I have generally pursued this practice since. I am, &c.,

Robert Barnes, M.D.

31, Grosvenor-street, Grosvenor-square, W., July 17.

MR. MAUNDER'S SUGGESTION CONCERNING THE OPERATION FOR RUPTURED PERINEUM, etc.

Letter from Mr. C. F. Maunder.

[To the Editor of the Medical Times and Gazette.]

Sir,—I concluded my Lettsomian Lectures on the Surgery of the Arteries with the proverb—"There is nothing new under the sun."

It appears from letters by two of your correspondents, published in the journal of last week, that the above suggestion is not new. I may, however, remark that a method of operation, though it prove not to be new, may yet have an origin in the brain of more than one person.

I am glad the method has been tried and is approved, and only regret that it had not been sooner made known to the profession in the interest of suffering humanity.

I am, &c., C. F. Maunder.

Queen Anne-street, July 19.

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REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, JULY 7.

W. O. PRIESTLEY, M.D., F.R.C.P., President, in the Chair.

ADJOURNED DEBATE ON THE RELATION OF PUERPERAL FEVER TO THE INFECTIVE DISEASES AND PYÆMIA.

(*Continued from page 82*).

DR. GREENE: Assuming that the object of the present discussion is to clear up what has hitherto been confused and doubtful in post-partum pathology and therapeutics by a comparison of the records of individual experience, and not to establish any particular theory, I trust I may not be thought too presumptuous for desiring to bring before you and the Society the result of some ten years' observations, extending over nearly two thousand cases, of which a proportion of about 10 per cent. suffered, in a greater or lesser degree, from one or other of the various affections to which parturient women are peculiarly liable, and which have so frequently been confounded together under the general name of puerperal fever—a disease of which I had for some time doubted the existence, but which I am now satisfied has yet to be differentiated as a malady *per se*. So far from post-partum febrile affections being identical, I have observed that they invariably assume one of three distinct forms, differing essentially in their origin, progress, duration, and gravity—in other words, the exciting cause may be local and transitory, local and persistent, or altogether extraneous. In the first two forms the disease may be, and often is, autogenetic; but in the third this is necessarily impossible. Firstly, very alarming symptoms may be excited by the presence of a decomposing clot in the uterus, or even in the vagina, or from an overloaded state of the bowels, but yield rapidly to an aperient or the use of the syringe; and I may be permitted to observe that it is unpardonable in an accoucheur who fails to have recourse to such simple remedial measures on, or even before, the first appearance of the enemy. Some time since, one of my patients on the fourth day after a comfortable delivery had rigors, and, when I saw her, had a pinched suffering expression of countenance, considerable abdominal tenderness, suppression of the lochia, recession of the mammary secretion, high temperature (104°), rapid pulse (130), and, in fact, all the symptoms of so-called puerperal fever; but she also, as I was informed by the nurse, had begun to suffer from diarrhœa, which, on investigation, turned out to be the ineffectual efforts of nature to relieve the loaded intestines. I at once washed out the vagina, as there was rather more odour present than was usual, with a diluted solution of chloride of lime, my favourite antiseptic, and ordered five grains of calomel. Next morning, though informed by the nurse that she was weak and sinking, I found my patient wonderfully improved in every respect, but very angry with me because the powder I had prescribed had, as she said, purged her instead of stopping her diarrhœa, which, however, had then ceased to be troublesome. I ordered nourishment and a due proportion of stimulants, and she made an excellent recovery. Whereas, had I acceded to her wishes, and checked instead of promoted the alvine discharge, she would in all probability have died, for I have, I believe, in one or two instances seen a patient lost because the attendant had an unreasonable dread of cathartics. Secondly, a foul, ill-ventilated, crowded, or overheated room, by promoting putrefaction of the lochial discharges, will often give rise to septicæmia, and, unless the cause can be removed, to death, which the most earnest efforts on the part of the medical attendant will, in such a case, be utterly powerless to obviate. Or, hysteritis, rapidly involving the adjacent parts, may result from injury to the uterus by long-continued pressure of the fœtal head in tedious labours; by the unskilful or incautious use of instruments; or by the well-meant but frightfully injudicious attempts of the accoucheur to pass the swollen lip of the os uteri above the head of the child during the continuance of a pain—a very common practice, and often, I am convinced, productive of extremely disastrous consequences. A primipara, aged thirty-three, who had suffered a good deal throughout her pregnancy from sickness and general debility, was delivered naturally after a favourable labour of a healthy living child, and progressed fairly for the first couple of days. She was nursed by her mother-in-law, who persisted in keeping the room at stove-heat. On the third day the patient had rigors, and severe symptoms soon set in, but subsided on the arrival of a more intelligent nurse. Unfortunately this person was soon called away, the mother-in-law became once more in the ascendant, stove-heat was renewed, all my orders disregarded, and the patient died on the tenth day after her confinement with every symptom of blood-poisoning. I might multiply instances, but *cui bono? Ab uno disce omnes.* In every such case—that is, ending in the death of the patient—I have no doubt (and this constitutes the essential difference between what I may call the first and second forms of post-partum febrile affections) careful inquiry would elicit the fact that the woman's health had been for some time in a more or less unsatisfactory condition; and to that cause rather than to any accidental lesion the unfavourable ending of the case must be ascribed, just as we not unfrequently find in the other sex, where the health has not been all that could be desired, the most trivial injuries giving rise to septicæmia and death; otherwise, nine-tenths of all women must sink after their confinements. In the third form, if I may so term it, of post-partum fevers, which comprises at least six-eighths of all cases, the contagium is conveyed to the patient from without in the shape of the germs of one or other of the zymotic class of diseases by the medium of someone—doctor, nurse, or friend—recently in attendance on a person suffering from the same complaint; and of this fact I have had positive proof, although the possibility of its occurrence has been denied, and it has been even attempted to be proved that because some women resist the contagion, none can suffer by it—a mode of reasoning, however, undeserving of further notice. Of all the exanthemata scarlatina, in my experience, most frequently attacks the parturient female, and though giving rise to very alarming symptoms, is happily rarely fatal. Some years ago, during the earlier part of my professional career, I was attending a lad with scarlatina anginosa of a severe type, and at the same time nearly all my puerperal cases exhibited febrile symptoms, and had more or less sore throat, although the characteristic rash did not in every instance make its appearance. Several of the children sickened as the mothers were recovering, and exhibited every feature of scarlet fever. Fortunately, none of them, parents or children, died; but I received a lesson I shall not soon forget. Since then, at different times, I have met with other similar cases, and have always been able to trace the contagion to its source. Post-partum small-pox I have met with in two instances, where the preliminary symptoms were identical with those usually ascribed to puerperal fever; in both of these the patients recovered. Of post-partum measles I have had no experience, but I have met with several cases of erysipelas occurring in recently confined women who all succumbed to the disease. In one of these cases I was able positively to trace the disorder to its source. The nurse had come straight from the bedside of a man suffering from phlegmonous erysipelas—of which he afterwards died—to attend upon my unfortunate patient, in the raw placental surface of whose womb the insidious disease found too ready a nidus, and thence spread rapidly to all the adjacent parts, terminating fatally on the tenth day after the poor woman's confinement. The infant also died of the same complaint, thus confirming the diagnosis in the mother's case. I have had one case of post-partum typhoid fever occurring soon after delivery in consequence of the patient inhaling the noxious emanations of a drain immediately under the window of the breakfast-room in which she had been confined. After a hard struggle for her life, this woman recovered, but her infant died with every symptom of typhoid fever. If it be asked why scarlatina, etc., assume so formidable a character in parturient women, I reply that in them the absorbents are in the highest state of activity, and the poison in consequence is conveyed with extreme rapidity to all parts of the system, and produces a correspondingly grave effect. With regard to the animalcula, which by some are supposed to play so important and destructive a part in septicæmia generally, and notably in the case of parturient women, and by others to be a delusion and a snare, I cannot boast of any great experience; but I can imagine that their presence within the body would have a tendency to cause increased irritation, just as maggots in an open wound would certainly retard, if not prevent, its closing. Hence the value of antiseptic lotions, especially the chlorides, which are fatal to bacteria and their congeners. To sum up, there is no such disorder as puerperal fever, and therefore the erasure of the term from the nomenclature of diseases is very

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urgently demanded as utterly misleading, and in its lieu there might be advantageously substituted the name of the complaint from which the patient had suffered, with the qualifying epithet "post-partum"—thus, "post-partum septicæmia," "post-partum scarlatina," erysipelas, etc.; and a little care in analysing the symptoms and the history of each case would almost always render the diagnosis absolutely certain.

Dr. ROUTH: I am anxious to make a few remarks in this discussion, since in early life it occurred to me to have seen, perhaps, a greater number of cases than any person in this room, having been present during part of that terrible epidemic which took place in 1846, and part of 1847, at the Vienna Hospital. During the first of those years 456 women died of the disease, and in the second 176. The greater number of those cases I saw, and therefore I had an opportunity of studying the disease very closely. On my return to England I published a paper—which is extant, and is probably known to many members present; therefore, I shall only refer to it—in which I showed (as was also proved by Dr. Semelweiss, to whom the main credit is due, because it was his discovery) that the disease was communicated directly by inoculation from the hands of the medical students, who came from the dead-house and from the coroner's court, and, satisfying themselves with simply washing their hands in a little water, made examinations of women about to be delivered. One point in regard to the disease was clearly brought out—namely, that it was not contagious from one person to another. That fact I took a great deal of trouble to find out, and I think it was proved in the most satisfactory manner that the disease was not communicable from one person to another, except the discharges were in some manner communicated, or except in the case of examinations made by the students under the circumstances I have mentioned. Many of the nurses and midwives who attended those patients were married women, and many of them had children, but not one of those women caught the disease. In the division where the labours were attended by women, who had nothing to do with dead bodies, the disease did not exist; or if it existed at all, the cases were so few and far between that there was no belief that it could be produced in any way by the attendants. And after the plan had been adopted of compelling every student to wash his hands in a solution of chloride of lime before he attended a midwifery case, the mortality in the first division, where about 3500 women were annually confined, diminished to exactly the same figure as in the second division, where a similar number of women were attended by midwives only. Well, that disease I showed from the evidence was not contagious from one person to another. That is exactly what is true of surgical fever. We all know that very often we communicate a disease to a lying-in woman, if we come from a case with our own fingers contaminated by some discharge. The records of medicine abound in cases of that sort. The cases published by Dr. Storr some years ago in the *Transactions of the Provincial Medical Association* showed how often the disease was produced in that way. Therefore, I say, it is clear from the evidence at Vienna upon a large scale, and from what I have seen and read upon a smaller scale—in my own practice and that of others,—that one variety of puerperal fever can be, and often is, communicated by direct inoculation of the practitioner. In the case of the fever in Vienna the children died generally a little before the mothers, and in all those cases it was found that peritonitis existed in the child. In Dr. Storr's cases it was found that many of the husbands of these women contracted peritonitis; and we have heard to-night of some cases in which the disease communicated was erysipelas. Therefore we must admit that under certain circumstances there is some contamination that takes place between parties coming in close contact, probably analogous to that which takes place with typhoid fever, which may be said to be communicated by discharges or by the powerful odour emanating from the patient. No man can read all the literature upon the subject, I think, without being convinced that there is another variety of puerperal fever which is eminently contagious. Whether it be communicated from erysipelas direct, or from typhoid, or from any of these diseases, it is communicable from woman to woman, even from woman to man. There is, I think, a point in which we have not made a clear distinction. There is indubitably a peculiar point in the contagion of several different fevers, at which, when it attacks a lying-in woman, it will develope in her a particular disease—call it puerperal fever, or call it a modification of the disease which originally infected her,—but which, applied to another woman, would extend, and thus produce an epidemic. If we look at that question on a broad basis, we must come to the conclusion that some cases are not contagious and some are, and that those that are contagious are communicated by infection from other cases.

Dr. GREENE: I may mention a fact which I omitted to state: that a midwife, whose son was suffering from erysipelas, communicated puerperal fever or some febrile affection, which undoubtedly was erysipelas, to a number of her patients, many of whom died. That occurred recently.

Mr. WALLACE: I am pleased to hear what Dr. Routh has said about the contagiousness or non-contagiousness of some cases of puerperal fever. Up to last October I was in the happy position of having attended over two thousand cases without having lost a woman from any disease whatever—like some of those gentlemen who write to the papers and say they have attended so many cases without a single death, and therefore think they are never to have one. However, my turn came at last. My *locum tenens* attended a primipara on October 5. The house was in a bad hygienic condition, the rooms being ill-ventilated and most offensive, and the drains smelling. The woman died after six days, of what I should call typhoid fever modified by the puerperal condition. The most singular part about the case was this. I should explain that I came back from the country the very night the woman was confined, and I attended her afterwards myself. During the first two days after my return I attended four women in their confinement, and they all did badly,—none of them died, but they were all more or less ill for some time, and two or three of them barely escaped with their lives,—so much so that I was compelled to give up midwifery practice for three weeks, when my trouble ceased. About two months afterwards a medical friend of mine attended a case for me, in which the woman died after five days of metro-peritonitis. While this woman was ill I attended several cases, and they none of them exhibited any bad symptoms whatever. I continued to attend midwifery cases, and all my cases did well; but after two months there was another case where the woman died. I may mention that in the second case the woman had a dead child, and there was decomposition of a portion of the placenta. What I wish especially to say is, that what would be called the pyæmic cases were non-contagious. I may also state that during 1870 in my neighbourhood there was an epidemic of scarlet fever. I had many cases to attend, and I also had a good deal of midwifery, but none of the women were taken ill. On several occasions, children with the rash out were in bed with the mothers when they were confined. The same has been the case with measles. During the epidemic of small-pox which occurred in my neighbourhood in the East-end of London, in 1871, those puerperal women who took small-pox had small-pox simply, not at all modified by the puerperal condition.

Dr. GRIFFITHS: You will, I trust, sir, pardon the remarks I am about to read, since I am not accustomed to take part in the debates of the Society. Indeed, I would ask you to pardon me for at all addressing any words to such an assembly as this, composed as it is of the Gamaliels of the profession; but I consider it behoves every member to give his opinion and experience, that conclusions may be obtained from such data. In the discussions which have preceded to-night's there seems to be some discrepancy as regards the relation of scarlet to the so-called puerperal fever, which with the greatest diffidence I submit may be explained in the following way: Some gentlemen have seen and described true scarlet fever running the regular course, the subject of it happening, in the chapter of accidents, as it might be said, to be the lying-in woman, in whom that fever which we know by the name of the puerperal fever was not induced. Other gentlemen have seen, after labour, symptoms which they have considered scarlatina, but which really do not constitute that affection, being simply the outward and visible signs of that inward autogenetic poison, of which—as indeed the word "autogenetic" implies—the woman is herself the factor, and subsequently the recipient—recipient not alone, because the poison generated in utero lies in, or is received by, the uterus, but because it is received into the lymphatics, the veins, the peritoneum, and into the body generally, as described by Dr. Tilt in his paper on "Lymphangitis in Pelvic Pathology" in the sixteenth volume of our *Transactions*, and alluded to by him in his recent speech. With the train of symptoms to which I refer, and which has been termed scarlet fever, who practising obstetrics is not acquainted, and has not met it in cases of what, for the sake of distinction, we must term puerperal fever? But, sir,

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is it scarlet fever at all—at least that form contracted from another affected with the ailment, and which, in the usually accepted meaning of the name, constitutes the true disease? The conditions alluded to, and which are identical with scarlatina, nay, more, are in some instances, perhaps, the same, are the result of, pyrexial action, the indication of latent mischief, and have their origin not from scarlet fever contagium—that is, from a scarlatina-infected person, the woman never having been exposed to the scarlatina virus,—but from the presence of some putrid or offending matter in utero or vagina: the sickness, the dreadful headache, the hot, pungent skin, the sore throat and rash, the congested eyeballs, the jaundice, the delirium, the oppressed heart and breathing, and, later, the diarrhœa. These are not scarlatina in the usually accepted sense of the word, but a group of symptoms pointing to a toxæmic condition of blood dependent not upon the entrance of a specific virus, but simply of the noxious elements resulting from putrescent animal matter—are, in fact, the sequelæ and manifestations of the blood-poisoning which occasions what is termed puerperal fever, and which, if not checked or corrected, would inevitably end fatally. In a scarlet fever epidemic, such happening to a lying-in patient would be set down to the scarlatina poison; but I have seen them where no scarlatina at all existed, and where no exposure to it had taken place. Those gentlemen who have seen scarlet fever attacking the lying-in, and running its usual course well defined without inducing any form of puerperal fever, would do good by relating whether the lochia were offensive before the scarlatina set in, or at any time during its progress. If not before the invasion of the fever, then I say the case is one of true scarlet fever; but if the discharge become offensive only in the course of the scarlet fever, I would submit that the fever poison, perverting, as we know it does, the entire blood, has vitiated, and it may be even rendered putrescent, the outcome of the blood—I mean the lochia; the relation of the scarlet fever being to the offensive discharge as cause to effect, the reverse of that which obtained when the symptoms exist which I have demonstrated as being those of so-called puerperal fever, and to which we might apply the term "bastard" or "simulating scarlet fever." Those gentlemen who hold that scarlatina is a great agent in producing puerperal fever, would do well to tell us whether the scarlet fever symptoms came on before labour. If not, on what day after delivery? They should also state whether the lochia were fetid. If they were, how many days previous to the scarlet fever symptoms had they been so? I am led to the conclusions I offer by a case of autogenetic poisoning at this moment under my care, in which most, if not indeed all, the symptoms of scarlatina obtained, but which recognising to be wholly the consequence of a morbid condition of the uterine system and its excretions—the lochia—I attacked by imitating the eliminative action of involution, grasping the soft, spongy, uncontracted uterus with my hands, compressing it and expelling some clots, washing out the putrid or putrescent discharges of the womb and vagina by means of Higginson's syringe, Condy's fluid and warm water being used every two hours, till the lochia became quite inodorous. Had I, however, seen the patient for the first time, when those apparently scarlatina symptoms were well developed, I might have erred in supposing I had a case of scarlet fever to deal with, have treated it as such, and lost my patient; but, being alive to the puerperal facts to which I have drawn attention, I at once proceeded as I have described, and the correctness of this diagnosis was evinced by the immediate improvement in my patient, commencing as it did from the very time I got rid of the offensive clots, and washed away the foul lochia. All the group of evils in this case might be termed scarlet fever, yet, all at once disappearing under the defouling treatment named, showed incontestably that the diagnosis was correct. Moreover, since her recovery, I have made inquiries, and find no exposure to scarlet fever nor any presence of it in the town. One difference I noticed: there was no desquamation of the skin, although I should not have been surprised had such taken place, so high did the temperature run. I admit, as Dr. Savage, I think, said, there may be cases of septicæmia running a rapidly fatal issue without any of the pyrexial disturbance I have named, or even any elevation of temperature from first to last; but that is where the patient is stricken down and overwhelmed by the dose of poison, or where the febrile symptoms occur in our absence, and hence may escape the observation of even the astutest. The same remarks will hold good of the rash as adduced by Dr. Braxton Hicks. I am led up to these conclusions because lately my mind has been exercised upon what I consider to be a fact—namely, that scarlet fever and typhoid may originate in the same way, from the same infecting source or poison; may be, in fact, the same poison developed in different persons or in the same persons at different times and under different circumstances, the poison at one time determining to the lymphatics and glandular systems, producing what we know as scarlet fever, at another time determining with greater virulence to the intestines, particularly Peyer's patches, as exists in typhoid fever. In this—although I had arrived at my goal without knowing the way to it had been trodden before me—I find I am borne out by the previous researches of Dr. John Harley, which he published in a pamphlet he has had the kindness to send me since I commenced my investigations; also by the researches of Dr. Tilt, made known to us in his paper on "Lymphangitis in Pelvic Pathology"; by Dr. Tilt's speech, by the speeches of those who have preceded him, and by my own at present somewhat crude experience, which I value very slightly indeed till I verify and check it by further careful inquiry. Bearing in mind, therefore, the life symptoms which exist in scarlet fever, puerperal fever, and typhoid, also the pathological conditions found after death, and how closely allied they are—nay, more, how much alike in a number of instances—we can see how readily the first—that is, scarlet fever—can run into the second, puerperal fever; the second into the third; how typhoid came to be supposed to originate puerperal fever (Sir Henry Marsh's opinion, as quoted by Dr. Squire); and how true so-called puerperal fever may clothe itself in the garments of scarlet fever, so that only with difficulty can it be distinguished.

(*To be continued.*)

LEGAL INTELLIGENCE.

ALLEGED NEGLECT BY A NURSE.

At the Assizes, at Limerick, on July 14, Bridget McNamara, late night nurse in the fever hospital of the Limerick Workhouse, was charged with the manslaughter of Michael Brennan, a patient in the hospital, in April last, by permitting him to escape from the hospital at night into the open air. It appeared that she had gone to sleep while on duty, and that meanwhile the boy got out of a window and fell twenty feet on to a gravel walk, where he lay for three hours. Medical evidence was given to prove that his death was accelerated by the accident and subsequent exposure. At the close of the evidence, Mr. Justice O'Brien, the judge, stated his opinion that there was no proof of the culpability of the prisoner, and the jury agreed with his view of the matter. The Crown then entered a *nolle prosequi*, and the prisoner was discharged. Some strictures on the nursing arrangements of the workhouse were made by the Judge; and Sir Colman O'Loghlan, the counsel for the Crown, said, in reply, that the matters complained of had been already remedied.

Poisoning by Strawberries.—In the *Lyon Médical* for June 20, M. Garnier relates a case of fatal poisoning by strawberries, which occurred in a strong, healthy girl, fifteen years of age. Three hours before he was called to her she had eaten a large cup (*bol*) of strawberries, without any condiment, and he found her in a dying state, comatose, with complete prostration, livid countenance, and a very small, intermittent pulse. He administered an emetic, and endeavoured to restore warmth to her icy body by warm applications; but a profuse and viscous sweat having spead over her body, she soon after died, not more than three hours having elapsed since she began to feel ill. M. Garnier states that several other such cases have occurred in his practice, four of which have been saved by emetics, but that he has lost more cases than he has saved. In his opinion, after two hours emetics are of no use, in consequence of the great amount of meteorism that has become developed, and that then large doses of ammonia should be given. It does not seem that any autopsy was practised in this case; but twenty-four hours after death very marked decomposition had taken place, and an incredible degree of meteorism was present. It is to be regretted that M. Garnier has not furnished more particulars of the numerous cases he says he has met with, of what must be regarded as a very rare occurrence.

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MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following were admitted Licentiates on July 19, viz.:—

Anningson, Thirkell, Burnley.
Baly, William, St. Mark's Hospital, City-road, E.C.
Blackmore, George Henry, Shaftesbury-road, Hammersmith, W.
Childs, Christopher, 121, Warwick-street, S.W.
Clarke, Arthur, Brill, Buckinghamshire.
Clayton, Joseph Everett, 4, Rutland-street, N.W.
Collins, Charles Edward, 47, Crowndale-road, N.W.
Cooper, Ernest Frederic, 13, St. Paul's road, N.
Haines, Edmund William, 5, Tavistock-place, W.C.
Hood, Francis Edward Charles, Guy's Hospital, S.E.
Irving, Charles, St. Bartholomew's Hospital, E.C.
Jackson, Ernest Carr, 91, Harley-street, W.
Kebbell, William, Brighton.
Kempe, John Arthur, 74, Wimpole-street, W.
Murrell, William, 12, York-street, St. James's-square, S.W.
Pasley, Nicholas Claude Burgoyne, 19, Palace-road, S.E.
Peck, Awdry, Yalding, Kent.
Peevor, George Hamilton, 4, Portsdown-road, W.
Phillips, Arthur Owen Henry, Bethlem Hospital, S.E.
Poynder, George Frederick, Weeting, Brandon.
Ree, Frederick George, Ealing, W.
Reid, Thomas Whitehead, St. Bartholomew's Hospital, E.C.
Rendall, John, Maiden Newton, Dorchester.
Robson, Arthur William Mayo, Leeds.
Romano, Frederick William Richard, 17, Albany-road, S.E.
Rudd, Leonard, Guy's Hospital, S.E.
Spooner, Frederick Henry, Plymouth.
Thompson, Alfred, Spilsby.
Waylen, George Swithin Adee, 19, Granville-square, W.C.
Williamson, Francis, 5, Durham-place, S.W.

The following candidate, having passed in Medicine and Midwifery, will receive the College Licence on obtaining a qualification in Surgery recognised by this College:—

Sykes, John Frederick Joseph, 20, Fitzroy-square, W.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, July 13, 14, and 15, the following were the successful candidates for the licence to practise Medicine, viz.:—

Alexander, Thomas.
Barker, Arthur Edward James.
Deeley, Ambrose William.
Elliott, Robert Andrew.
Hunt, Daniel de Vere.
Jones, John Thomas.
MacGrath, William Michael.
MacNamara, Joseph.
O'Meara, Michael Aloysius.
Townsend, Charles Bryan.
Warnock, Hugh Thomas.
Wood, Edwin Stanley.
Yourelle, Michael.

For the licence to practise Midwifery—

Banks, Alfred.
Barker, Arthur Edward James.
Deeley, Ambrose William.
Drapes, John Benward.
Drummond, David.
Jones, John Thomas.
Jevers, Philip Glover.
MacGrath, William Michael.
O'Carroll, Martin.
Townsend, Charles Bryan.
Warnock, Hugh Thomas.
Wood, Edwin Stanley.
Yourelle, Michael.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 20th inst., viz.:—

Alford, George Ernest, Weston-super-Mare.
Clinton, Samuel Aubrey, L.S.A., Chislehurst.
Clippingdale, Samuel Dodd, Commercial-road.
Daubeny, Charles Alexander, Yatton.
Eames, James Crompton, M.B. Edin., Manchester.
Hayward, William Thornborough, L.K.Q.C.P.I., Liverpool.
Hunter, Robert Hope Alston, Dalston.
Irvine, Delaware Lewis, Newcastle-on-Tyne.
Jones, Thomas Reginald, L.R.C.P. Lond., Walton, Liverpool.
McNaught, James, M.B. Edin., Wall, Northumberland.
Palmer, Francis Craddock, Weston-super-Mare.
Skipworth, Herbert, Brigg.
Tindle, John George, Middlesborough.
Watkins, Arnold Hirst, Edinburgh.
Wilson, Arthur Cobden Jordan, Manchester.
Winship, William Lionel, Newcastle-on-Tyne.
Wright, Newton Wheeldon, Ardwick.

Eight candidates, who passed in Surgery at previous meetings of the Court, having subsequently obtained Medical qualifications, were also admitted Members of the College, viz.:

Blake, Andrew Henry, L.S.A., Castle-street East, W.
Jumeaux, Benjamin, L.R.C.P. Edin., Stafford.
Peevor, George Hamilton, L.R.C.P. Lond., Maida-hill.
Smith, Charles Callow, L.S.A., Redditch.
Sparrow, George Gordon, L.R.C.P. Edin., Southsea.
Sykes, William, L.R.C.P. Edin., Sheffield.
Thomas, Edmund Frederick, L.R.C.P. Edin., Weston-super-Mare.
Vernon, William, L.R.C.P. Edin., Newcastle-on-Tyne.

One candidate passed the examination in Surgery, and when qualified in Medicine will be admitted a Member of the College. Seven candidates were referred to their professional studies for a period of six months.

The following were admitted Members on the 21st inst., viz.:

Briggs, William Hamilton, Stroud, Gloucestershire.
Crouch, Ernest John, L.S.A., Kensington.
Gawith, James Jackson, London.
Hobson, Lewis John, Ainger-terrace, N.W.
Latour, George Lewis, Lambeth.
Lumby, John Rollinson Hill, Birmingham.
Mitchell, Charles Joseph Carter, Bedford.
Ormerod, Joseph Arderne, B.A. Oxon, Oxford.
Richards, Thomas, Cardiff.
Street, Alfred William Frederick, Barnetby, Lincolnshire.
Symonds, Charles James, St. John, New Brunswick, Canada.

The following gentlemen, having obtained Medical qualifications since passing in Surgery, were admitted Members of the College, viz.:—

Clayton, Joseph Everett, L.R.C.P. Lond., Leeds.
Haines, Edmund William, L.R.C.P. Lond., Tavistock-place.
Hood, Francis Edward Charles, L.R.C.P. Lond., Bletchingley.

Twelve candidates were referred to their hospital studies for a period of six months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 15:—

Chadwick, Alfred, Heywood, near Manchester.
Crowdy, Frederic Hamilton, Newfoundland.
Fell, Thomas Kennedy, Ulverston, Lancashire.
Fussell, Ernest, Sherborne, Dorset.
Lilley, George Herbert, Ware, Herts.
Smith, Charles Callow, York-road, Lambeth.

The following gentlemen also on the same day passed their primary professional examination:—

Brown, Alexander Stuart, St. Mary's Hospital.
De Caux, Frederick, King's College Hospital.
Goulder, Frank Samuel, University College.
Osborne, John Henry, University College.
Richardson, Thos. William, London Hospital.
Sutton, Thos. Seagrave, Middlesex Hospital.
Thompson, Edmund John, University College.
Weller, John, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ROSE, WILLIAM, F.R.C.S., L.S.A.—Honorary Surgeon to the Royal Free Hospital, Gray's-inn-road.

BIRTHS.

DOVE.—On July 15, at Pinner, the wife of J. R. Bathurst Dove, M.B., of a daughter.

FEAR.—On July 16, at Brenchley, Kent, the wife of William Fear, M.R.C.S. Eng., of a daughter.

HERON.—On July 13, at King's Cliffe, Northamptonshire, the wife of G. A. Heron, M.D., of a daughter.

MURRAY.—On July 15, at The Parks, Tenbury, Worcestershire, the wife of W. Berkeley Murray, M.D., of a daughter.

PEARSON.—On July 18, at 23, Upper Phillimore-place, Kensington, the wife of David R. Pearson, M.D., of a son.

RICHARDSON.—On July 10, at Berrington House, Beal, Northumberland, the wife of Henry Richardson, M.D., R.N., of a son.

SMITH.—On July 20, at Christ's Hospital, London, the wife of Alder Smith, F.R.C.S., of a daughter.

MARRIAGES.

CARTER—LARKINS.—On July 13, at Holy Trinity Church, Dover, Surgeon-Major R. W. Carter, son of the late John Carter, M.D., to Louisa Bertha, youngest daughter of the late R. Larkins, Esq., of Dover.

CHURCH—BIGGE.—On July 14, at Ightham Church, William Selby Church, M.D., of Woodside, Herts, and Bell's-hill, Northumberland, to Sybil Constance, youngest daughter of the late Charles Bigge, Esq., of Linden, Northumberland.

CULLINAN—PYNE.—On July 15, at St. Stephen's Church, Dublin, William Cullinan, L.K.Q.C.P.I., L.R.C.S.I., of Belle-vue, Ennis, Ireland, to Eliza (Isil), only daughter of the late William Pyne, Esq., of George-street, Hanover-square, and Kilburn, Middlesex.

GRAY—BUDDEN.—On June 9, at the Mission Chapel, Almorah, Northern India, the Rev. Richardson Gray, M.D., of the American Methodist Episcopal Mission, Loohoo Ghat and Petorah, to Margaret, daughter of the Rev. H. Budden, of the London Missionary Society, Almorah, Kumaon, N.W.P.

PRENTICE—CHRISTIE.—On July 15, at the parish church, St. Leonard's, Bromley, Middlesex, Frederick Alexander, only son of Alfred Prentice, M.D., to Alice Phœbe, third daughter of the late J. C. Christie, Esq., of Mansell-street, Aldgate.

ROBERTSON—HAWKINS.—On June 10, Edward Bruce Robertson, M.A., M.B., only son of the late Rev. Edward Robertson, of Perthshire, to Annie, widow of the late James S. Hawkins, M.R.C.S., of Bow.

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SPENCE—CROSSE.—On July 15, at St. James's, Piccadilly, J. A. W. Spence, L.R.C.P., Madras Medical Staff, second son of John Spence, F.R.C.S., to Fanny Louisa, youngest daughter of the late Edmond Crosse, Esq., of Fairfield, Harrow Weald, and 9, Ladbroke-gardens, Bayswater.

STEPHENS—CROSS.—On July 20, at Nantmel Church, Radnorshire, Edward Barrington Stephens, Lieutenant Royal Marine Light Infantry, youngest son of the late Captain Nassau William Stephens, formerly of the 94th Regiment, to Edith M., youngest daughter of Alexander Cross, Deputy Inspector-General of Hospitals R.N.

DEATHS.

BURT, BENJAMIN, M.D., late of the Honourable East India Company's Service, at 19, Coates-crescent, Edinburgh, on July 18.

DELL, EDWARD CRUMP, M.D., L.F.P.S. Glasg., L.S.A., formerly of Maida-hill, late of Cliftonville, Margate, at 10, William's-terrace, Chiswick, on July 14, in his 57th year.

HARDWICK, JOHN, M.R.C.S. Eng., L.S.A., at Hillside, Worle, Somerset, on July 11, aged 70.

HELSHAM, ARTHUR, M.D., at 33, Mile End-road, on July 14, aged 90.

NEWMARCH, VIOLET, widow of Henry Newmarch, M.D., late of the Bengal Army, and third daughter of the late General James Doddington Sherwood, of the Bengal Artillery, at 20, Colville-terrace East, Kensington-park, W., on July 18, aged 73.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOROUGH OF ROCHDALE.—Medical Officer of Health. Candidates must be duly qualified and registered. Applications, with testimonials, to Z. Mellor, Esq., Town Clerk, Town Hall, Rochdale, on or before August 7.

CARLOW UNION.—Medical Officer for the Tullow Dispensary District. Applications, with testimonials, to B. Furney, Esq., Honorary Secretary, Butter's Grange, Tullow, before August 11.

CARLOW UNION.—Medical Officer for the Tullow Fever Hospital. Candidates must be duly qualified. Applications, with testimonials, to Mr. E. L. Jameson, Clerk of the Union, Board-room, Carlow, before August 12.

CHELTENHAM GENERAL HOSPITAL.—Surgeon to the Branch Dispensary. Candidates must possess both a medical and surgical qualification, and be registered. Applications, with testimonials, to the Secretary, at the Hospital.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Board of Guardians, Christchurch, before August 16.

CONSUMPTION HOSPITAL, BROMPTON.—Resident Clinical Assistants. Applications, with testimonials, to the Secretary, on or before August 2.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—House-Surgeon. Candidates must be M.R.C.S. Applications, with testimonials, to the Secretary, on or before July 30.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Ophthalmic Surgeon. Candidates must be F.R.C.S. Applications, with testimonials, to the Secretary, on or before August 6.

KILBURN DISPENSARY.—Assistant Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, 83, Boundary-road, Finchley-road, N.W., on or before July 26.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Demonstrator of Anatomy. Applications, with testimonials, to the Registrar, on or before July 31.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

NORTH LONDON CONSUMPTION HOSPITAL, MOUNT VERNON, HAMPSTEAD.—Two Physicians. Candidates must be M.D. and F. or M.R.C.P. Applications, with testimonials, to the Secretary, 216, Tottenham-court-road, W.C., on or before August 5.

NORWICH DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before July 31.

ROYAL FREE HOSPITAL, GRAY'S-INN-ROAD.—Senior House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 4. Also vacancies for two Junior House-Surgeons. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 4.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Teacher of Physiological Chemistry. Applications to Dr. Wadham, at the Hospital.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Plomesgate Union.—Mr. H. J. Robbins has resigned the Aldeburgh District; area 7425; population 3024; salary £40 per annum.

Tiverton Union.—Mr. John Reddrop has resigned the Western Tiverton District; salary £70 per annum.

APPOINTMENTS.

Banbury Union.—Thos. Hill, M.R.C.S. Eng., L.S.A., to the Chipping Warden District.

Cardiff Borough.—Mr. Joseph W. Thomas, as Analyst.

Tamath-park Township.—Roger Edwards, L.R.C.P. Lond., M.R.C.S. Eng., as Assistant Medical Officer at the Workhouse.

SPINA BIFIDA SUCCESSFULLY TREATED BY IODINE.—Mr. Eate, of the Madras Medical Service, relates in the *Indian Medical Gazette* for June 1 the case of a native male infant a month old. The tumour, the size of a large orange, was situated in the lumbar region, having its summit ulcerated. Although the child slept well, and took nourishment freely, it was emaciated, while the lower extremities appeared paralysed and the sphincter ani enfeebled. A quantity of clear fluid was drawn off by a trocar and canula, leading to the collapse of the tumour, which, however, was not thoroughly emptied. Two drachms of a solution of iodine, successfully employed in a case by Dr. Watt, of Ayr (iodine gr. x., iod. pot. gr. xxx., glycerine ʒj.), were injected by means of an ordinary syringe, the solution being diffused over the sac by gentle manipulation. The aperture was closed by plaster, and a light lint compress was applied. By the following day the tumour had regained its original size and tension, but nothing was done beyond dressing the ulcerated surface. During the day it gave way over the site of the ulceration, much of the contained fluid escaping, and from that time slowly draining away. The tumour also became gradually reduced in size, and the ulceration healed, leaving a fistulous opening for about twenty-five days. At the date of the report, about five weeks after the operation, the tumour had become a firm mass, with a puckered appearance, about the size of a walnut, and upon which firm pressure can be made without causing crying. The child was much improved in health, and seemed to be recovering the use of its lower limbs. Mr. Eate believes that this is the fifth or sixth time this procedure has been resorted to, and always with success.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Owen C.—The Quekett Microscopical Club was established in London in 1865.

Octavius M.—Common lodging-houses were placed under the watch of the police by an Act passed in 1851.

N. N.—Dr. Henry Towbridge Moor, of Chester, was a pupil of the late John Abernethy in 1825.

Gus T.—James Price, the alchemist, was a Fellow of the Royal Society; and the University of Oxford, where he had been a fellow-commoner of Oriel College, bestowed on him the degree of M.D.

L. J. F.—In 1808 vaccination was taken under the direct protection of the Government. The National Vaccine Establishment was then formed, which continued for many years to superintend the practice of vaccination in this country.

R. N., Southsea.—Transfusion was known at a very early period, as passages in the ancient poets not obscurely show. Thus:—

"Quid nunc dubitatis inertes?
Stringite ait gladios: veteremque haurite cruorem:
Ut repleam vacuas juvenili sanguine venas."—*Ovid.*

Spes.—The Local Government Act passed in 1858. The Local Government Board was established in pursuance of an Act passed August 14, 1871.

Ralph N., Gosport.—Dr. Peter Mark Roget was President of the Medical and Chirurgical Society 1829-30.

G. G., Deptford.—*Fraser's Magazine*, December, 1871—"The Anglican and their xxxix. Medical Formulæ."

Mortimer K.—The bills of mortality in London commenced 1592; issued regularly from 1603.

C. A. O.—Dr. Babington was a Fellow of the Royal Society, having been elected May 30, 1805. His certificate describes him as "Senior Physician to Guy's Hospital, and a gentleman eminently learned in chemistry and mineralogy." It is signed by Davy, Hatchett, Home, Wollaston, and Abernethy.

J. K.—The proverb is—"A good surgeon must have an eagle's eye, a lion's heart, and a lady's hand."

Giles W.—On January 1, 1849, according to the Reports of the Lunacy Commissioners, there were 14,560 patients in the hospitals, asylums, and licensed houses of England and Wales.

Apothecary, Maidstone.—In our opinion, the fact of your keeping an "open surgery" is a disqualification for the post you mention. Only those persons who hold qualifications which would enable them to become physicians to in-patients hereafter should be elected assistant medical officers; or, if such cannot be obtained, anyone offering himself should only be elected if he binds himself to forego the public sale of drugs, which is the proper business of a pharmaceutical chemist, and not of a medical man. The question whether a candidate should be permitted to send out medicines for his own patients is one for the governors to decide.

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Dick.—1. Yes. 2. Oatmeal. Markham, in his "English Housewife," 1653, speaks of it as a food in regular family use in England.

Charles V.—The Rev. Richard Napier, astrologer and physician, died April 1, 1634. His manuscripts, which contained a diary of his practice for fifty years, fell into the hands of Elias Ashmole, who deposited them in the library at Oxford which bears his name, and where they still remain, together with a portrait of Dr. Napier. Many of the medical recipes in these manuscripts are marked by Dr. Napier as having been given him by the angel Raphael.

Morris T.—"Handbook of Forensic Medicine," New Sydenham Society's translation, vol. ii., p. 18.

P. P., Shrewsbury.—See an interesting series of severe injuries to the elbow-joint in London and provincial hospitals, collected by Mr. J. Hutchinson, *Medical Times and Gazette*, 1856, vol. ii.

COMMUNICATIONS have been received from—

Mr. D. Goyder, Bradford; The Registrar of the College of Physicians; Mr. C. J. Cullingworth, Manchester; Dr. H. D. Noyes, New York; Mr. H. Brickwell, Somersham; Apothecary; Dr. R. Barnes, London; Dr. Domett Stone, London; Dr. St. John Roosa, New York; Dr. J. Dewar, Kirkcaldy; W. E. P.; Dr. Edis, London; Surgeon J. C. Lucas, Bombay; Mr. S. Whitford, London; Dr. George Johnson, London; Dr. Lightwood, London; The Registrar of the Apothecaries' Hall, London; Mr. W. Odell, Hertford; Mr. W. Johnson Smith, Greenwich; Mr. J. Archibald, Dalry; Mr. C. F. Maunder, London; The Registrar-General, Edinburgh; Mr. G. Sutton, London; Captain Mercier, London; Mr. J. Chatto, London; Professor Huxley, Edinburgh; Dr. C. Handfield Jones, London; Dr. J. Lionel Beale, London; Mr. T. Spencer Wells, London; Dr. Richardson, London; Mr. Wm. Hornibrook, London; Mr. Francis Fowke, London; Dr. G. J. Arnold, Boston, U.S.A.; Mr. G. Lawson, London; Dr. Leeson, Wharfedale; Dr. David J. Brakenridge, Edinburgh; Mr. G. Eastes, London.

BOOKS AND PAMPHLETS RECEIVED—

Etude Chimique sur la source Sulfurée Sodique forte et Iodobromurée de Challes (Savoie), par le Dr. F. Garrigou—Norton on Affections of the Throat and Larynx—Bennett's Report on the Antagonism of Medicines—Essays and Papers on some Fallacies of Statistics, by Dr. Rumsey—Thirteenth Annual Report of the Peking Hospital—Cases of Disease in the Orbit, by H. D. Noyes, M.D.—Fire-Burial among our Germanic Forefathers, by Karl Blind.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Guy's Hospital Gazette—The Englishman—Students' Journal and Hospital Gazette—Shipping and Mercantile Gazette—Dublin Medical Journal—Canada Lancet—Chicago Medical Journal—Herald of Health—Islington Gazette—Medical Inquirer—Canada Medical and Surgical Journal.

APPOINTMENTS FOR THE WEEK.

July 24. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

26. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

27. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

28. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

29. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

30. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 17.

BIRTHS.

Births of Boys, 1081; Girls, 1122; Total, 2203.
Average of 10 corresponding years 1865-74, 2095·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	825	656	1481
Average of the ten years 1865-74	724·6	652·3	1376·9
Average corrected to increased population	...	...	1473
Deaths of people aged 80 and upwards	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	3	17	1	6	...	4	...	22
North	751729	2	3	9	...	10	2	2	2	45
Central ...	334369	1	3	8	...	10	...	1	1	19
East	639111	...	10	16	2	12	...	1	2	59
South	967692	...	8	40	7	23	...	5	6	59
Total	3254260	4	27	90	10	61	2	13	11	204

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·692 in.
Mean temperature	56·2°
Highest point of thermometer	66·5°
Lowest point of thermometer	42·5°
Mean dew-point temperature	52·2°
General direction of wind	S.W. & N.E.
Whole amount of rain in the week	3·27 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 17, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending July 17.	Deaths Registered during the week ending July 17.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2203	1481	66·5	42·5	56·2	13·44	3·27	8·31
Portsmouth ...	122632	27·3	75	29	...	...	...	...	...	...
Norwich	82842	11·1	39	28	68·0	44·0	55·6	13·12	1·01	2·57
Bristol	196186	44·1	148	67	67·8	41·3	53·7	12·06	3·04	7·72
Wolverhampton ...	71718	21·1	54	17	70·5	44·3	54·1	12·28	1·81	4·60
Birmingham ...	366325	43·6	240	132	70·0	44·5	54·3	12·39	2·01	5·11
Leicester	109830	34·3	74	46	69·0	42·8	54·5	12·50	1·42	3·61
Nottingham ...	92251	46·2	45	53	67·5	40·9	54·8	12·67	1·86	4·72
Liverpool	516063	99·1	360	209	66·7	49·0	54·9	12·72	0·73	1·85
Manchester ...	356626	83·1	289	167	76·0	42·5	56·9	13·83	0·64	1·63
Salford	135720	26·3	139	94	75·0	40·3	55·3	12·95	0·74	1·88
Oldham	87437	18·7	61	45	...	...	...	...	...	...
Bradford	168305	23·3	116	59	68·2	45·4	55·1	12·84	0·32	0·81
Leeds	285118	13·2	202	140	68·0	44·0	55·3	12·95	0·56	1·42
Sheffield	267881	13·6	195	120	71·0	47·0	54·9	12·72	1·16	2·95
Hull	133932	36·8	93	79	69·0	42·0	54·5	12·50	1·28	3·25
Sunderland ...	106342	32·2	93	38	73·0	45·0	56·1	13·39	1·56	3·96
Newcastle-on-Tyne	137665	25·6	103	69	63·0	44·0	50·8	10·45	1·67	4·24
Edinburgh	211626	50·5	137	85	...	...	...	...	...	...
Glasgow	534564	88·6	355	255	68·1	42·9	55·6	13·12	0·04	0·10
Dublin	314666	31·3	153	115	69·5	38·3	55·3	12·95	0·71	1·80
Total of 21 Towns in United Kingdm	7742889	37·0	5174	3328	76·0	38·3	54·9	12·72	1·32	3·35

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·69 in. The lowest was 29·33 in. on Sunday morning, the 11th inst., and the highest 30·05 in. on Tuesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 89.)

THE *Cephalopoda* are divided into two very distinct groups, the *Tetrabranchiata* and the *Dibranchiata*.

The former possess an external chambered siphunculated shell. The margins of the foot are produced externally into a sort of hood, between which and the mouth lie four lobate processes. The hood contains thirty-eight, and each lobe twelve, cavities, in each of which is lodged a long tentacle, divided into a number of discs, connected by a median stem. Besides these, there is a tentacle in front of the pedunculate eye, and another behind it. The margins of the united epipodia are simply folded inwards, without being united into a tubular funnel. There are four branchiæ, and the anus terminates in the pallial, or posterior, wall of the branchial cavity. The apices of the horny beaks are obtuse, and coated with a calcareous deposit. The liver is a loosely racemose gland, and there is no ink-bag. There are no branchial hearts, and, in addition to the four apertures which lead into the organs of Bojanus, there are two others, connected with chambers in the interior of the body, which probably contain blood.

The cartilaginous skeleton supports the post-œsophageal ganglia, but does not encircle the gullet. The stalked eye has neither cornea nor lens, but is an open cup, on the interior of which the retina is spread out.

In the males, modified tentacula of the posterior inner lobe of the left side constitute a peculiar organ—the "*spadix*."

The only existing representatives of the *Tetrabranchiata* are the different kinds of "pearly nautilus" (*Nautilus pompilius*, etc.), which are found in the southern seas, living at the bottom at a considerable depth. The genus is one of the oldest in existence, as it is traceable through the whole series of fossiliferous rocks as far back as the Silurian epoch.

Along with it, in the Palæozoic formations, occur numerous closely allied forms, which differ from *Nautilus* mainly in the different curvature (*Lituites*, *Gyroceras*, *Trochoceras*) or straightness (*Orthoceras*, *Gomphoceras*) of the shell, and in the varying position, proportions, and degree of calcification of the siphuncle.

In the middle of the Palæozoic epoch (Devonian), Tetrabranchs (*Ammonitidæ*) appear, in which the margins of the septa are strongly bent, whence their edges appear as zigzag transverse lines, folded into "lobes" and "saddles," when the outer layer of the shell is worn away (*Goniatites*, *Ceratites*); and in the Mesozoic epoch the lobes and saddles become extremely complicated (*Ammonites*, *Baculites*, *Turrilites*). The *Ammonitidæ* are extraordinarily numerous in the Mesozoic epoch, but no trace of them has been found in tertiary or quaternary formations.

In the *Dibranchiata*, the margins of the foot are produced into not fewer than eight nor more than ten arms, which are provided with *acetabula* or suckers. Each acetabulum is a sessile or stalked cup, from the bottom of which rises a plug, which nearly fills the cup, but can be retracted by the action of muscular fibres attached to it. When the margins of the acetabulum are applied to any surface, and the plug is retracted, a partial vacuum is created, and the acetabulum is caused to adhere to the surface by atmospheric pressure. The edges of the acetabula are frequently strengthened by chitinous rings, and these are sometimes produced into long curved hooks.

The margins of the united epipodia are not only folded inwards, but unite so as to give rise to a tubular funnel, through which the water taken into the branchial sac for respiratory purposes is ejected. There are two branchiæ, and the anus terminates between them in the anterior wall of the branchial sac. The apices of the horny beaks are acutely pointed, and not ensheathed in calcareous matter. The liver is usually a compact mass. A peculiar gland, which secretes an extremely dark fluid—the so-called ink,—and has the form of an oval or pyriform sac (the *ink-bag*), with a long duct which opens into or close to the rectum, is lodged sometimes in the liver, sometimes further back. The ink is ejected when the animal is alarmed, and forms a dark cloud in the water, by which its retreat is covered. Where the afferent branchial vessels pass into the gills, they present spongy dilatations—the so-called branchial hearts.

The eye may be pedunculate, or lodged in an orbit. A larger or smaller aperture perforates the cornea. The lens is present, and, like a Coddington lens, has a deep circumferential groove, which separates the external from the internal moiety, and receives the ligament by which the lens is kept in place. The cartilaginous endoskeleton forms a ring enveloping the principal ganglia.

The *Dibranchiata* are divided into the *Octopoda* and the *Decapoda*. The *Octopoda* have eight arms, and have no pallial shell. But, in the female of one genus (*Argonauta*), the extremities of the anterior pair of arms are greatly expanded, and, being turned back over the mantle, secrete an elegant shelly structure (the "paper Nautilus"), which covers the body, and serves for the attachment of the eggs. In this genus, and in some other Octopods, the male is very much smaller than the female, and gives rise to a Hectocotylus.

The *Decapoda* have ten arms, two of which are much longer than the rest, and can be protruded from, or retracted into, sockets. The acetabula have horny rims, which may take on the form of hooks.

Hectocotylisation does not go further than a modification of the form of one of the arms. There is always an internal shell, which is either a pen, a sepiostaire, a phragmocone, or a combination of the latter with a pen.

The *Teuthidæ*, or Squids, are characterised by possessing a pen. This is a lamellar chitinous body, strengthened by one or more longitudinal ridges, which lies in a sac lodged in the anterior wall of the body, by the lining membrane of which it is secreted. The posterior end of the pen is commonly broad, and its sides may be infolded so as to form a conical cup.

In the *Sepiadæ*, or Cuttle-fishes, the sepiostaire, or "cuttle bone," which occupies the same position, is composed of a broad plate answering to the pen, but calcified. On the inner face of this plate, a great number of delicate calcified laminæ, connected by numerous short columns, form a spongy tissue, which is full of air.

In the *Spirulidæ*, represented by the solitary genus *Spirula*, which is among the rarest of animals in museums, though its shells are found piled up in countless millions on the beaches of the islands of the Pacific, the shell is spirally curved and divided by septa, perforated by a siphuncle, into chambers. The last chamber of this *phragmocone*, however, is no larger than its predecessor, and the shell is held in position by lateral processes of the mantle, which are united behind it, and probably represent the walls of the sac in which the shell was primitively formed.

In certain extinct genera (*e.g.*, *Spirulirostra*), a shell, like that of *Spirula*, is inclosed in a dense and laminated pointed sheath, like the hinder end of a sepiostaire, or of the pen of an *Ommastrephes*.

In the *Belemnitidæ*, which abounded in the Mesozoic epoch, but have been extinct since that time, a straight phragmocone is inclosed within a more or less conical calcified laminated cone, the *guard* or *rostrum*, which is continued forwards into a variously-shaped, usually lamellar, *pro-ostracum*. The pro-ostracum and the rostrum together represent the pen in the *Teuthidæ*.

The rare specimens of *Belemnitidæ* in which the fossilised soft parts are retained, show that the arms were provided with hooks, and that there was a large ink-bag.

The genus *Acanthoteuthis* (*Belemnoteuthis*, Pearce)—one of the *Belemnitidæ*, in which the guard is almost rudimentary, while the pro-ostracum is large and penlike—occurs in the Trias, and is the earliest known Dibranchiate Cephalopod. The ordinary *Belemnitidæ* abound from the Lias to the end of the Mesozoic period, after which they disappear. The *Sepiadæ* first appear in the latter half of the Mesozoic epoch; while the *Teuthidæ* are represented by genera closely allied to existing forms (*Teuthopsis*, *Belemnosepia*) as early as the Lias.

The Tunicata.—The Ascidians are all marine animals, many of which are fixed in their adult state; while others swim freely, propelled either by the rhythmical contraction of the walls of their body, or by a special muscular appendage.

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The great majority secrete an external coating or test, which contains cellulose; and, in all, the course of the circulation is alternately reversed, in consequence of the reversal of the direction of the peristaltic contractions of the heart. In these two respects the *Tunicata* differ from all other animals.

The *Appendiculariæ* present the Tunicate type of organisation in its simplest and least modified form. They are pelagic animals of small size, having a certain similarity to minute tadpoles, inasmuch as the short body is provided with a sort of tail, by the undulations of which locomotion is effected.

The ectoderm, or outer wall of the body, consists of a single layer of cells, which, in some cases, contain nematocysts.(a) The endoderm, constituting the wall of the alimentary canal, is also formed of only a single layer of cells, and between the endoderm and the ectoderm is situated a cavity which contains the blood, and is partially occupied by the skeleton, the muscles, and the reproductive organs.

The skeleton consists of a gelatinous rod—the notochord,—which occupies the centre of the caudal appendage, and extends a short way into the body. On each side of this is a layer of longitudinal striated muscular fibres. The wide oral aperture is placed at the end of the body opposite to the insertion of the caudal appendage. It opens into a spacious pharyngeal sac; on one side of this sac a median longitudinal fold of its wall projects into the blood-cavity, and in side-view has the form of a rod within that cavity, whence it has been termed the *endostyle*. On the same face as the endostyle, the posterior end of the pharynx presents two openings, one on each side, by which its cavity communicates directly with the exterior. These are the branchial *stigmata*. Currents caused by the cilia of the pharyngeal endoderm set in at the mouth, and pass out of the branchial stigmata, thus subserving alimentation and respiration. Behind, the pharynx communicates, by a short and narrow œsophagus, with a gastric sac, whence the straight intestine proceeds, usually bending forwards and to the side on which the endostyle is placed, and terminating between the two stigmata, in the anus.

Close to it, the elongated saccular heart is seen, whence this aspect of the body answers to the hæmal face of a Mollusk. The principal nervous ganglion is situated upon the opposite face of the body, behind the mouth. A ciliated depression of the wall of the pharynx, which appears to be a sense-organ, and an otolithic sac, are connected with the ganglion, and a long cord proceeds backwards from it along one face of the notochord, presenting ganglionic enlargements, and giving off lateral branches as it goes.

The reproductive organs are simple glands, situated behind and on the neural side of the alimentary canal. The two sexes are usually combined in the same individual.

The *Appendiculariæ* have the singular faculty of secreting a gelatinous envelope many times larger than the body, and forming that investment for it which Mertens called their "house." This envelope is readily detached, but is renewed with extreme rapidity. Cellulose has not been found in it.

All the other Tunicata differ from the *Appendiculariæ* in the following characters:—

1. The anal extremity of the alimentary canal is not situated upon the hæmal face of the body, nor does it open directly upon the exterior.

2. There is a chamber, termed the *atrium*, the walls of which are formed by an involution of the ectoderm. The external opening of this chamber is situated on the neural face of the body; and the rectum, which is bent down towards this face, terminates in the atrium. The one wall of the atrial chamber invests the neural and lateral aspects of the pharynx, as the visceral layer of peritoneum may invest a viscus; and the branchial stigmata, which are often very numerous, perforate the wall of the pharynx thus formed by the endoderm and the atrial ectoderm, and open into the atrium. The reproductive organs also pour their contents into the atrium, and the atrial aperture is the exit for the current of water which has traversed the pharynx, and carries with it the fæces and the generative products.

3. There is no caudal appendage in the adult, which is frequently fixed, and may give rise, by budding, to compound aggregations.

4. The ectoderm secretes a test or outer investment, in which cellulose is deposited, and which may acquire the structure of connective tissue, or of cartilage.

5. A circlet of tentacula is commonly developed around the oral aperture; the ciliated sac often acquires a complicated form, and eye-spots may appear round both the oral and atrial apertures. The latter are usually closely approximated, but may be situated at opposite ends of the body, as in the *Salpæ* and *Pyrosomata*.

In most of these Ascidians the vitellus undergoes complete division, and becomes a vesicular morula, from which the alimentary canal is developed by invagination. The embryo leaves the egg in the condition of an Appendiculariform larva, provided with a vibratile caudal appendage, which has a notochordal axis; and after a locomotive existence in this condition, loses its caudal appendage and becomes fixed. The atrium is formed by invagination of the ectoderm around the anal aperture.

In *Pyrosoma*, and in some other compound Ascidians, the embryo is saccular, ecaudate, and simply forms the stock from which the zooids of the compound aggregation bud.

In the *Salpæ*, the embryo is ecaudate, and is connected by a placenta with the vascular system of the parent (A) until it has attained a considerable size. When detached, it differs widely from A in form, and may be termed B. The form B possesses no sexual organs, but gives rise to a stolon, from which buds are developed, and these buds take on the form of A, and are set free in coherent chains. These chains break up, and the single ovum which is contained in the ovary of each zooid becomes a placentate embryo. Thus, each egg gives rise to a sexless zooid (B), which by gemmation produces many hermaphrodite zooids (A); and it was upon the fact of the alternation of the forms of parent and offspring observed in the *Salpæ* that Chamisso founded the doctrine of the alternation of generations.

The Enteropneusta.—The very singular animal *Balanoglossus*, which is the only known example of this group, is an elongated, apodal, soft-bodied worm, with the mouth at one end of the body and the anus at the other. The mouth is surrounded by a sort of collar or prominent lip, within the margin of which springs a long proboscidiform median appendage, which is hollow within and has a terminal pore. On the same side as that from which the proboscis springs, the anterior region of the body presents an elongated, somewhat flattened area, bounded by raised longitudinal folds. On each side of this area is a longitudinal series of apertures—the branchial apertures. These communicate with saccular dilatations of the anterior part of the alimentary canal—*branchial sacs*, which are supported by a peculiar skeleton.

No nervous system has yet been certainly made out in Balanoglossus, nor any organs of sense.

According to Kowalewsky, who was the first to elucidate the very singular characters of *Balanoglossus*, the vascular system consists of a dorsal and a ventral vessel. At the posterior end of the branchial region, the former divides into a superior and an inferior dorsal and two lateral trunks. The superior trunk passes forwards, and, at the anterior end of the body, divides into two descending branches, which unite with the ventral trunk. The inferior dorsal trunk supplies the branchiæ, of which the lateral trunks are the efferent vessels.

For the pharyngeal branchiæ of *Balanoglossus*, the only parallels to be found are among the *Tunicata* and the *Vertebrata*. On the other hand, the larval form of this anomalous creature is generally Annelidan, with very close and special resemblances to the *Echinodermata*.

The young of *Balanoglossus* was first observed by Müller, who called it *Tornaria*, and regarded it (as did all succeeding observers, until its true nature was discovered) as an Echinoderm-larva, on account of its extraordinary resemblance to the larvæ of some Star-fishes.

It is an elongated ovoid body, provided with three bands of cilia, one of which is præ-oral, while the other two are post-oral. Of the latter, one at the posterior end is circular, while the other is inclined obliquely to the axis of the body, so that anteriorly and superiorly it reaches the anterior extremity, while posteriorly it occupies nearly the middle of the body. On the ventral face a deep groove separates it from the præ-oral ciliated band, and in this the mouth is situated. The margins of the præ-oral and post-oral ciliated bands are deeply sinuated, and they come into contact in the median dorsal line. A wide gullet leads from the mouth, and opens into the gastro-intestinal portion of the alimentary canal, which passes backwards in the middle line, and opens on the hinder end of the body. About the middle of the dorsal face of the body there is a circular pore, whence a

(a) H. Fol, "Études sur les Appendiculaires." 1872.

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canal leads to a rounded sac, which lies on the junction between the gullet and the stomach. The sac gives off two lateral short diverticula, which embrace the œsophagus. A delicate band, apparently of a muscular nature, connects the summit of the water-sac with that part of the dorsal aspect of the body at which the præ-oral and post-oral ciliated bands unite. Here two eye-spots are developed. A constriction separates a rounded gastric from a tubular intestinal, division of the alimentary canal. Diverticula of the gastro-intestinal part of the alimentary canal give rise to two pairs of discoidal bodies, from which apparently the mesoblast and the perivisceral cavity of the *Balanoglossus* are developed.

From the sides of the œsophagus a series of diverticula are given off, which unite with the ectoderm, open externally, and become the gill-pouches. When only two of these branchial apertures are formed, they are said by Metschnikoff to have an striking resemblance to those of *Appendicularia*. A pulsating vesicle—the so-called "heart,"—makes its appearance close to the water-sac. The anterior end of the body in front of the mouth now elongates, and is converted into the proboscis; while the post-oral region loses its ciliated bands, and lengthening, becomes the long body of the adult worm.(b)

(To be continued.)

CLINICAL LECTURES DELIVERED IN THE ROYAL INFIRMARY OF EDINBURGH.

By T. GRAINGER STEWART, M.D., F.R.C.P.,
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ON ABDOMINAL ABSCESS.

GENTLEMEN,—We have lately had in my wards some good illustrations of a group of diseases not very often met with, but which now and then occur in the practice of a physician, and with which it is essential that you should be acquainted. I refer to cases of abdominal abscess. You will remember that on making our visit ten days ago, we found in Ward VIII. a woman who had just been admitted, complaining of abdominal pain. She was evidently very seriously ill, and we proceeded at once to investigate her case. Let me remind you of the facts we elicited. She was forty-seven years of age; was a mill-worker; had always been healthy till towards the end of April, when, after violent exertion, she was seized with a shivering, and pain in the left side, in the region of the kidney. She managed to work on for about five days, and then had to give in and take to bed; when there she discovered a fulness at the painful part between the ilium and the ribs on the left side. She remarked that it was very tender to the touch. It gradually increased in size. There was no history of renal calculus. The face was flushed; the skin hot; the thermometer registered, after only five minutes in the axilla, 102°; the pulse was rapid and not strong. There was no lesion to be discovered, excepting a large, slightly nodulated mass, situated in the left side of the abdomen, and extending from the crest of the ilium to the ribs, being continuous with the kidney at the back, and reaching in front nearly to the umbilicus. The mass was quite distinct from the spleen and the liver. It was tolerably firm, but at the central and most prominent part there was deep fluctuation. The urine was acid; deposited urates on cooling, and contained neither albumen nor tube-casts. The patient had suffered a good deal from constipation, but action had been readily obtained by laxative medicines. With these facts before us, I was pleased to find that some of you at once diagnosed perinephric abscess; and as I judged that the case required immediate attention, I asked Mr. Annandale to give us the benefit of his advice and assistance. You remember that a moderately fine needle, connected with an aspirator, was introduced through the anterior abdominal wall into the most prominent part of the mass, and that immediately on the valves being opened pus escaped freely. The pus was singularly fœtid; and on this account, as well as for other reasons, we resolved at once to proceed to evacuate it entirely. Accordingly, the patient having been brought under the influence of chloroform, Mr. Annandale made an incision with the usual antiseptic precautions, not at the front, where the needle had been introduced, but at the side, in the situation and direction of that employed for exposing the external iliac artery. After a little dissection behind the peritoneum, he opened into the cavity of the abscess, and felt the surface of the kidney apparently healthy. Four or five ounces of pus having been drawn off, a drainage-tube was introduced, and the antiseptic dressing applied. On the evening of that day the temperature was 102°, the pulse 92; the pain was easier, the discharge still continued, and the general condition of the patient was much improved.

The fœtor was such as to suggest the existence of a communication with the bowel, but there was no fæcal matter mingled with the pus, and experience has abundantly proved that when abscesses exist in the neighbourhood of the large intestine, a fæcal odour may be present although there is no communication. By an unfortunate mistake the pus was thrown away without having been examined microscopically, so that we do not know whether organisms were present in that which was at first drawn off, but Dr. Ronaldson satisfied himself that no organisms were present in the discharges a day or two later. The grounds of our diagnosis were—the presence of a tumour so intimately connected with the renal region; the rapid development of the tumour; the pain and tenderness; the fluctuation in its most prominent part; the high temperature and rapid pulse. In all these respects the case contrasted strikingly with two other examples of abdominal tumours which you have lately had the opportunity of studying. One of these was an example of a tumour, probably malignant, connected with the mesenteric glands. There, you remember, there was a history of slow growth, and we felt numerous rounded masses of hard, or at least firm, consistence, certainly nowhere fluctuating. There was no pain as the patient lay at rest, and little tenderness on pressure; the temperature was not elevated, and the pulse was quiet; there was, moreover, extreme anæmia. The other case is still under observation—that of a young man in Ward VII., who has a tumour in the left side of his abdomen, apparently connected with the kidney and spleen. You remember how firm it is, how free from tenderness, how insidious has been its growth, and how complete is the absence from pain. Although this case is in itself obscure, you at once observe how different it is from that under consideration.

Many of you also watched with interest the case of a girl who, during the last winter session, was under treatment in Ward VIII., on account of abdominal abscess. She is now quite well; but I wish to recall to you the main features of her case. She was a fair and delicate-looking young woman of twenty-three, unmarried; and she told us that she had been a feeble child up to the age of seven, but that she afterwards became quite strong. We further ascertained that when about twenty-one she had had a child, and had been affected with syphilis. She was confined in the Maternity Hospital, and her recovery was so slow that she remained there six weeks. On leaving hospital she complained of pain in the right side, in the situation in which the swelling afterwards appeared. Although this pain was nearly constant, and interfered with comfort in walking, it did not cause her to take to bed. About the month of May last year she was obliged to take to bed, the pain having extended and become more intense, while gradually a fulness and hardness had appeared. These increased at first very slowly, but after the beginning of October with considerable rapidity. On admission, she was a pale, delicate-looking girl, somewhat emaciated, with a pink flush on each cheek. Her temperature was 101·4°; her tongue furred, her gums were painful and red, appetite was poor, thirst considerable, digestion impaired, the bowels were constipated. The liver was of natural size. The abdomen was prominent, particularly on the right ide; it was tender to the touch, especially at the swollen part. A tumour extended from the level of the crest of the right ilium to a point midway between the umbilicus and the ensiform cartilage, and to a short distance to the left of the umbilicus. The mass was slightly nodulated, and was hard throughout most of its extent, but in the central part, where it was most prominent, careful palpation revealed deep-seated fluctuation. On placing the hand in the right lumbar region, and tilting forwards in the direction of the kidney, the tumour was not lifted up, and there was there no marked tenderness. The urinary and all the

(b) *See* Agassiz, "The History of *Balanoglossus* and *Tornaria*,"—*Memoirs of the American Academy of Arts and Sciences*, 1873; and Metschnikoff, "Untersuchungen ueber die Metamorphose einiger Seethiere,"—*Zeitschrift für Wissenschaftliche Zoologie*, xx., 1870.

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other systems presented no important abnormality. No pelvic tumour could be found on examination by the rectum or the vagina. The bowels were readily moved by aperient medicine. The uterus was not fixed. Regarding the case as one requiring surgical interference, I asked Mr. Annandale to see her. We directed the house-physician to introduce an aspirator needle. Pus being found, Mr. Annandale proceeded on October 15 to operate as you saw him do in the recent case. The incision was made parallel with, and internal to, the crest of the ilium. Ten ounces of pus, with several solid lumps, were evacuated. A drainage-tube was introduced, and antiseptic dressing carefully applied. During the week following the operation the fever continued, but it gradually subsided, the discharge diminished, and the girl in a month was quite out of danger.

The diagnosis which we established was abscess originating either in the retro-peritoneal cellular tissue or in the peritoneal cavity. The grounds of this diagnosis were—the presence of a tumour; the fact that it was enlarging; that while the mass of it was hard, palpation revealed at one point deep-seated fluctuation; that it was not a tumour of the liver, kidney, ovary, or uterus; and that it did not present the characters of enlarged mesenteric glands; the general hectic condition, the quick pulse, high temperature, dryness of skin, pallor of face generally, with flush on cheeks. The withdrawal of pus by aspiration demonstrated the correctness of our view.

But abdominal abscesses may originate from a variety of causes. Let us, first, review these, and then decide to which of them it was due in our cases:—

1. They occur in connexion with typhoid ulceration of the intestine. Of this, I remember one well-marked example under the care of Professor Schönlein, in the Charité Hospital of Berlin, in which a tumour, similar to that in our case, was formed, and was ultimately recovered from, the pus having discharged spontaneously by the intestine. The abscess was probably in the cellular tissue about the cæcum; the case was thus an example of perityphlitis.

2. They occur from tubercular disease of the intestine, and, as in the case of the typhoid abscess, the pus may be formed either in the cellular tissue or within the peritoneal cavity. In illustration of this may be mentioned a case which occurred when I was Pathologist. The patient had been under the care of Dr. Bennett, and suffered from tubercle of the lungs and intestine. One of the intestinal ulcers, situated in the colon, an inch and a half from the ileo-cæcal valve, had penetrated the wall of the gut, a small orifice, about the size of a crow-quill, leading into the cellular tissue. This abcess, after existing for some time, burst into the peritoneal cavity, and produced a speedily fatal peritonitis.

3. More rarely, such accumulations are due to malignant disease. I recall the case of a man, whom also I saw only after death, and who suffered from malignant disease in the cæcum, in the form of a large fungus-mass. In connexion with this, and probably from ulcerative perforation of its substance, perityphlitis occurred, and just such a tumour as you have studied in our patient existed for some time.

4. Abscesses also sometimes originate from the presence of foreign bodies about the cæcum, or in the vermiform appendage. Some of you will remember the case of a boy who was one day last summer admitted into Ward VII. in a dying state. The death was due to peritonitis, which had arisen in connexion with an abscess surrounding the vermiform appendage, and which had been originally shut in by adhesions. When Dr. Wyllie, who was then acting as Pathologist, examined the parts closely, he found a little bit of the woody fruit-stalk of an apple or pear, which, having passed into the vermiform appendage, induced ulceration, and produced the abscess.

5. Still more rarely, abscesses may form from the perforation of the small intestine or of the stomach. In the case of chronic perforating ulcer of the stomach, adhesions sometimes form, and perforations take place into shut sacs, which become the seat of suppuration. In the duodenum, also, such ulcers may lead to abscess. I once met with a singular case of abscess in the cellular tissue behind the peritoneum, extending from the level of the liver to the cæcum. This had originated in perforating ulcer of the posterior wall of the duodenum, and when I examined the case a finger could be readily passed from the gut into the cavity of the abscess.

6. Such abscesses occasionally result from hepatic suppuration. This is especially apt to be the case when the posterior part of the liver is involved, for perforation takes place into the cellular tissue more easily there than anywhere else. The pus in such a case may burrow downwards as far as the cæcum, or even lower.

7. In connexion with the kidney, abscesses are not unfrequent. Some of you may remember the case of an old woman who was under my care about eighteen months ago. She was admitted complaining of abdominal pain and tumour, which I found to be connected with an abscess in the cellular tissue round the right kidney. Unfortunately, taking fright at the idea of surgical interference, she insisted upon leaving the hospital. Three weeks later she returned with the swelling much increased, and her strength exhausted. We proceeded to operation without delay, and had the advantage of Mr. Annandale's skill. He evacuated a considerable amount of very fœtid pus, but the patient sank within twenty-four hours. On post-mortem examination our diagnosis was confirmed, but the mode of origin of the abscess turned out to be specially interesting. The right ureter was completely blocked up by a calculus, impacted at its lower end; its upper part and its pelvis were dilated, and had evidently been the seat of hydronephrosis; but suppuration had set in, and involved the substance of the kidney, and secondary to this the perinephric abscess had been formed. The left kidney was natural, and had secreted healthy urine, which was never contaminated by pus, as the bladder and left ureter were sound, and the right ureter was completely occluded. This corresponds pretty closely with what I saw ten years ago, in the case of an old woman who was afflicted with cancer of the uterus. The disease had extended to the bladder, and closed the orifice of the ureter. From this obstruction pyelitis resulted, suppurative nephritis followed, with widespread perinephric abscess as a further result.(a) About four years ago another example of this disease was under my care, in which suppuration appeared first to have affected the prostate, to have extended to the bladder, thence to the substance of the kidneys, and on one side to the surrounding cellular tissue. This diagnosis left, of course, no room for surgical interference, and the dissection subsequently confirmed the opinion which the history of the case and the facts observed had led us to form. In all these cases you will observe that the abscesses in the cellular tissue were associated with pyelitis, or with suppuration in the kidney itself; but this is by no means invariably the case, for sometimes, in consequence of contusions(b) or wounds,(c) of violent exertion,(d) as a sequela of fever,(e) from impaction of stone in the pelvis of the kidney,(f) or the presence of parasites,(g) suppuration arises. I shall have occasion to refer shortly to one well-marked case, where even such causes could not be assigned.

8. Abdominal abscesses sometimes result from disease of bone. You must never forget this fact. I have seen a patient come a considerable distance to get advice regarding an abdominal tumour, which was really an abscess connected with caries of the vertebræ.

9. Such abscesses occasionally form in connexion with the ovaries. We lately examined the body of a girl who suffered from an abscess in the pelvis connected with the uterus and ovaries, and probably originating from the latter. You remember that I, more than once, directed your attention to her case, and that our diagnosis was waxy degeneration of the stomach, intestine, liver, spleen, and kidneys. The grounds of that diagnosis were the vomiting, diarrhœa, enlargement of the liver, altered microscopic character of the blood, albuminuria—the urine not being scanty, although the diarrhœa was so severe. The immediate cause of death was acute peritonitis, lighted up by a contiguous chronic abscess in the pelvis. Three years ago she had been under treatment for pelvic pain in another ward in the house, and left the hospital not improved. It appears to me probable that the abscess dates even from that time; at all events the waxy degeneration was widely diffused, and there was nothing else to account for it but chronic suppuration.

10. Abscesses are not uncommon in connexion with the uterus. Sometimes they are in the cellular tissue—"parametric abscesses," a result of parametritis. Sometimes they

(a) See a very similar case in Rayer's "Maladies des Reins," vol. iii., p. 268; and Atlas, plate xviii.
(b) *Edinburgh Medical and Surgical Journal*, vol. xv., p. 252. Also Trousseau's "Clinical Lectures" (Syd. Soc. trans.), vol. v., p. 338.
(c) Rayer, "Maladies des Reins," vol. iii., p. 251.
(d) Trousseau, p. 340.
(e) *Edinburgh Medical and Surgical Journal*, vol. xxvi., p. 106, quoted by Rayer.
(f) Rayer, vol. iii., p. 263.
(g) Rayer, vol. iii., p. 278.

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occupy spaces in the peritoneal cavity—"perimetric abscesses," the result of perimetritis. It is to my colleague, Dr. Matthews Duncan, that we owe much of our knowledge of these two diseases. You had last winter an opportunity of watching in Ward VIII. the case of a young woman who suffered from chronic parametritis. In that instance, happily, there has been no suppuration, but merely infiltration of the cellular tissue. On admission she complained of pain and swelling in the region of the right iliac fossa. She had been confined four months before, and soon after her confinement began to suffer from the symptoms above mentioned. On inspection of the abdomen no swelling was visible, but on deep palpation a hard circumscribed mass was felt in the right iliac fossa. On vaginal examination, the uterus was found to be freely movable, but on pressing the finger high up to the right side, the mass above referred to could be touched. Under the use of blisters this case did well, and suppuration was averted. This case, though not one of abscess, will, as it was under your own observation, serve as a reminder of this class of cases.

Having indicated these the chief causes of abdominal abscess, the question arises, To which of them are we to ascribe the lesion in the cases we are to-day considering? In that which I first described, and which still remains under observation, we had sufficient evidence that the abscess was truly perinephric in position, and had probably originated from a strain. The situation of the mass, its close connexion with the kidney, the absence of any history pointing to uterine, intestinal, or other causal lesion, taken along with the patient's statement as to violent exertion, satisfied us of this.

In the second case the question of origin is more difficult to answer. Ulceration of the intestine, either typhoid, tubercular, or cancerous, could not be suspected. There was no history of typhoid fever, nor any physical sign of tubercle of the lungs, while the age of the patient and the absence of an early history of intestinal obstruction and of any bloody or black discharges with the motions, forbade the idea of malignant disease. The absence of a history of obstruction rendered the presence of a foreign body about the ileo-cæcal valve very unlikely; and even supposing that such a condition had existed to begin with, it certainly did not exist when the patient came under our charge; and it is not likely that suppuration, lighted up by such a cause, could have persisted and extended when the cause was removed. As to a foreign body in the vermiform appendage, the symptoms were less acute than I believe to be usual in that affection. Perforations further up could not be suspected, as there were no symptoms of disease of the stomach or small intestine. The same remark applies to abscess of the liver as a possible cause. Was the disease connected with the kidney? The urine being perfectly normal, and there having been no symptom of renal disease, it is pretty clear that the case could not be one of those connected with pyelitis or suppurative nephritis. You must keep in view both of these considerations. I have told you already of the case of a woman whose suppurative nephritis and extensive pyelitis never showed themselves by abnormality of urine, the corresponding ureter being completely occluded, and only the secretion of the healthy kidney reaching the light of day. Remember, also, that the symptoms may be transient. There was, further, no history of wound, contusion, or violent strain, nor even of transient difficulty in micturition, and pain in the loins, which I have seen in one apparently spontaneous case of perinephric abscess. This, then, although more probable than any that we have as yet considered, cannot be regarded as proved,—all the more, because there are certain facts strongly opposed to it. The position of the mass was too low and too much to the front, while there was an absence of the fulness and tenderness in the lumbar region which are usual in perinephric abscess. The position of the abscess, its form, its extension upwards, the absence of any spinal curvature or tenderness, preclude the idea of abscess connected with bone. The absence of all sign of ovarian enlargement, the history of the illness, and the position of the tumour shut out the idea of ovarian origin. Was it connected with the uterus? There was certainly no thickening within the pelvis; the uterus was movable, and apparently of normal size. Perimetritis was, therefore, according to the rules laid down by Dr. Matthews Duncan, excluded. There thus remains only parametritis. In favour of it we have not only the evidence derived from the exclusion of the other causes, but certain positive facts of considerable value. The girl was healthy up to the time of her pregnancy, but thereafter was never well. She suffered pain in the region where the abscess existed, from the time of her confinement till her admission to the wards. It might seem at first sight that its position was opposed to that view, for while the tumour occupied the abdomen, we could not make out that it extended to the pelvis. But Dr. M. Duncan and others have shown that parametric abscesses may extend as high as the kidney, and that they may be present there when all trace of inflammation has disappeared from the pelvis.(h) The position, then, does not forbid the diagnosis. On the other hand, it is lower, more to the front, and less intimately connected with the kidney than is usual in perinephric abscess. We thus conclude that the case was one of parametritis.

Let us now briefly glance at the further history of cases of abdominal abscess. Some of them terminate in recovery, the abscess discharging externally and gradually drying up, or discharging by the vagina, by a ureter, through the bronchi,(i) or, as in the case of Schönlein's patient, to whom I have already referred, by the bowel.

I once examined the body of a woman who had evidently long suffered from this disease, but had ultimately recovered with the loss of one kidney. I found traces of that organ in the midst of a dense mass of cicatricial tissue which occupied the usual position of the kidney.

They prove fatal by perforation. I examined one case in which this took place by the diaphragm, and fatal empyema resulted. Perforation into the stomach or intestine is often fatal, and so may be opening by more favourable channels, such as the vagina; or perforation into the peritoneum, and lighting up of general peritonitis by contiguity, are in my experience not uncommon causes of rapidly fatal results.

Prolonged suppuration may be fatal by exhaustion or may induce waxy degeneration.

I have seen in one or two cases pylephlebitis or inflammation of the portal vein lighted up, and induce the fatal result by the development of abscesses in the liver.

Many cases prove fatal from different forms of toxæmia, some with secondary abscesses, pyæmia, others with septicæmia. In connexion with this, I may refer to a case which proved fatal in my wards about two years ago. A man was admitted suffering from symptoms of abdominal abscess in the neighbourhood of the left kidney. I deferred the operation for a day, but in the course of that day he died. I was at first inclined to regret that we had not at once opened the abscess when we examined the case; but the result of the post-mortem satisfied me that we had done better in leaving the case alone, for the spleen was pulpy and soft, the liver was congested, and the portal vein with its branches in the liver was full of pus. When the organ was cut through, and its substance squeezed, bloody purulent matter welled out from the cut surfaces.

Such, gentlemen, is a catalogue of the chief dangers to which the victims of abdominal abscess are exposed. What *treatment* are we to adopt? When there is merely the condition which, from Dr. Matthews Duncan's teaching, we have become accustomed to term "phlegmon"—that is, inflammation without suppuration—counter-irritants are our chief reliance. Along with them the external application of sedatives—such as opium or belladonna—with the view of relieving pain, and occasional aperients, should be employed. Let me remind you again of an example of this condition you have witnessed this session. In her case we had the benefit of Dr. M. Duncan's advice, and the treatment by means of rest and blistering which we, at his suggestion, employed, was followed by the happiest results, for complete recovery took place. Whenever the presence of pus is ascertained, seek to give it vent. There are two ways which I commend to you—viz., the aspirator, and free incision. The former is best for tentative purposes, as it involves no risk; the latter for cure. Those of you who saw the purulent material and the fibrous tissue removed from the abscess in the second case I described, would see that the aspirator would have failed to get rid of the material; that re-accumulation is accordingly much more likely to occur than it is when incisions are made. But I would never venture to express this preference were it not for the antiseptic method. Considerable experience of cases of medical abscess has satisfied me of the great value of this treatment, and I should never feel warranted in allowing any patient of mine to have deep abscess opened freely without its careful application. You, of course, understand that

(h) "Perimetritis and Parametritis," pp. 143 and 144.
(i) See a case given by Rayer, and two others quoted, vol. iii., p. 259 *et seq.*

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before these methods were introduced we were in the habit of making ordinary incisions, giving exit to the pus, and introducing a drainage-tube; and I may mention, in connexion with this, the first case of abdominal abscess that I ever had under my own care. It was that of a man who was admitted to the Infirmary about nine years ago, suffering from a large perinephric abscess. The diagnosis having been established, I asked Dr. Gillespie to operate. This he did by making a free and deep incision in the lumbar region. A large quantity of pus was at once evacuated, a drainage-tube was introduced, and for some weeks the wound continued to discharge. It ultimately healed perfectly, and some years afterwards I saw the patient in excellent health, working regularly as a cabman. This is an example of the good result that often follows the ordinary method of operation, but I must ask you to believe that greater safety is attained by the newer methods.

ORIGINAL COMMUNICATIONS.

ON A CASE OF

NEARLY COMPLETE DEAFNESS OF ONE EAR AFTER AN APOPLECTIC SEIZURE.

By J. HUGHLINGS-JACKSON, M.D., F.R.C.P.,
Physician to the London Hospital, and to the Hospital for the Epileptic and Paralysed.

THAT different kinds of ear disease occur with different kinds of nervous symptoms in different kinds of relation is well known. I have never known, however, complete deafness after apoplexy of any kind. I here use the word apoplexy in its wide sense, as including sudden coma from many causes. It is believed that disease of the labyrinth will cause grave nervous symptoms, mostly vertigo, with retching and vomiting. The labyrinthine disease, it is supposed, may be either primary —a hæmorrhage in it, for example—or secondary, there being increased pressure in the labyrinth, consequent on disease in the tympanum. I think, considering that there is what Knapp calls limitation of the field of audition, in the case which I am about to relate there is disease of, at any rate, the cochlea, and probably there has been a sudden hæmorrhage. It is not certain, however, that a hæmorrhage in the labyrinth, however sudden and extensive, would produce such deep apoplexy as this patient had; his coma was like that from a large cerebral hæmorrhage. I think there may have been a separate lesion to produce the apoplexy. I suggest the possibility of another lesion because I do not think that any disease of the encephalon, which might account for the apoplexy, would produce deafness. I except, of course, disease of the auditory nerve or its nucleus; but of disease of this nucleus I know nothing. It may be theoretically maintained that a hæmorrhage in the medulla would produce the two symptoms—deafness and apoplexy. But diagnoses without the anticipation of post-mortem examinations are not very profitable in cases like this. My patient was well in general health when I saw him last, and I hope he is so still. His case is of sufficient clinical rarity to deserve record.

At 9 p.m. on Christmas-day, 1871, I saw with Dr. Frederick Marsh a man, forty-eight years of age, who was suffering from apoplexy. He was profoundly unconscious. I could find no local paralysis. I regret that I did not take any notes of the case. I never expected to hear of him again. We both of us believed the man was dying. It *was* a case of apoplexy; there was deep coma, and the question in my mind was whether the case was one of simple apoplexy or of large clot in the pons Varolii. Having seen a good many cases of apoplexy, I was able to come to the conclusion that I did not know, or, as I may be permitted to put it, that there was no evidence to warrant a diagnosis. I mention these things to show that, at any rate, the case was severe, and one likely to prove fatal. To my astonishment I heard, some weeks later, that the man was well again, except that he was deaf. As this was a rare sequel of apoplexy of any sort, I asked Dr. Marsh to send the patient to me. From the patient's wife and from the examination of the patient I took the following notes on March 7:—

On Christmas-eve, about 10.30 p.m., he blew his nose very violently, and afterwards said he had pains from the back of his head down the spine to the calves. He then turned "on his stomach and on his hands and knees" with pain, seemed to faint, and then became unconscious. As I say, when I saw him, about twenty-four hours later, all I could determine was that the patient was apoplectic and, as I thought, dying. His wife told me that he came fully to himself in about fourteen days, but as he spoke in four days and seemed to know his wife, he was probably only partly unconscious the latter part of the fortnight. When he got out of bed at the end of the fourteen days he tottered, but only slightly. But he was deaf; at first he thought it was his wife who could not speak.

When I saw him his general health was good. There was no albumen in his urine. There was no paralysis, and he did not reel. His optic nerves were normal. The only alteration made in him during the apoplexy was the deafness of the left ear.

He had for twenty or thirty years been considered deaf of the right ear, but *now* the right ear is the only useful one; he calls it his good ear, but he can, with it, only hear when his wife puts her mouth close to it. The state of hearing on the "bad" side may be inferred from this state of the "good" ear.

He could not hear the tuning-fork placed on his forehead in either ear; when placed on the left mastoid process he heard it faintly. Moreover, he spontaneously remarked that it was the note C; this was engraved on the fork. He himself found out and mentioned to me that he could hear the tapping together of two wooden stethoscopes better with his worse (left) ear, and that "it was very remarkable" that he could hear the nipping together of his nails on the left side, and not on the right. A medical friend helped me in my examination, and reported that both membrana tympani were concave, but the right the more; the Eustachian tubes were open.

NOTES ON THE

DISTINCTION OF THE SENSATIONS OF TOUCH, PAIN, AND HEAT IN THE SENTIENT NERVES OF LEPERS.

By W. MACRAE, M.B., etc.,
Surgeon, late in charge of the Leper Hospital, Madras.

I WAS not long in charge of the Hospital before I found that it was very difficult—in fact, that it was impossible—to note with any degree of accuracy the sensibility of the skin. In the case of old patients I found my observations did not correspond with those of my predecessors, and in the case of new ones the observations of one week were inconsistent with those of the next. The cause of the difficulty was this: No attempt had been made to distinguish between the sense of touch and the sense of pain. As soon as the necessity for this forced itself upon me, the process of recording the conditions of the patients became comparatively easy. The method of examination was this: A patient was taken and blindfolded. Being then told to say "yes" whenever he felt anything touch any part of his body, whatever the nature of the sensation happened to be, I gently touched him with the tip of the forefinger, beginning with the head and slowly working downwards. In this way the area of touch became known. With the point of a penknife I then pricked him in the same order, desiring him to state when it pained him. The results obtained were compared with his own ideas on the subject, and noted down. It was always much easier to make out the painless areas than those not sensitive to touch. Lepers are, as a rule, stupid and apathetic, and there was often considerable difficulty in getting them to take the trouble of admitting when they felt something touch them. The necessity for this double process of examination is illustrated in many pages of the case-book. For example, a Hindoo was reported to have "general and complete anæsthesia" in September, 1874; in November I described the same man as having anæsthesia everywhere except over the head and the back of the neck. The next time I examined him, however, I found that he had touch-sensation everywhere, but pain-sensation was gone everywhere except on the head and back of the neck.

The cases were very numerous where the areas of no pain and those of no sense of touch differed widely in extent. An East Indian had the touch-sense everywhere, but the pain-sense nowhere. An old native resembled him in this respect. Another native had no touch-sensation on the backs of the forearms, the greater part of the hands, and the whole of the lower extremities except the skin over Scarpa's triangles. He

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had no pain on pricking any part of the body except the groins and armpits. These were extreme cases; and I could quote several where the differences were not nearly so great, and still more where the areas corresponded very closely. Generally, when they differed in extent, the painless area was the most extensive. I think I have only met two cases where there was some pain-sensation in parts without the sense of touch. One of these was an old native, who could not feel touch on the back of his left hand, and the back of the right little finger, although he felt pain on pricking these parts. The other was an East Indian, who felt no touch in any part of his right upper extremity, while there was some pain when the anterior surface of the arm and forearm was pricked. These, however, were exceptional cases. The distribution of these areas of no pain and no touch-sensations were, generally speaking, very symmetrical, so that when the right leg or the right arm did not feel a prick, for example, the chances were that the left leg or left arm would prove equally wanting. Generally, the aspects of flexion of the extremities retained the senses of touch and pain longer than those of extension, and in several of the cases that improved under treatment I noticed that they returned to these parts first. Although, as a general rule, these sensations were lost first in the distal ends of the extremities, there were numerous cases with isolated anæsthetic patches. These sometimes corresponded to coloured patches of skin, but not always.

It must be understood that the skin does not get anæsthetic all of a sudden. Judging from the fact that blunted areas are exceedingly common, and from the statements of the patients, I infer that gradual transition from perfect sensation to complete absence of it is the rule. Hyperæsthetic patches were not uncommon among the patients. They were inferred, not from heightened sense of touch, which with apathetic persons, such as lepers are, it would be almost impossible to prove, but from increased sensitiveness to painful impressions.

The separation of the two sensations of touch and pain effected by leprosy appears to me very interesting in relation to the functions of nerves. It seems to prove that the views of those physiologists are correct who think that separate nerves are employed for touch and pain.

I have made a few observations on the relation of the sense of temperature to the other two, the general result being that, as a rule, the area not sensitive to pain is not sensitive to temperature. For example, a leper may feel his finger touched, but if he is not conscious of pain when it is pricked he cannot usually tell whether water is hot or cold when the finger is immersed in it. I have only met with one undoubted exception to this rule. It occurred in the following patient, who has already been referred to. An intelligent Eurasian male, aged twenty-one, in hospital with the mixed form of leprosy; some tubercles on the face and ears, some fingers distorted, etc.; feels gentle contact everywhere, but allows the penknife to be used freely without the least sense of pain. Having blindfolded him, I got two basins, the one containing cold water and the other hot. He could tell which was cold when the tip of his finger was inserted, but he only distinguished the hot when more than half the finger was inserted. I tried him several times, but he was always correct in his statements. Water rather hotter than was pleasant was brought, but it produced no pain; he simply said it was warm. He then said that he knew he could distinguish things hot and cold, although the fire would not hurt him.

Brown-Séquard thinks that different nerves are employed to distinguish temperature, and this case seemed to me to support his views.

Muscular Anæsthesia.—I have detected this in no case, at any rate in its complete form. Patients with limbs wanting in the sensation of touch, pain, and temperature could always tell me when I squeezed the muscles of these parts, and, when blindfolded, they could point to the parts. They could also hold the limbs in any of the ordinary positions with their eyes shut, and bend them as required. The electro-magnetic current caused contraction of the muscles, with consciousness of the parts acting.

PUERPERAL FEVER IN COUNTRY PRACTICE.

By A. H. MORRILL, M.R.C.S.E.

Perhaps the subjoined brief history of cases, that at the time caused my worthy principal no small amount of worry and uneasiness, will not be without interest. A primipara, aged twenty-four, whom he had delivered, and who apparently was doing well, was attacked within a few hours of her delivery with puerperal trouble, and died. During her illness it was my duty to visit her twice a day, to employ vaginal injections and apply other remedial measures. The day before her death I was obliged to attend another case; and well can I recollect how anxiously I watched for any bad symptom. But fortunately the patient did well—as well as could be wished. Now another case was coming on—a young lady (primipara) who had come into the country to be confined at her mother's. From the freedom from ill that had attended my case, notwithstanding the awkward circumstances, it was decided that the doctor should go. The lady had an ordinary labour, but within a few hours she was attacked with severe illness which nearly cost her her life. At the time of the first case there was one patient ill with slight erysipelas faciei—not to any extent, merely a mild case. It was attended by both the doctor and myself, but he had not gone from this patient with erysipelas to attend the first case, and I had not visited the puerperal case until serious symptoms had set in, yet during the intensity of her illness I was obliged, against my will, to attend a case, which did well. It is probable that in using injections, catheters, etc., our fingers may get wet with fluid but in this case no harm arose. Many cases are autogenetic without a doubt, and, I should say, a goodly proportion. There is every reason to believe that modern midwifery does much, to lessen the attendant evils of childbed, yet whether erysipelas or its allied diseases, or too much faith in Mother Nature, or the peculiarities of using certain instruments, give rise to this puerperal trouble, is a doubt which I cannot solve, in lumping them all together. But of this I feel sure—that if those in the upper classes of life were confined under the difficulties and privations which so frequently attend their poorer sisters, there would then be a much greater frequency of these direful complaints.

P.S.—These cases occurred several years since, in a small village in Dorsetshire.

REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

ST. BARTHOLOMEW'S HOSPITAL.

ANEURISM OF ARCH OF AORTA—RUPTURE INTO LEFT BRONCHUS—DEATH.

(Under the care of Dr. ANDREW.)

[Communicated by Vincent Harris, M.B. Lond., House-Physician.]

[The following case illustrates very well the course of an aneurism of the aorta almost from its beginning to its sudden termination by rupture into the left bronchus, about seven months afterwards. The patient was under the care first of Dr. Ward, at the Victoria-park Hospital, and afterwards of Dr. Andrew, at St. Bartholomew's Hospital. I am indebted to these gentlemen for permission to publish the notes of the case.—V. H.]

J. B., a fairly healthy-looking man, aged forty-seven, a gas-stoker, came to the out-patient's department of the Victoria-park Hospital on December 30, 1874, complaining of difficulty of breathing and pain in right side. On examination of the chest, the diagnosis of aneurism appeared to be so certain that he was at once admitted into hospital.

Note on Admission.—He is of medium height, muscular, and in fair condition. Capillaries of face congested; expression somewhat anxious; pupils equal, and act well. Lies best on left side, he says; but there is no apparent difficulty of breathing in any position when he is lying quietly. Respirations 24 per minute; tongue rather furred; appetite stated to be good, and bowels regular; pulse 104, fair volume, regular and equal in the two radials; temperature 98·5°; voice not altered; no dysphagia or swelling of arms and legs. Urine: Specific gravity 1016, acid, no albumen.

Examination of Thorax.—The attachment of the diaphragm is mapped out by a line of congested capillaries. A tumour, pulsating synchronously with systole of heart, occupies the centre of the first bone of sternum, extending more to the right than to the left. The extent of the swelling is about two inches and a half from above down (over the circumference), and two inches and a quarter from side to side.

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Dulness extends one inch to left, and three-quarters of an inch to right of tumour; there is no distinct murmur over it, but the second heart-sound is everywhere intensified. Apex-beat of heart is felt in sixth interspace, about two inches directly below nipple. No marked pulmonary signs.

History.—Has been healthy previous to development of present trouble, and has never had rheumatic or other fever or syphilis, nor does he present any sign of the latter complaint. States that five weeks ago he noticed that his chest was very sore, and that he had pain in the right side on exertion. In about ten days the swelling appeared. Tried to work after a rest at home, but, difficulty of breathing arising and the swelling increasing, he left off work and came to the hospital. Does not recollect any sudden strain. Family history good.

Ordered tr. digitalis ℥v., ex. aq. menth. pip., ter die; full diet; and ice-bag to chest over the swelling. This treatment seeming rather to increase than diminish the dyspnœa, it was discontinued in part, and the patient was allowed simply to rest quietly in bed, with the ice-bag to chest a few hours daily.

During the next fortnight the tumour increased much in size and the pulsation became greater. A good deal of pain shooting from the right side of chest to back of head was occasionally complained of. Cough was troublesome, but the dyspnœa was not increased, neither was there dysphagia. Pulse about 96, fair volume and regular; rather smaller on right side.

On January 16, with the patient's consent, his diet was diminished to about a pint of fluids and twelve ounces of solids a day, and on the 22nd the fluid was still further reduced to seventeen ounces, and he was kept at perfect rest in bed. The ice-bag to the chest was continued.

The note of the 26th says that "the tumour is extending to the left, but the pulsation is diminished." Pulse 84; temperature 98°.

February 1.—The tumour, which during the early part of the week had increased very much to the left, has in the last two days become much smaller and harder, with less pulsation. Has a little pain in right side and some dyspnœa; no dysphagia. Temperature under both arms 96·8°; pulse 72, rather smaller on right.

3rd.—No pain remaining. Pulse 68, intermittent about every tenth beat.

23rd.—Progress has been retarded by a severe fit of sneezing which the patient had about a fortnight ago. This caused the tumour to increase and the pulsation to become more forcible. Diet now is sixteen ounces of fluids and twelve of solids.

March 2.—Diet: Fluids fourteen ounces, solids eight ounces. Tumour less, and harder. Feels comfortable. Pulse 72. Less dyspnœa. Has a little pain in right breast.

9th.—Pain in right side of neck; no pain in breast for several days. Temperature 97·6°. Tumour varies in size and hardness.

13th.—No pain. An attack of coughing a day or two ago appears to have increased the pulsation in the sac.

30th.—Since last note the patient has been doing well; all distressing symptoms have departed, and the tumour is, if anything, smaller and harder. Dulness as before. Temperature 97°; pulse 50 to 56.

April 17.—No marked change. He had great pain last night passing from region of tumour round right side; thinks the pain is greater when the ice-bag is applied.

20th.—Pain in left breast; does not keep him awake at night. Vivid dreams at times. Some stridor in breathing.

From this time the patient continued on the low diet until May 1, when he was put on full diet, as it was thought that the result of the former treatment had not been satisfactory. On May 11, after ten days of full diet, the note is—"He complains of pain in region of right nipple, extending round to back, and felt most at angle of scapula. The breath, during the last few days, has become somewhat stridulous, but there has been no dysphagia, though there seems to be some difficulty (though no pain) in swallowing liquids."

For nearly a month the patient remained in much the same state, sometimes better, sometimes worse, and up some part of nearly every day. On June 10 his pulse and temperature rose, a violent cough with muco-purulent expectoration developed, and all the symptoms increased in severity. For several days he seemed in the lowest possible state. By the 19th he had recovered somewhat, the fever having abated, but the cough continuing; and on the 22nd he was able to leave the hospital.

The patient came to St. Bartholomew's on July 3, about 1 p.m., and was able to walk up one flight of stairs into the ward. Appeared thin, and somewhat wasted, and was exhausted by his journey from home (about five miles by train); had a violent cough and much frothy muco-purulent sputum. Was at once sent to bed, and put upon a limited diet (fluids eight ounces, solids ten ounces). It was deemed advisable not to make a physical examination of the chest.

July 4.—Passed an unquiet night, because of the violence of his cough. Tongue fairly clean. Appetite not very great. Sputum of the same character as yesterday, but slightly blood-streaked. Pulse 112, small, soft, and regular. At 6.45 p.m. he suddenly vomited about a pint of blood, and died in a few minutes.

Autopsy.—A large aneurism, size of a cocoanut, occupied the middle part of arch of aorta, involving the innominate; the fore part filled with pale laminated fibrine. A communication, the size of a shilling, exists from aneurism into left bronchus. Bronchial tubes and upper parts of lungs filled with blood. A large clot of blood in mouth; bloody fluid in pharynx, nose, and trachea. Both lower lobes of the lungs solid and tough, otherwise like grey hepatisation. Heart small, left ventricle not at all hypertrophied; walls flabby, aorta below aneurism not dilated, but atheromatous. Kidneys small, rough, and hard; cortex narrow.

Remarks.—As regards the apparent want of success of the low-diet treatment in this case, it seems not improbable that, had it been persevered with alone, without the ice-bag, a better result would have been obtained. The ice-bag, by inducing the deposit of fibrin at the anterior part of the sac, thus stopping increase in that direction, very probably threw the strain on the posterior and weaker part. For the treatment to have had a fair chance, the amount of fluid also should have been more suddenly reduced, and to a greater extent. 2. Although unsuccessful, the treatment certainly had a palliative effect, as nearly all the distressing pain and dyspnœa were removed during the time the patient was on the restricted diet, and returned more or less afterwards. 3. The violent cough, the probable cause of rupture, was very likely due to the broncho-pneumonia, caused by the pressure of the posteriorly increasing aneurism on the lung and bronchial tubes.

THE BROMHYDRATE OF QUININE.—Professor Gubler states that he has frequently employed this new preparation, both in private and in hospital practice, and that it has the advantage of being more rich in the alkaloid and more soluble in various menstrua than the sulphate of quinine. He gives usually 0·40 centigramme in two doses daily, sometimes reaching 0·60 or 0·80 centigrammes; and, on very rare occasions, one gramme. He has also used it hypodermically. The only case which he relates is one in which the bromhydrate was successfully employed in treating incoercible vomiting in pregnancy.—*Journal de Thérap.*, July 10.

COLLODION IN ERYSIPELAS.—In allusion to a recently published case, in which M. Broca arrested the advance of erysipelas by surrounding the eruption with flexible collodion, applied over a breadth of six or eight centimetres all around its margin, Dr. Lubauski, of Nice, writes to say that this is a practice which he has pursued with invariable success during the last thirty years—ever since, in fact, M. R. Latour introduced the medical employment of collodion. The great point is to immediately repair any breaches that may be made in the collodion circle. He has also applied collodion with great advantage to the eruption in a case of zona.—*Union Méd.*, July 20.

DECEPTIVE VISION.—There is a tendency in the eye to enlarge the upper part of any object on which it looks—a fact which we find admirably illustrated by a row of ordinary capital letters and figures:—

BBBBBBSSSSSSSSSXXXXXX888888888

They are such as are made up of two parts of equal shapes. Look carefully at these, and you will perceive that the upper halves of the characters are a little smaller than the lower halves—so little that an ordinary eye will perhaps declare them of equal size. Now, turn the page upside down, and, without any careful looking, you will see that this difference in size is very much exaggerated; that the real top part of the letter is very much smaller than the bottom.—*Philad. Med. Times*, from the *Laboratory*.

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Medical Times and Gazette.

SATURDAY, JULY 31, 1875.

RESPONSIBILITY IN MENTAL DISEASE.

Among the criminal cases at the Assizes at Maidstone last week was a trial for wilful murder, which is well worth a few moments' consideration, as it once more brought out the old conflict between legal science and medical science as to responsibility in mental disease.

George Bampied, a man of middle age, a shipwright, was indicted for the wilful murder of James Catt, at Chatham, on April 16 last, and pleaded not guilty. The men had both been for some time employed in the masthouse in Chatham Dockyard, and some months before had had an altercation, but since then had apparently been on good terms. On the date mentioned they were at work on the same mast, about six feet from each other, and from thirty feet to sixty feet from any other workman. Suddenly some of these other workmen heard a sound as of a blow, and a cry; one of them ran towards the two former-named men, and saw the prisoner standing with his adze in his hand; being frightened he went back for assistance, and on returning, the prisoner, who had put the adze down, said that Catt, the deceased, had taken his (the prisoner's) adze and killed himself with it. It was said that the prisoner seemed quite calm and collected, and there was nothing unusual in his appearance. The inspector of police gave evidence that the prisoner came to him and reported—"I was employed in the masthouse, and when I turned round, James Catt, who was employed with me, took hold of my adze and struck himself on the head with it, seriously injuring himself." When asked if the man was dead, he replied, "No; I don't know about that," and added, "He is at the surgery; he was a good mate, a good workman, and a good fellow;" and when charged with murder said, "I didn't do it; he did it himself." This, it is to be observed, was absurdly impossible: the wound was at the back of the head, and had been inflicted with such force as to "nearly break the head in pieces." The surgeon of the police, who saw the prisoner next day, asked if he knew why he was there, and he replied, "I knocked my mate on the head, and the stupid fellow fell down dead." "Then you killed him?" said the surgeon; to which the reply was, "I knocked him on the head, and he fell down dead." The surgeon also stated that in December, 1868, he had signed the certificate for the removal of the prisoner to Barming Lunatic Asylum as a lunatic, where he remained till December, 1872, when he was discharged as cured.

The counsel for the prosecution argued that the prisoner had cherished a grudge against his mate, had yielded to a sudden impulse to murder him, and that all the circumstances of the act, and especially the prisoner's denial of it, were consistent with perfect sanity, and indicated a perfect consciousness of guilt. The defence was that the prisoner's act was an act of insanity; that he had been insane; was insane at the time that he committed the act for which he was being tried; and was not responsible for it. It was proved, as we have stated above, that the man had been in a lunatic asylum from the end of 1868 to the end of 1872. The surgeon to the dockyard stated that he had attended him in April, 1874, for "swimming of the head," and in October, 1874, for melancholia. The surgeon to the gaol said that he believed the prisoner to be of unsound mind on the subject of religion. The medical attendant of the asylum in which the prisoner had formerly been, stated that he then suffered from religious melancholia, and that his grandfather was insane, and one of his sisters.

There could be no doubt that the prisoner had killed his comrade. No one but he could have done it. But he had an insane family history and an insane personal history; the act for which he was being tried was an insanely motiveless and sudden one; and the defence he himself offered was an insane defence. It would surely be difficult to find a clearer case of impulsive insanity? The learned judge who tried the case—Mr. Justice Brett,—however, repudiated the "medical theory of insanity" set up as a defence; declined to allow any weight to an opinion from Taylor's "Medical Jurisprudence," as "though Dr. Taylor was a high medical authority, he was not a lawyer, and was no legal authority at all"; and summed up strongly against the prisoner. He set forth clearly and forcibly the well-known legal doctrine that it is not enough for a man to be mad in order to obtain exemption from responsibility for a criminal act, but he must be so mad as either not to know what he was doing, or not to know that it was wrong. He allowed that, in this instance, there was no doubt the prisoner had been insane, and might have been so at this time, and, indeed, that it would be better to assume that, at this time, he was of unsound mind. But, he said, the question was not whether he was of unsound mind, but whether he was so insane as not to know the nature of the act he committed—that is, that he did not know that he was killing a man, or that he did not know that he was doing wrong in killing a man. If the jury were satisfied of this, then they would acquit the prisoner on the ground of insanity; otherwise they were bound to find him guilty of murder; and he solemnly adjured them to do their duty, which was to answer truly as to the facts. The ultimate responsibility as to the man's fate would rest with others; but their duty was simply to find their verdict with reference to the truth of the case, and the effect of the evidence.

The jury, after a consultation of about a quarter of an hour, returned a verdict of "Guilty, but not accountable for his acts"; and the prisoner was ordered to be detained during her Majesty's pleasure.

The judge was no doubt right in clearly stating the legal view of responsibility; but as doubtless, we think, the jury were right in taking what in this case we should call the common-sense view, enlightened and guided by medical

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experience and science. It would have been simply impossible to hold that the prisoner had been guilty of wilful murder, and if the jury had returned that verdict the Home Secretary would have had to alter it. Yet we are told by the daily press, or at any rate by a most influential portion of it, that the judge's charge was in perfect accordance with scientific truth, as well as with public policy. And we are told further that "if Bampied, when he began to think about killing his fellow-workman, had also thought about being hanged for doing it, the probabilities are that the second idea would have prevented the first from being predominant, and that even when the opportunity arose the fear of punishment would have arrested his hand." This, as has been well said by one of our most able writers on the subject, "ignores entirely the real nature of insanity as a *disease*, for which the victim is certainly not altogether responsible, and which may render him irresponsible for what he does. . . . . Were one-half the lunatic population of the country hanged, the miserable spectacle would have no serious effect upon the remaining half, and assuredly would not deter a single insane person from doing murder, any more than convulsions would be prevented from occurring from henceforth by hanging all persons who fall into convulsions." We medical men know, as a positive fact of observation, that there is such a disease as impulsive insanity; that sometimes insane persons are driven to commit, or to attempt to commit, homicide by a blind, instantaneous impulse, independent of the will, when they act "without passion, without delusion, without motive." In such melancholy cases it is idle to talk of the power of self-control, or of thinking and reasoning; no ideas of punishment can present themselves; reflection and will are swallowed up and lost in the one violent impulse that entirely and irresistibly possesses the unfortunate insane being.

The attempts to apply the legal view of responsibility in mental disease to such cases as these, may lead, as it has led, to legal tragedies inexpressibly sad and painful; but we allow that the doctrine of irresponsibility may rightly be regarded by the public with much jealousy, for no doubt the insane in our asylums are to some extent managed, and excited to exercise self-control, by the fear of closer restraint or of the curtailment of their indulgences if they yield to their violent propensities. But this system of management may easily be carried too far, and a patient who is at one time, or usually, amenable to such motives and influences, may at another time be utterly beyond the reach of all moral influence, and absolutely incapable of any degree of self-control. In the case before us we hold that the prisoner, allowed even by the judge to be of unsound mind, was the victim of a blind, sudden, irresistible, insane impulse to homicide, and was therefore, as the jury decided, irresponsible.

THE VACANT MEDICAL CHAIRS IN THE SCOTTISH UNIVERSITIES.

It is not often that we find so many as three medical chairs vacant at the same time in Scotland, with all its universities; but, at this moment, we believe there are vacant the chair of Medicine at St. Andrews, and the chairs of Medicine and of Midwifery in Aberdeen. Such an opportunity rarely occurs for making a mark in the history of medical education in Scotland. The appointment to the St. Andrews chair is in the hands of the University Court, an eminently respectable body, and which should be distinctly progressive in its character. No one could be more generally liked and respected than the late Dr. Bell, but something more must be looked for in his successor. Sooner or later there must be a science college in Dundee, and it would be far better that this should be affiliated to St. Andrews, than that it should be started on an independent basis. Here would be the chance for a school of medicine in which the Professor of Medicine at St. Andrews would be the natural head. We are not sure as to the condition of the chair of Natural History, whether filled up or vacant, but the same principles should be held in view if it too is vacant.

Turning to Aberdeen, we find matters in a unique position. Fortunately, the vacant chairs here are in the hands of the Home Secretary. Aberdeen is the most remote, and consequently the most provincial, of all the Scottish universities, and some of the appointments made by the University Court bear the cast of provincialism about them. It is all the more satisfactory, therefore, to find that a gentleman like Mr. Cross, who has shown himself to be thoroughly free from taints of party or prejudice, has to decide in the matter. It is a fortunate thing for our profession that the appointments made in it nowadays are totally independent of party feeling. A good example in this way was set by the last Government, when in the plenitude of its power and intolerance, as regards another Scottish university; and we may safely hope that the same policy will be carried out by a Government which, though Conservative, is more liberal in these things. But, if there is to be any benefit derived from this fact, the "testimonial system" must be kept in check. Let each candidate select his twelve best testimonials, and send them in: these have a chance of being read; but it is unnecessary to say that the Home Office officials have quite enough to do in the way of ordinary work to destroy any appetite of the kind they may have originally possessed, and such as an Edinburgh bailie can even nowadays display for cases of such a kind.

Filling two chairs like these is a very great responsibility to any man. However honest he may be, it is quite possible that those from whom he may seek counsel are so far one-sided as to know something personally of one candidate and nothing of another. This sometimes decides the question, which in reality should be settled by such points as these—education, occupation, nature of study, written results, and general character for ability. There are now two local candidates for the important chair of Medicine; these are Dr. Beveridge and Dr. Shand Smith. In many ways it would be desirable to find some one coming from another university, for breeding in and in is not a good thing; but as matters now stand, and taking the above tests, there can be no doubt of the superior claims of Dr. Beveridge. He has taught publicly and privately for many years—in fact, since he was himself a student—as Pathologist, and subsequently as Physician to the Royal Infirmary, a post he now occupies. He has had ample opportunity for studying and teaching the subjects most nearly related to medicine, as well as medicine itself. As to the written results, we can point to more than one useful and instructive paper in our own columns from his pen.

INSECTIVOROUS PLANTS.(a)

We have already briefly indicated what may be considered the most extraordinary points in the discoveries by Mr. Darwin in his investigations on the Drosera. These were—the remarkable powers of motion displayed by certain parts of this plant: their still more extraordinary power of transmitting impulses through considerable distances; and the power of actually digesting and absorbing animal substances in a way quite analogous to that seen in animal digestion. The mechanism is sufficiently simple. The leaf is covered with hair-like processes, short near the centre, longer towards the circumference. These hairs are composed of cells placed end to end, and support at their extremity a glandular organ, commonly covered with an exceedingly tenacious secretion. These hair-

(a) "Insectivorous Plants," by Charles Darwin, M.A., F.R.S., etc. London: Murray. Pp. 462.

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like processes have the power of spontaneously bending inwards, and again, of course, outwards, when the central ones do so when they are irritated by the presence of a fly, or even of any dead body possessed of weight; not only so, but each tentacle (as Mr. Darwin calls them) may be made to bend itself inwards when its own particular gland is irritated. Moreover, there exudes from these glands, when closely inflected and holding in their grasp a fly or particle of organic matter, a fluid truly digestive in its character, and consisting of an acid and an organic body similar to pepsin.

Now, as regards the movements, nothing is more striking than the exceedingly small weights capable of exciting them in individual tentacles. A portion of hair perfectly infinitesimal in weight ($\frac{1}{78740}$ gr.) gave rise to decided movement, and so of other particles of matter equally small. Here a particle of matter, too small to be appreciated by even such a sensitive organ as the tongue, was able to produce an impulse on the surface of a vegetable gland, which impulse had to be transmitted from cell to cell for some distance, till properly active motile cells could be reached, and to influence these cells so as to induce unmistakable movements.

Temperature, as might perhaps be expected, exercises an important influence on the motions of the plant; at 110° Fahr. the tentacles become somewhat inflected, and more readily stimulated; about 120° Fahr. they become inflected of their own accord; whilst 130° Fahr. seems to paralyse them so that recovery is only possible in cold water. Higher temperatures coagulate their albumen. As already hinted, all stimulants do not have the same effect in respect of causing motion. Nutritive bodies of an albuminous kind seem to act most powerfully in this way, as particles of meat or its infusion, cabbage and green-pea water. When so stimulated, the fluid secreted by the glands is so powerful as to dissolve even bone, and even tooth-cartilage is treated in the same way. A careful inquiry was made as to the effects of certain salts on the leaves. Of all thus tried, certain salts of ammonia, especially the carbonate, the nitrate, and the phosphate, proved most effectual. The quantity of these salts necessary to set a tentacle in motion by their direct application to its gland is something like the twenty-millionth part of a grain. That such a minute quantity should suffice to send a motor impulse through many cells is very wonderful. Of the many substances tried, and of their effects, we need hardly here speak. Suffice it to say that some seemed to act more powerfully on the Drosera than on animal tissues, and some which destroy animal tissues seemed to be harmless to its cells. Notably, some of the poisons which act specially through the nerves in animals are powerless on the Drosera. Such is the case also with cobra poison.

Lastly, we must speak of the motor impulse and its results. Only the glands may be said to be sensitive, and from them the impulse proceeds through the common cellular tissue of the plant, not the fibro-vascular bundles, to the root of the tentacle, where alone the cells are motile; but thence it spreads in the same way to either side and towards the centre of the leaf. When once contracted, and the glands are bent to the centre, and are concerned in digestion and absorption, no further motion takes place, though they occupy the same attitude for days, and only begin to relax when digestion is over. In the minute mechanism of this process something very much like reflex action is to be seen; and the whole is so extraordinarily like nerve-action that the resemblance is quite startling. The immediate cause of the motion is not yet perfectly clear; undoubtedly it is connected with the movements of the protoplasm in the motile cells, but how this acts is not quite clear; its own motions seem purposeless. Even now experiments have shown that, as in the case of the Venus fly-trap, the movements are similar in their electrical results to those of animal motion. These, in brief, are the results obtained by Mr. Darwin in his investigations of Drosera. How great they are, and how important, we need hardly say; yet their author speaks of them with the utmost modesty.

Others of the *Droseraceæ* have been examined by Mr. Darwin, especially the Dionæa, but none of them so fully as the *Drosera rotundifolia*. Inquiries into the properties of other carnivorous plants are also given in some detail, especially the curious phenomena of Pinguicula, a plant often found in situations similar to the Drosera, not unfrequently side by side with it; and Utricularia, a water plant, whose bladders often hold water insects and other aqueous inhabitants; but with regard to all of these much has yet to be studied, and to this Darwin's wonderful researches clearly point the way.

THE WEEK.

TOPICS OF THE DAY.

It was stated, at the annual meeting of the Metropolitan Asylums Board, held on the 17th inst., that there was no reason to fear any extraordinary pressure upon the accommodation at the hospital at Stockwell, in consequence of the present prevalence of fever in London. Although many cases had been reported as occurring among the upper and middle classes, during the previous fortnight not a single patient had been received at Stockwell from the London poor, suffering from either typhus or enteric fever. Sixty-nine cases of scarlet fever had been admitted during the same period, and only five cases of small-pox from the whole of the unions of London; these latter, with two patients already in hospital suffering from the same disease, represent all the cases in London under the Poor-law authorities.

Mr. Bailey Denton reports that there has fallen on the surface of the country during the last month (with but few places excepted), within the short period of one hour, as much rain as would, if conserved, supply the entire population with water for domestic and other purposes for a whole year. There has already fallen within the present year sufficient rain "per square yard of surface" to furnish 50 per cent. more water than would satisfy each unit of the population with all required for drinking purposes. Mr. Denton asks if an inquiry into the capability of utilising such excesses, and so equalising extremes, should not be at once made, when it is remembered that amidst all the deluges of rain that have recently fallen, there are even now places where an insufficient provision of water exists.

A Convalescent Home for sixty inmates has been erected on the verge of Rombald's Moor, near Ilkley, Yorkshire, through the liberality of Mr. Charles Semon, of Broughton Hall, near Skipton, who has expended £8000 in constructing a suitable building. The home is intended for the use of poor people from all parts of the country, to enable them by the benefit of fresh air to regain the strength lost in illness. With a view of promoting a spirit of independence, and to relieve the Home from any appearance of charity, a small sum is to be charged weekly to each patient. The institution is to be opened for the admission of patients on the 3rd prox., and the five acres of land which surround it are being laid out as pleasure-grounds for the recreation of the inmates.

The account of the floods now prevailing in the northern counties shows the pressing necessity for a Bill to prevent the pollution of rivers. From Doncaster it is reported that the last few days' heavy rains have caused the River Don between Sheffield and Thorne to overflow; large quantities of fish of various sizes have been netted, most of them when taken out being dead or nearly so. This is to be attributed to the dreadful state of the river, the whole sewage from Sheffield Rotherham, Mexborough, and other smaller places emptying itself into the Don, with the consequence that when the river

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is low the solid refuse sinks within a mile or two of the outlet, but in flood time is carried along with the great body of water. The smell in Doncaster is spoken of as horrible; and as some of the poorest and most populous parts of the town have been flooded, it is to be hoped no bad consequences may follow. The authorities at Doncaster have diverted all the sewage of that town from the river, but large towns like Sheffield and Rotherham still continue to pollute the stream to the danger of all dwellers on its banks.

The Sanitary Commissioner for the Punjaub reports in the weekly return of births and deaths registered for the period ending May 15, 1875, that 593 deaths were recorded under the head of small-pox. Of this number, 426 occurred in the districts south of the Sutlej, and only 167 in the districts north of that river. The population of the two localities being in the ratio of nearly two to one, it results that the less numerous population on the south of the Sutlej is suffering, as a consequence of its prejudice against vaccination, far more severely than the more numerous population on the north of that river, who have taken to vaccination with comparative readiness in the last few years. The death-rate of many of the large towns is stated to be excessive. A comparison with the death-rate of London of the same date shows as the result—London 24, Delhi 60, Rawul Pindee 54, Peshawur 51, and Umballa 47 per mille.

For many reasons we are delighted to find that the Secretary of State for War has stated that he has no objection to offer against the adoption of the system in force in the Indian Medical Service; and in future, therefore, we presume that the number of vacancies existing in the Army Medical Department will be duly advertised, when the dates for the periodical examinations are announced. Mr. Hardy has exercised a wise discretion in thus deferring to public opinion, and has doubtless warded off a shower of questions which the forthcoming examination would have raised. Moreover, such a course is much more likely to commend itself to intending candidates, as exhibiting a straightforward policy, which, combined with a fair field and no favour, may do something towards restoring the confidence of the profession in the Army Medical Service.

The Parliamentary Committee appointed to take evidence on the subject of constructing a fever hospital at Hampstead, concluded its duties at the end of last week. The latter portion of the inquiry has been directed to the evidence of the inhabitants of that district, who have endeavoured to show cause against the adoption of the projected site by the Metropolitan Asylums Board for the erection of a hospital, even if there was only a prospect of its being at any time used as a fever or small-pox asylum. The grievances of the residents were very forcibly explained to the Committee by Mr. Hill (son of Sir Rowland Hill), Dr. Murchison, Mr. Bennett, Dr. Anderson, Dr. Alford, Dr. S. Gibbon, and Mr. Harvey. Another class of opponents was also examined, who strenuously objected to the selection of the Mill-lane site in lieu of the present spot chosen by the Board, on the ground that whatever objections could fairly be urged against Hampstead, on the score of injury by deterioration in the value of the surrounding property, and danger from contagion, much stronger reasons could be adduced against the selection of Mill-lane. Surgeon-Major Bostock, C.B., Scots Fusilier Guards, Drs. Collie, Aveling, Brewer, and Jervis were also examined. The Committee will now proceed to consider their report, and we must express a hope that, whatever their decision may be, this much vexed question will at last be finally settled.

The new building for the Hospital for Sick Children in Great Ormond-street is now completed, and will shortly be opened for the reception of patients. It will contain altogether 112 beds, twenty of which number are placed in the smaller wards, to be used as follows:—Five as places of quarantine for new patients, six for whooping-cough, and nine for special cases. The remainder are allotted to boys and girls in nearly equal proportions, sixty-nine being set aside for medical, and twenty-three for surgical cases. The main entrance to the Hospital is in Powis-street, and immediately facing this is a little gem of a chapel—the walls of alabaster, the roof supported by columns of alabaster and marble,—the gift throughout of an anonymous donor. Right and left of the entrance, on the ground- and first-floors are spacious wards, each one, by permission, named after some member of the Royal Family. The wards are floored with teak, the walls being of polished brick set in Parian cement, non-absorbent and easily washed down, and they are fitted with every modern appliance to render them as suitable as possible for the purpose for which they are intended. Special contrivances to insure perfect ventilation have been adopted after full consideration and thought, and the whole arrangements of the building, including the rooms for the out-patients' service, are admirable. The committee are to be heartily congratulated on having achieved a building of such a character.

Last week the Sanitary Committee of the Corporation of the City of London proceeded down the river to make their annual inspection of their hospital-ship which lies a little way below Gravesend. The jurisdiction of the Corporation, as to the sanitary supervision of the Thames, extends from Teddington Lock to the North Foreland. Dr. Harry Leach is medical officer to the Committee, and Dr. Whitcomb, of Gravesend, has charge of the hospital-ship; both these gentlemen report that during the past year the Thames has been singularly free from contagious diseases.

The death is announced of Dr. Peter Mere Latham, at the advanced age of eighty-seven. The deceased was Physician Extraordinary to the Queen, and formerly one of the physicians to St. Bartholomew's Hospital. He was a son of Dr. John Latham, a former President of the Royal College of Physicians, and also a physician to St. Bartholomew's Hospital. Dr. Latham graduated at Oxford, and took his M.D. degree in 1816. He was elected a Fellow of the Royal College of Physicians in 1818, and has filled most of the offices of that institution. We hope shortly to give a fuller notice of his life and works.

On the 17th ult. Professor Rokitansky, of Vienna, delivered his last lecture before his final retirement from the chair of Pathological Anatomy, which he has occupied for so many years with such distinguished honour. He was loudly cheered by a crowded audience. His successor, Professor Heschl, of Graz, appears to be a man likely (if rumour may be trusted) to carry on Rokitansky's work in a worthy manner, and to make good use of his enormous opportunities.

Professor Blasius, of Halle, has just died at the age of seventy-four years. He had at one time one of the greatest reputations in Germany as a surgeon, and he was also a clinical teacher and writer of no small celebrity.

ARTIFICIAL DIABETES.

A PAPER was read by F. W. Pavy, M.D., F.R.S., at the Royal Society, on June 17, "On the Production of Glycosuria by the Effect of Oxygenated Blood on the Liver." The author referred to a former communication to the Society, on "Lesions of the Nervous System producing Diabetes" (*Proceedings of the Royal Society*, vol. x., 1859-60), in which he made known that division of certain parts of the sympathetic system occasioned the presence of sugar in the urine. The results given in that paper showed that there were other means, besides Bernard's celebrated experiment of puncturing the floor of the fourth ventricle, by which artificial diabetes could be

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induced, but they did not explain the reason of the appearance of the sugar, and the author still sought to discover something upon this point. The inquiry was pushed in various directions, but always with a fruitless issue until the summer of 1874. The author for some time past had been led to look to an altered condition of the blood flowing to the liver as likely to prove the most probable cause of the transformation of amyloid substance into sugar, which evidently constitutes the foundation of the artificial diabetes following operations on the nervous system. Schiff is of this view, and (*Journal de l'Anatomie et de la Physiologie*, Paris, 1866) has referred the escape of sugar from the liver, and thence the production of glycosuria, to the development of a ferment in the blood as a result of the hyperæmia (not necessarily of the liver) which follows the operations on the nervous system which occasion artificial diabetes; but, although the author has carefully examined this opinion, he cannot obtain evidence of the development of a ferment in the manner asserted. He has further tried the effect of introducing a secretion—viz., saliva—into the circulatory system, which is known to act as an energetic ferment upon the amyloid substance of the liver; and on one occasion he found that, from some cause or other, the urine became to a moderate extent saccharine, but in a large number of other experiments the operation was attended with a negative result. Having so far proceeded without success, it occurred to the author to try the effect of introducing defibrinated arterial blood into the portal system. He was led to experiment in this way from having some time previously observed that when arterial blood only was allowed to flow through the liver,—as, for instance, when the portal vein was tied and the hepatic artery left free,—sugar escaped from the organ to such an extent as to render the contents of the circulatory system strongly saccharine. This result he had commented upon as being somewhat surprising, and as furnishing evidence standing in opposition to Bernard's glycogenic theory. He had not succeeded by the operation in producing glycosuria, because, as it appeared to him, no urine was secreted, owing to the ligature of the portal vein leading to such a diversion of blood from the general circulation, by the accumulation occurring in the portal system, that the flow through the kidney was too slight to allow of it. He had endeavoured to overcome this obstacle by connecting, through the medium of a canula, the portal with the right renal vein after ligaturing the corresponding renal artery. If the experiment had succeeded, the liver would have been left with its arterial supply, but the portal stream would have been diverted and made to reach the inferior cava without traversing the hepatic vessels. As regards the operative part, this the author found he could accomplish, but each time he performed the experiment the object he had in view was frustrated by the canula becoming quickly filled with a plug of blood-clot. It was whilst under this difficulty that the thought of collecting blood from an artery, defibrinating it, and then introducing it into the portal system, occurred to him. He had considered it possible that some slight effect might be perceptible, but had not anticipated the strongly marked result which is producible. The amount of blood used has been from ten to eighteen fluid ounces. After the production of anæsthesia by chloroform, the blood was collected from the carotid artery, stirred in order to defibrinate it, strained, and then very slowly injected into a branch of the mesenteric vein. In one experiment, where half an hour had been occupied in making the injection, the urine at the completion of the operation contained a notable amount of sugar, and half an hour later showed by analysis the presence of fifteen grains to the fluid ounce. In a second, the urine contained ten, and in a third, fourteen grains to the fluid ounce when collected three-quarters of an hour after the operation. The experiments were performed upon dogs, and in each case it had been ascertained that the urine was devoid of sugar before the operation.

Having noticed the effect which has been described from the injection of oxygenated blood into the portal system, it became necessary to ascertain positively that it was attributable to the oxygenated condition of the blood, and not to any other cause. To decide this point an appeal to the counterpart experiment was made. Defibrinated venous instead of arterial blood was injected into a branch of the mesenteric vein, and upon each occasion where such an operation has been performed a negative result has been obtained. With the evidence thus furnished, the conclusion may be warrantably drawn that oxygenated blood in some manner influences the liver, so as to lead to the production of glycosuria. It may be inferred that, contrary to the effect of venous blood, it promotes the transformation of amyloid substance into sugar.

The suggestion naturally occurs that what has been stated above affords an explanation of the glycosuria occurring after Bernard's puncture of the fourth ventricle, and the various lesions of the sympathetic. Without any new agent being called in, sufficient is presented in the state of the blood to account for the production of sugar that occurs. By a vasomotor paralysis affecting the vessels of the chylopoietic viscera, the blood will reach the portal system, without having become de-arterialised, in its natural way; and in this state it has been shown by the experiments narrated to possess the property of acting within the liver in such a manner as to determine the production of glycosuria.

THE ISLINGTON POOR-LAW MEDICAL DISTRICTS.

SOME months ago, Dr. Ducat and Mr. Gardner, Medical Officers of the Upper Holloway and St. Peter's districts respectively, of the Islington Union, wrote to the Local Government Board in reference to the extent of the duties discharged by them, and the amount of their remuneration. In their communications they showed that, in comparison with the other medical officers of the union, they were very much underpaid. Dr. Ducat and Mr. Gardner had previously complained to the guardians, but were told that the question was so beset with difficulties that they could not make any alteration in the present arrangements. However, the Local Government Board requested the guardians to reconsider the matter, and a committee was appointed to determine what alteration, if any, should be made. It was shown to this committee that Dr. Ducat's district (Upper Holloway) extended over 1045 acres, and that he attended, on an average, 448 cases in each quarter, his salary being £100 per annum; and that Mr. Gardner's district (St. Peter's), although much smaller in point of average, gave 586 cases per quarter, the salary being £120 per annum. In St. Mary's district, however, the medical officer attends only ninety-nine cases per quarter; and in Barnsbury district the average is about 150 cases per quarter; and in each instance the salary is £100 per annum. From this it is pretty clear that either Dr. Ducat and Mr. Gardner are underpaid, or the medical officers of the other districts are overpaid. The committee admitted that Mr. Gardner had just cause for complaint, but could not see their way clear to lessen his work by adding a portion of his district to the St. Mary's district, as suggested by the Local Government Board, as it would necessitate a rearrangement of the relieving officers' districts. They therefore requested a conference with Dr. Bridges, the Inspector of the Local Government Board, and this gentleman met the committee on the 16th inst., when the matter was further considered. Dr. Bridges having heard the views of the committee, said that he should not recommend an alteration in Dr. Ducat's district, but in Mr. Gardner's the amount of work was certainly excessive, and he should recommend either that the district be equally divided, and an extra medical officer be appointed,

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the aggregate salaries not to exceed £150 per annum, or that a portion of Mr. Gardner's district be assigned to Dr. Greenwood, the Medical Officer for the St. Mary's district. At the last meeting of the Board of Guardians it was decided to divide Mr. Gardner's district into two equal portions, each medical officer to receive £75 per annum. Before, however, this proposal can be carried into effect, it will be necessary to get Mr. Gardner to resign his present appointment. As yet this gentleman has not complained of inability to do the whole of the work, neither has he been charged with neglect of duty in any one instance during his four years of office: his only grievance has been insufficiency of pay for the services demanded from him. This the guardians propose to remedy by reducing his salary £45 a year, whilst the work will not be correspondingly lessened, except in regard to home visitation of paupers, for he will still be required to attend the parish dispensary daily, and will be occupied in dispensary work about the same length of time as at present. The proposed arrangement does not appear to be the best that might have been adopted, and it seems probable that its adoption will be opposed by the ratepayers. The *Islington Gazette* characterises the proposal as one of the most extraordinary as well as the most extravagant advanced by the guardians for a long time, and suggests that the guardians are actuated by a desire to favour individuals instead of studying the interests of the ratepayers. It is a matter for surprise that, when Dr. Bridges held his inquiry, he did not ask the medical officers themselves to meet him, so that he might have learnt their views as well as those of the guardians. Had he done so, it is possible that the question would have received a more satisfactory solution.

THE WORCESTER HOSPITAL FOR CONTAGIOUS DISEASES.

The city of Worcester is favoured beyond many towns, in that it has a hospital specially set apart for the reception of cases of contagious disease. The hospital, however, does not appear to have been of much use to the inhabitants of late, for we understand that only two cases have been admitted during the last thirteen months, and these were cases of small-pox. It must not, though, be understood that the city has been entirely free from infectious disease during this period; indeed, during the greater part of the time, contagious disease in some form has been almost epidemic. Contagious diseases, then, having been prevalent in the city, and the hospital designed for their reception not having been utilised, it is pretty evident that in some quarter there has been a failure of duty. The circumstance has recently been occupying the attention of the Worcester Board of Guardians, one of their medical officers, Dr. Woodward, having reported that he had attended about thirty cases of erysipelas during the last few months, all of which might easily have been prevented had the first cases been removed as he advised. This report would make it appear that the sanitary authorities had neglected to attend to Dr. Woodward's instructions and recommendations; but Dr. Strange, Medical Officer of Health for the city, writes to the chairman of the Board of Guardians to say that neither he nor the inspector of nuisances has ever received notice from Dr. Woodward of any case of erysipelas that should be removed to the hospital for contagious disorders. To this Dr. Woodward replies by saying that it is generally recognised that it is no part of the duty of union medical officers to send in reports to the medical health officers. The plan he has universally adopted since receiving notice from Dr. Strange that the contagious hospital was open for the reception of cases has been to inform his patients and their friends of the fact, and endeavour to persuade them all he could to apply for removal! As none of these cases found their way to the hospital it is clear that Dr. Woodward's persuasive powers were not strikingly efficacious: and it is somewhat surprising that it did not occur to him, when month after month he found the disease spreading among the poor in crowded rooms, to adopt some other plan in order to remove his patients to a place where they would have the best possible chance of speedy recovery, and cease to be sources of danger to others. Dr. Strange truly remarks—"I cannot raise the dead, and if I am thus kept in ignorance of living cases I am prevented from exercising the powers which I possess of isolating certain of the early cases of infectious disease with a view to limiting it." We might remark that if the Union Medical Officers of Worcester think that it is not necessary they should do more than advise and "endeavour to persuade" the helpless friends of patients suffering from contagious disease to avail themselves of the contagious hospital, the sanitary authorities of the city might just as well employ the building for some other useful purpose.

THE BRITISH MEDICAL DEFENCE ASSOCIATION.

A meeting of medical men practising in the East-end of London was held at the residence of Mr. R. H. S. Carpenter, L.R.C.P. Lond., 533, Commercial-road East, on the 23rd inst., for the purpose of considering the advisability of adopting some measures to prevent unqualified practice in the East-end. Mr. George Brown, Hon. Secretary of the British Medical Defence Association, having been voted to the chair, explained that he attended the meeting at the invitation of Mr. Carpenter, who had taken a great interest in the success of the Association of which he (Mr. Brown) had the honour to be secretary, and was anxious to form a local branch of the Society for the prosecution of chemists and others who are practising in the neighbourhood as duly qualified medical men. From information which had reached the Society, it was evident that unqualified practice prevailed to a much greater extent than was generally supposed, and it was of the first importance, in the interests of the public and of the profession, that some steps be taken to meet the evil. The Medical Council and the medical corporations generally had declined to interfere in the matter, and it was not to be expected that individual medical men would incur the odium and expense attaching to the prosecution of unqualified persons. The only alternative was to form a society, whose officers would be able to take up cases wherever they occurred, and, he hoped, prosecute promptly and successfully. Two cases of unqualified practice, one in North London and the other in Poplar, had been reported to the Society, in which it was believed that convictions could be sustained; and summonses would be applied for as soon as the detective engaged in the cases reported that the evidence was complete. The objects of the Association had met with the approval of the profession generally, and names were being added daily to the list of members. It was intended to form branch associations in the different London districts, and in the provinces, as soon as a sufficient number of medical men were enrolled in any one town or district to work a separate branch. Mr. Carpenter said that he had received the names of a dozen members who had expressed their willingness to aid in forming a branch association, and he felt sure that many others would join as soon as they were acquainted with the objects of the movement. He believed that they would be able to conduct their own prosecutions without any expense to the parent society. On the proposition of Mr. F. G. Aubin, M.R.C.S., seconded by Mr. Whitten, L.S.A., it was resolved—"That it is desirable to form an association of medical men practising in the East-end of London, for the purpose of suppressing unqualified practice, and that the society be called the 'East-end Branch of the British Medical Defence Association.'" The following gentlemen were elected on the committee to give effect to the above resolution—viz., Messrs. F. G. Aubin, G. L. Priddle, C. Chaple, Dr. J. W.

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Kay, Messrs. H. Kay, Whitten, Carpenter, and Dr. W. Wiles. Mr. Carpenter was elected honorary secretary, Mr. George Brown honorary treasurer, and Mr. A. A. Shapland, of King William-street, City, solicitor to the branch. Particulars having been furnished to the meeting that a man calling himself "Dr. Bellaers," but whose name does not appear in the Medical Register, is practising as an apothecary at 318, Oxford-street, Stepney, it was resolved that the honorary secretary be requested to instruct the solicitor to the branch as to immediately prosecuting the said "Dr. Bellaers" under the Apothecaries' Act. The proceedings terminated with a vote of thanks to Mr. Brown for presiding, and to Mr. Carpenter for permitting the meeting to be held at his house.

THE FORTHCOMING HOSPITAL SATURDAY COLLECTION.

THE second collection in aid of the London Hospitals, which has somewhat erroneously been termed the working-man's contribution to these charities, will take place in London on the 21st inst. We have so frequently expressed our views as to the policy of both Hospital Sunday and Hospital Saturday collections that our opinions must, by this time, be pretty generally known; we fear that ultimately the London hospitals will not be found to have benefited by the well-meant exertions of those who originally organised these movements. But specially we have objected to the Hospital Saturday Fund, because if these collections are to be carried out in the metropolis, there should have been unanimity on the part of all classes, and not opposition. It is to be assumed that the working-man's donation could as readily be placed in the church plate as in the publican's receiving-box; and it does not appear to us, looking at the result achieved by the Committee of the Saturday Fund last year, that the amount realised was commensurate with the numerous devices adopted to insure a favourable total. Again, the announcement that this is a working-man's movement is wrong, inasmuch as it fosters the feeling of inequality, and tends to cause unnecessary unpleasantness between the upper and lower classes of this country; and, moreover, the title is not strictly true, when it is remembered that at street collecting-tables and in the boxes and stalls of theatres the contributions are furnished from the pockets of those who can scarcely, by any amount of latitude, be reckoned as daily toilers for their bread.

We have been asked to make it generally known that upon the present occasion the Committee have avoided many of the errors which characterised the inauguration of their movement, and especially that the expenses of collecting the Fund have been reduced to a minimum. Everyone will of course be glad to hear that as much as possible of the sum collected will be appropriated to the object for which it was subscribed, and the balance-sheet will show how far these promises have been kept; but the machinery necessary for obtaining the amount is costly as compared with the simple means by which the Hospital Sunday Fund is got together, and we think that it will always be found that the sum handed over to the hospitals by the Hospital Saturday Committee has been purchased at too great an expense. It will be extremely interesting at some future day to ascertain if the funds of the different London hospitals have been materially increased by the introduction of these collections into the metropolis.

PRESENTATION OF DR. HUGHES BENNETT'S BUST.

THE bust of Dr. Hughes Bennett, by Mr. W. Brodie, R.S.A., will be presented to the University in which he so long laboured, on Monday next, after the graduation ceremony. Unfortunately, the state of Dr. Bennett's health is such that he will not be able to be present to receive the honorary degree which the Senatus had determined to confer upon him. The presentation of the bust will be made by Dr. Andrew Clark.

WATER SUPPLY.

IN the monthly report of the water companies for June, Professor Frankland, writing from the College of Chemistry on June 28, states that the river waters supplied to London have now fully assumed their summer quality, and contain scarcely half as much organic impurity as they did during the winter. Their efficient filtration has also become much easier to accomplish; nevertheless the Southwark and Grand Junction Companies delivered slightly turbid water, containing numerous moving organisms, to their customers. The remaining samples were clear when drawn from the companies' mains. The Kent and New River Companies delivered water of much greater purity than that supplied by any other company. Dr. Hill, the Medical Officer of Health for Birmingham, reports that the water supplied to that town was slightly turbid, and stood greatly in need of filtration. It contained numerous moving animal organisms, some visible to the naked eye, and many vegetable growths. The was, however, a reduction in the amount of organic nitrogen. According to the remarks appended to the tables of analysis of the various waters supplied to London, by Mr. Frank Bolton, water examiner, most of the companies are now giving constant water-supply under the Act of 1871, which compels them to do so "as and when the public authorities see fit to move." The Kent, New River, and East London Companies have at present taken the lead in developing the new system.

The number of miles of streets which contain mains constantly charged and upon which hydrants could at once be fixed, in each district of the metropolis, are as follows:—Kent, 80 miles; New River, 168; East London, 70; Southwark and Vauxhall, 100; West Middlesex, 67; Grand Junction, 41½; Lambeth, 90; Chelsea, 50,—making a total length of 666½ miles; and the water companies are ready to affix hydrants thereon when required by the authorities. The total number of hydrants erected is at present 2547, of which 2007 are for private purposes, 272 for street watering, and 268 for public use. At the conclusion of his report, Mr. F. Bolton emphatically warns householders against the danger of waste-pipes which enter a drain instead of opening freely into the air; and he further points out the necessity of constant attention to the cleanliness of cisterns, "more especially after periods of flood and turbidity." The warning was never more opportune than at the present time, after the deluge with which we have lately been favoured, and we trust that it will be attended to.

PUBLIC, BEWARE!

THE following appeared in the *Echo* of July 27:—

"Urgent Caution!—On Monday evening, a man, having the appearance of a sailor, purchased at a chemist's in the City a box of Beecham's pills, senna leaves, Epsom salts, and glycerine. On leaving, he took away an unlabelled parcel by mistake, instead of the Epsom salts. He is hereby cautioned not to make use of the contents of the said parcel for any purpose whatever."

We hope that this advertisement may "meet the eye" of the person whom it concerns before mischief has happened. It is clear that the advertiser has laid himself open to a charge of carelessness on two grounds—(1) in supplying a medicine without a label; and (2) in giving his customer poison instead of a harmless purgative. As oxalic acid is the drug most usually confounded with Epsom salts, we may hope that no more dangerous mistake has been made than supplying it; but the urgent terms of the advertisement suggest a still more serious error. Quite recently a French chemist who had no carbonate of lithia in stock, applied to a neighbour, who supplied him instead with sulphate of atropia, two grammes fifty centigrammes of which were dispensed in twelve powders, and one of them was given to a child, whose life was probably saved by the severe vomiting it caused. The two chemists were tried

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before the Tribunal Correctionnel, and, their previous characters being taken into consideration, they were fined—one 100 fr. for making the mistake, and the other 50 fr. for not detecting it. We mention this case to show that mistakes in dispensing are made in France as well as in England, but they are happily—in this country at least—of such rare occurrence that they serve, when they do happen, to give us fresh confidence in our pharmaceutists, through whose hands so many thousands of prescriptions annually pass without mishap, although the issue of life and death often hangs on their accuracy and care.

UNQUALIFIED "PROPRIETOR" OF A DISPENSARY.

LAST WEEK Mr. Donaldson held an inquiry at the Gosset Arms, Gosset-street, Bethnal-green, respecting the death of a child named Herbert Wilson. It appeared that the deceased was the son of a cabinet-maker living at 107, Gosset-street. About five weeks before, he was found to be suffering from measles, and the mother sought advice at a dispensary in the Bethnal-green-road. A fee of half a crown, which included visiting and the supply of medicine for one week, was paid, and at the expiration of that time the child had apparently recovered. However, it fell ill again, and the mother had recourse a second time to the dispensary. The customary fee for a week's attendance and medicine was paid, and the child was visited and prescribed for up to five o'clock in the afternoon of the 8th inst. The mother was then told to call in the evening for the medicine, but on going to the dispensary for that purpose she saw no one there but a young woman, who said that the doctor was intoxicated, and that she was to come again on the following day. The mother went again with the same result, and subsequently the half-crown she had paid was sent back to her. In the meantime Dr. Sarvis was summoned, and found the child to be sinking fast from pneumonia resulting from measles. It died on the 12th inst. Henry Beardmore Smyth, of 201, Bethnal-green-road, now stated that he was a student of medicine and part proprietor of the dispensary. He was not qualified, but had with him Dr. M'Gill, who was properly qualified. Dr. M'Gill prescribed some of the medicines, and he, as an assistant to a doctor, prescribed the remainder. He had since dismissed Dr. M'Gill for being drunk, but he was not aware that the half-crown which was paid was returned, as he was absent at the time. All the cases then before them were attended by his brother, a properly qualified man. On the first occasion he visited the child with Dr. M'Gill, but on the second it was attended by the latter alone. The remainder of the witness's evidence and his replies to questions put by the jury went to show that he felt justified in acting as assistant to a duly and properly qualified man. The jury returned a verdict "That the deceased died from pneumonia from natural causes, desiring to draw attention to the fact that the deceased received medical treatment at the Bethnal-green Dispensary in the Bethnal-green-road, where medicines were administered by an irresponsible and unqualified practitioner, and that a dispensary under the management of irresponsible persons must be fraught with danger to the community."

THE COMMITTEE OF THE WORCESTER INFIRMARY AND THEIR MEDICAL STAFF.

ABOUT a month ago, the Executive Committee of the Worcester Infirmary passed a vote of censure upon Dr. Inglis, one of their honorary medical officers, for neglect of duty, in that he was absent from his work at the Infirmary on a recent occasion. This is, we believe, the only occasion during the fourteen years that Dr. Inglis has been on the medical staff that he has failed to fulfil his engagements at the Infirmary, and in this instance his absence was purely unavoidable. Under these circumstances it appears to us to be extremely inconsiderate on the part of the Committee to censure an honorary officer who has for many years faithfully performed very onerous duties, and we are pleased to hear that his colleagues have addressed a strong remonstrance against the injustice thus inflicted upon one of their body. In their remonstrance, the medical staff state that to the rules requiring them to give attendance at the Infirmary at stated times, they make no objection. But when circumstances render it *impossible* for them to comply with the *letter* of these rules, they consider they have a right to the forbearance of both governors and patients. They also state their conviction that they would be untrue to themselves, disloyal to their profession, and acting unfairly to those of their brethren who are attached to other offices, if they were to allow the rigid interpretation now, for the first time, put upon the rules relating to the attendance of the medical officers to go unchallenged. They therefore decline to be considered liable to censure for any unavoidable omission of their duties, and declare their inability to carry on the work at the Infirmary under the interpretation now put upon those rules. The Executive Committee appear to be much surprised at the action of the medical staff, but for the present they have declined to do more than enter the "remonstrance" on the minute-book. The matter will ultimately come under the consideration of the Governors of the Infirmary, and we have every confidence that they will see the reasonableness of extending the utmost consideration towards their medical staff. Meanwhile Dr. Inglis has sent in his resignation, but we trust that the Governors will ask him to reconsider his determination, and make such alteration in their rules as will enable the medical staff to retain their connexion with the institution.

CURLING ON THE TESTIS IN CHINESE.

WE have had the pleasure of examining a very interesting and suggestive, though certainly, in its present guise, to us personally, a not very instructive work, published in three queer-looking volumes, at Amoy. Not instructive to us, for it is a Chinese translation of Mr. Curling's well-known work on Diseases of the Testis, and, with the exception of its single page English preface, we cannot read a word of it. The able and learned translator, Dr. Patrick Manson, of Amoy, says that "Most of the works on foreign medicine and surgery hitherto published in Chinese, though valuable as introductions or guides, are not sufficiently exhaustive of the subjects they discuss to enable a native student from their study alone to undertake the diagnosis and treatment of disease with confidence and success"; and that he has selected this work for translation because of its fulness and completeness, and because eight years' experience of Chinese hospital practice in Formosa and Amoy has taught him the great frequency of diseases of the testis, and the ease, when an accurate diagnosis has been arrived at, with which, as a rule, they can be cured. He has added to the original work a chapter on the Anatomy of the Scrotum, Testis, and Spermatic Cord, a detailed description of the operation which he has for four years practised with uniform success for elephantiasis of the scrotum, and a "few notes" on a disease which he calls "Lymph Scrotum." Dr. Manson says that, in preparing his translation, he has been greatly indebted to "the House-Surgeon of the Native Hospital in Amoy, Knitsung, for the enthusiasm and intelligence" he brought to Dr. Manson's assistance. The appearance of such a work is curiously suggestive of the way and degree in which the most exclusive of Eastern nations is being gradually conquered by the medical science of the "outer barbarians."

ACTION TO RECOVER FEES.

AT the Liverpool County Court, last week, Mr. R. Bark, of Great Grimsby, sued Mr. Bebbington, watchmaker, of the same town, for five guineas for professional attendance and removing

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a foreign body from the throat of the plaintiff's wife. Mrs. Bebbington, it appears, was having supper one night, about eighteen months ago, when she felt a choking sensation caused by something having lodged in her throat. Mr. Bark was sent for, and abstracted from his patient's throat a "foreign body," the said "foreign body" being, according to the plaintiff's account, a piece of a lucifer-match, but the defendant and his wife agree in saying that it was simply a small piece of fibre. However, match or fibre, Mr. Bark removed it, and the patient breathed again. The exact time occupied by the operation is not definitely known, as Mr. Bark says he was in the house quite half an hour, whilst the defendant asserts that the operation was complete in five minutes, and that the doctor did not remain in the house ten minutes altogether, as he hurried away on account of his expecting one of his cows to calve momentarily. The defendant and his wife assert that they asked Mr. Bark his charge, when he replied, "Nothing." Two months ago, however, he made a claim for five guineas, but the defendant refused to pay more than half a guinea, which sum he paid into Court. His Honour said that, in his opinion, the half-guinea paid into Court was sufficient remuneration. He should therefore give judgment for the defendant, with costs against Mr. Bark.

REMOVAL OF FEVER-DENS.

We are glad to hear that the Holborn Board of Works has decided to urge forward the application of the Artizans' Dwellings Act to the area extending from Portpool-lane on the north to Holborn on the south, and from Leather-lane on the east to Gray's-inn-road on the west. Those who are acquainted with the habitations which cover the fourteen acres of land included in the above boundaries, will agree that it is scarcely possible to find a worse lot of dwellings in any part of the metropolis, and that to clear them off the face of the earth will be little short of a public blessing. In his report to the Metropolitan Board of Works, Dr. Gibbon, Medical Officer of Health for the district, states that the houses are unfit for human habitation; that diseases, such as low fever and the preventable ailments of infants, indicating a low state of health amongst the inhabitants, either were now, or had been from time to time, prevalent in the condemned area, and that the prevalence of these diseases might reasonably be attributed to the narrowness and closeness of the courts, to the bad arrangement and bad condition of the houses, and to the want of light, air, ventilation, and other necessary conveniences. The age and general condition of the houses will not admit of any alterations being carried out with advantage. The only alternative, therefore, is to pull them down and rebuild. The only building in the above area that it is contemplated to preserve is St. Alban's Church.

THE DURATION OF BLOODLESS OPERATIONS.

At a recent meeting of the fourth Congress of the German Surgical Society, Professor Langenbeck stated his opinion that it was of extreme importance to determine more accurately than has as yet been done how long a limb can be deprived of blood, during a bloodless operation, without danger either to it or to the patient. He thought that the constriction could be kept up for a very long time without fear of gangrene, if the patient could only overcome the disagreeable sensation which the bandage caused. We, however, particularly need experiments on animals, to determine the exact limit of safety. In long operations on the bones—for example, resections—we can see that the bloodlessness is not so complete in them as in the soft parts around, and that capillary bleeding occurs from them when not a drop of blood issues from the muscles. Professor Langenbeck continued: "I have recently kept up the constriction in excisions of the ankle-joint for an hour and a half, without any ill effects. After this operation I always find a plaster-of-Paris bandage the most comfortable and useful dressing; but till lately there was one great disadvantage attending its use—namely, that it became soaked with blood as soon as it was put on. In the last two cases in which I have operated, I have kept up the compression until the bandage was perfectly hard, and then cut large openings in it so that the whole wound could be seen, and only then removed the constriction. The abundant hæmorrhage which now occurs from the vessels of the periosteum and the bone soon stops, if the femoral artery is compressed for a short time; with a little care the blood can thus be kept from soaking into the bandage."

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

The quarterly Court of the Directors of the Society was held in the rooms of the Royal Medical and Chirurgical Society, 53, Berners-street, on the evening of July 14. Mr. Charles Hawkins, V.P., took the chair. The sum of £1116 10s. was voted to be distributed among fifty-seven widows now receiving grants, a sum of £75 10s. to be divided between seventeen children, and a further sum of £19 10s. was granted to three children from the Copeland Fund. The expenses of the quarter amounted to £66 10s.

A NEW VETERINARY JOURNAL.

Veterinary literature is to be enriched by the publication of a new monthly journal entitled *The Veterinary Journal and Annals of Comparative Pathology*. The first number contains several well-written and interesting papers on veterinary subjects, reports of societies, etc. Altogether the journal is well got up, and promises to be a successful undertaking. The editor is Mr. George Fleming, F.R.G.S., Veterinary Surgeon to the Royal Engineers, and the publishers Messrs. Baillière, Tindall, and Cox.

KENSINGTON VESTRY.

The Kensington Vestry at their meeting held on Wednesday last raised the salary of Dr. Dudfield, their Medical Officer of Health, from £300 to £400 per annum. The vote was unanimous, and couched in terms that could not fail to indicate to Dr. Dudfield the value of this expression of the Vestry's appreciation of his services.

PARLIAMENTARY.—PHARMACY BILL—SALE OF FOOD AND DRUGS BILL—POLLUTION OF RIVERS—CONTAGIOUS DISEASES OF ANIMALS—DISMISSAL OF A POOR-LAW MEDICAL OFFICER.

In the House of Lords, on Thursday, July 22,

The Duke of Richmond moved the second reading of the Pharmacy Bill, and explained its objects. At present no person could keep open shop in Ireland for the sale of medicines and the compounding of medical prescriptions unless he were a Licentiate of Apothecaries' Hall, under an Act of Parliament passed in 1791. The examinations under that Act were somewhat severe, and the consequence was that few persons in Ireland had applied for licences, so that in many parts of the country there were places where medicines could not be properly compounded. In view of this state of things, a Bill was introduced into the other House of Parliament by Mr. Errington last session. It was referred to a Select Committee, upon whose report the present measure was based. The Bill originally proposed that there should be reciprocity between the Pharmaceutical Society of England and the Pharmaceutical Society which it was intended to establish in Ireland, but in consequence of considerable objection being taken by the former society his right hon. friend the Chief Secretary for Ireland struck out that clause. The main provisions of the Bill were as follows:—It constituted a Pharmaceutical Society in Ireland; it named the first members of the Council, providing that the President should be Sir Dominic Corrigan, and the Vice-President Dr. Aquilla Smith; it empowered the Council to make rules and to regulate the examinations; and it provided that there should be two grades of chemists, one class to be called "pharmaceutical chemists," and another inferior class to be called "chemists and druggists."

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The Act would not come into operation until the rules had been approved by the Lord Lieutenant and the Privy Council of Ireland. After providing for the registration of the persons who might be found after examination qualified for either of the two grades, the Bill repealed so much of the Act of 1791 as prohibited keeping open shop in Ireland for the sale of medicines and the compounding of prescriptions except by Licentiates of Apothecaries' Hall. Further, the Bill provided that no person should keep open shop for such purposes unless he belonged to either of the two grades, or was a Licentiate of Apothecaries' Hall, or a duly qualified medical practitioner.

The Bill was read a second time.

The Duke of Richmond, on the order for the third reading of the Sale of Food and Drugs Bill, moved to insert a new clause, providing "That no person should be liable to be convicted under the third and fourth sections in respect of the sale of any article of food, or of any drug, if he satisfactorily showed that he did not know of the article of food or drug being so mixed, coloured, stained, or powdered as in either of those sections mentioned, and that he could not with reasonable diligence have obtained that knowledge,"—which was agreed to; and also one to substitute Clause 5 as follows:—"No person shall sell to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser, under a penalty not exceeding £20, provided that an offence shall not be deemed to be committed under this section in the following cases; that is to say—1. Where any matter or ingredient not injurious to health has been added to the food or drug because the same is required for the production or preparation thereof as an article of commerce in a state fit for carriage or consumption, and not fraudulently to increase the bulk, weight, or measure of the food or drug, or to conceal the inferior quality thereof. 2. Where the drug or food named is a proprietary medicine, or is the subject of a patent in force, and is supplied in the state required by the specification of the patent. 3. Where the food or drug is compounded as in this Act mentioned. 4. Where the food or drug is unavoidably mixed with some extraneous matter in the process of collection or preparation;"—which was agreed to, and the Bill, as amended, was read a third time and passed.

In the House of Commons,

Mr. Sclater-Booth, being interrogated about the Rivers Pollution Bill, deferred until Monday making a decided statement with respect to its withdrawal, and on that day the Bill was withdrawn for the present session.

Mr. Disraeli, replying to Mr. Charley, said he hoped opportunity would be found for the third reading of the Infanticide Bill, which he thought the House was anxious to pass, in time to send it to the other House.

The Contagious Diseases (Animals) Act (1869) Amendment Bill passed through Committee, and was read a third time and passed on Monday, July 26.

Mr. Sclater-Booth, replying to Dr. Lush's inquiry whether the statements of Mr. Hammett Hailey, a medical officer of the Newport Pagnell Union for twenty-seven years, in a petition presented to this House on July 7, and printed in the Appendix (526), had received his attention; and whether the dismissal of Mr. Hailey from his office for the alleged offence of writing an intemperate letter to a relieving officer (subsequently apologised for) will be reconsidered by the Board,—said that he was aware of the petition presented to the House and the statements contained in it. It is not correct to say that he was dismissed for writing an intemperate letter to a relieving officer. The letter was addressed to the Board of Guardians. But his offence could hardly be said to be confined to the writing of that letter. His conduct had been the subject of numerous and repeated complaints on the part of inspectors during a long series of years; and, upon reviewing the whole circumstances, he did not feel justified in reopening the case.

THE PRURITUS OF VARIOLA.—Dr. Noel Guéneau de Mussy recommends the following ointment to allay the pruritus which accompanies the eruption of variola, and to prevent the patient from lacerating the skin by scratching:—Bromide of potassium 3 grammes, camphor 30 centigrammes, cerate 30 grammes. To be applied several times daily.—*Union Méd.*, July 24.

THE FORTHCOMING MEETING OF THE BRITISH MEDICAL ASSOCIATION.

WHEN last year, at Norwich, it was determined to accept the invitation of the profession to make Edinburgh the site of the next meeting of the British Medical Association, its success was already secured. Edinburgh is in itself so interesting and so beautiful, the site of our largest medical school, and the chosen home of so many of our profession's brightest ornaments, that under ordinary circumstances it largely attracts men who are still students of our profession; but if we superadd the attractions which such a meeting always affords, we may say that the attractions become almost irresistible. It is, indeed, only when the Association meets in such places as afford ample space for all sections, general meetings, etc., under one roof, that it is at its best; for if one has to go here for one thing and there for another, whilst wishing to be at a third place at the same time, it becomes a little bit vexatious and troublesome. Moreover, much is to be expected from the lecturers who are to address the general meeting. If we begin with the stately old Mentor of Scottish physic, to pass on to her younger representative in medicine, from the experienced Professor of Surgery to the University's latest acquisition in the Professor of Physiology, neither Edinburgh nor Scotland will have any cause for shame from their utterances compared with any similar meeting in the world. Nor shall we expect less from such presidents of sections as Dr. Lyon Playfair and Dr. Matthews Duncan.

Nor is the list of promised papers less interesting. Many are set down for reading; but we fear that, with all the attractions of Edinburgh and its "auld town," there may be some difficulty in getting numerous audiences for all of them. Be that as it may, the success of the meeting does not depend on this feature alone; the festal prospects and projects are at least of equal, if not greater, importance in the minds of many; and these bid fair to be excellent. Moreover, Edinburgh is the great entrance to the beauties of Scotch scenery, and a trip has been organised by Mr. Cook which will show some of its finest features. This includes the Trossachs, Loch Katrine and Loch Lomond, Glasgow, the Kyles of Bute, the West Highlands, Oban, Glencoe, the islands Iona and Mull, the Caledonian Canal, and a return by the Highland Railway. This is one of the most complete trips possible; it is to last six days, and the expense is only ten guineas, to include everything; and if anyone will try the experiment of putting his hand into his pocket at every steamboat, carriage, and hotel on the road, he will bless the invention of circular tickets. Other excursions there will be to Melrose, to Roslyn, to the Bass, etc.; but the Highland excursion promises to be by far the best. Subjoined are fuller particulars as to the personal arrangements, hours, etc., connected with the meeting of the Association.

FORTY-THIRD ANNUAL MEETING.

The forty-third annual meeting of the British Medical Association will be held at Edinburgh, on Tuesday, Wednesday, Thursday, and Friday, August 3, 4, 5, and 6, 1875. President: E. Copeman, M.D., Senior Physician to the Norfolk and Norwich Hospital. President-elect: Sir Robert Christison, Bart., M.D., D.C.L., L.L.D., F.R.S. Ed.

An Address in Medicine will be given by James Warburton Begbie, M.D., F.R.C.P. Ed.

An Address in Surgery will be given by James Spence, F.R.C.S. Ed., F.R.S.E., Professor of Surgery in the University of Edinburgh.

An Address in Physiology will be given by William Rutherford, M.D., F.R.S.E., Professor of the Institutes of Medicine in the University of Edinburgh.

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The business of the Association will be transacted in six Sections, viz.:—

Section A. Medicine.—President: Dr. Quain, F.R.S., London. Vice-Presidents: Professor W. T. Gairdner, Glasgow; Dr. Grainger Stewart, Edinburgh. Secretaries: Dr. Claud Muirhead, 7, Heriot-row, Edinburgh; Dr. Stephenson, 33, Buccleuch-street, Edinburgh.

Section B. Surgery.—President: Professor Lister, F.R.S. Edinburgh. Vice-Presidents: Professor Pirrie, Aberdeen; Professor Macleod, Glasgow. Secretaries: Thomas Annandale, Esq., Charlotte-square, Edinburgh; Dr. John Duncan, 8, Ainslie-place, Edinburgh.

Section C. Obstetric Medicine.—President: Dr. Matthews Duncan. Vice-Presidents: Dr. Keiller; Professor Simpson. Secretaries: Dr. Peel Ritchie, 16, Hill-street, Edinburgh; C. J. Cullingworth, Esq., 260, Oxford-street, Manchester.

Section D. Public Medicine.—President: Right Hon. Lyon Playfair, M.P., C.B., F.R.S. Vice-Presidents: Inspector-General Smart, M.D., C.B.; Dr. Arthur Mitchell. Secretaries: Dr. Andrew Smart, 24, Melville-street, Edinburgh; Dr. Fraser, Knutsford.

Section E. Psychology.—President: Dr. Lowe, F.R.S. Edinburgh; Vice-Presidents: Dr. Sibbald; Dr. Clouston. Secretaries: Dr. Brown, Royal Asylum, Edinburgh; Dr. Saundby, Saughton Hall, Edinburgh.

Section F. Physiology. — President: Professor Burdon-Sanderson, F.R.S. London. Vice-Presidents: Dr. McKendrick; Professor J. Dewar. Secretaries: Dr. Lauder Brunton, F.R.S., 23, Somerset-street, Portman-square, London; Dr. Caton, 18, Abercrombie-square, Liverpool; and Dr. Wm. Stirling, Physiological Laboratory, University of Edinburgh.

Honorary Local Secretaries: Dr. John Batty Tuke, 20, Charlotte-square, Edinburgh; John Chiene, Esq., 21, Ainslie-place, Edinburgh; Dr. J. G. McKendrick, 2, Chester-street, Edinburgh; Dr. J. Bishop, 28, Alva-street, Edinburgh.

Tuesday, August 3.—11 a.m.—Service in St. Giles's Church. Sermon by Rev. Dr. Alexander. 1 p.m.—Meeting of Committee of Council. 3 p.m.—Meeting of the Council, 1874-75. 3.30 p.m.—General Meeting—President's Address, Annual Report of Council, and other business. 9 p.m.—President's Reception in Assembly Rooms, Music Hall.

Wednesday, August 4.—9.30 a.m.—Meeting of Council, 1875-76. 11.30 a.m.—Second General Meeting. 11.30 a.m.—Address in Medicine. 2 p.m.—Sectional Meetings. 9 p.m.—*Conversazione* given by the Royal College of Physicians in the Industrial Museum.

Thursday, August 5.—9 a.m.—Meeting of the Committee of Council. 10 a.m.—Third General Meeting—Reports of Committees. 11 a.m.—Address in Surgery. 2 p.m.—Sectional Meetings. 6.30 p.m.—Public Dinner in Music Hall.

Friday, August 6.—10 a.m.—Address in Physiology. 11 a.m.—Sectional Meetings. 1.30 p.m.—Concluding General Meeting. 4 p.m.—Party in the Royal Botanic Gardens, given by the University of Edinburgh.

Saturday, August 7.—Excursions—Bass Rock, Melrose, Trossachs, Roslin, Dalmay Park, and Hopetoun House.

Arrangements for Addresses, Sections, Soirées, etc.—All in University Buildings.

President's Address—Tuesday, 3.30 p.m., Queen-street Hall, 6, Queen-street.

President's Reception—Assembly Rooms and Music Hall, George-street.

Addresses in Medicine, Surgery, and Physiology—Lecture Room in the Industrial Museum.

Conversazione, given by the Royal College of Physicians, will be held in the Industrial Museum.

University Garden Party—Botanical Gardens, Inverleith-row.

Rooms for Sections: A. Medicine—Mathematical Class-room. B. Surgery—Anatomy Class-room. C. Obstetric Medicine—Materia Medica Class-room. D. Public Medicine—Chemistry Class-room. E. Psychology—Hebrew Class-room. F. Physiology—Physiology Class-room.

Meetings of Council: Latin Class-room; Reception-room; Reading and Writing-room; Lower Library Hall: Editor and General Secretary's room; Court-room; Local Secretaries, Treasurer, and Editor of *Daily Journal* room; Professors' Reading-room; Annual Museum, Practical Chemistry Class-room.

In the Vestibule of the Library (all in University Buildings)—Post-office and Telegraph-office; Registration-office; Ticket-office; Cab-office; Inquiry-office.

Refreshment-room.—By permission of T. C. Archer, Esq., Director of the Industrial Museum, the Buffet and Refreshment-rooms attached to that institution will be open to members of the Association during the meeting. They can be reached either by the main entrance of the Industrial Museum, or (which will be more convenient for members) by a lobby communicating with the University Quadrangle. A moderate tariff has been arranged for Luncheons, etc. Lavatory, etc., adjoining Refreshment-rooms.

All places will be carefully placarded.

Gentlemen desirous of reading papers, cases, or other communications, are requested to forward the titles to the General Secretary, or to one of the Secretaries of the Section in which the paper is to be read. All papers should be forwarded to one of the above-named officers at as early a date as possible.

No paper must exceed twenty minutes in reading, and no subsequent speech must exceed ten minutes. Speeches at the General Meeting must not exceed ten minutes each.

Annual Museum.

The Eighth Annual Museum of the British Medical Association will be held in the Practical Chemistry Class-room in the University on August 3, 4, 5, and 6, 1875, and will be open from 10 a.m. to 6 p.m. The Committee appointed to take charge of the arrangements for this Museum will be glad to receive for exhibition—

1. Latest Inventions in Medical, Surgical, and Obstetrical Instruments and Appliances of all kinds.
2. New Drugs and their Preparations, and New Articles of Diet for Invalids.
3. General Pathological Specimens, with photographs, models, casts, drawings, etc., illustrating Disease.
4. Specimens and Preparations in connexion with Injuries and Diseases of Bones and Joints. (It is desired to make this a special feature in the Exhibition.)
5. New Physiological Apparatus.
6. Microscopes and Microscopic Specimens, Pathological and General; New Chemicals and other Appliances used in Histological Research.

The following is a list of the Museum Committee:—Professor Turner, Dr. Angus Macdonald, Dr. Argyll Robertson, Dr. John Wyllie, Dr. W. Gordon, Mr. Thomas Annandale, and Mr. A. B. Stirling. Dr. Charles E. Underhill, 8, Coates-crescent, and Dr. John Playfair, 25, Rutland-street, Hon. Secretaries. All communications to be addressed to the Hon. Secretaries.

FROM ABROAD.

International Medical Congresses.

In allusion to the fourth International Congress which is to be held at Brussels on September 19, the programme of which we have published, a correspondent in the *Berlin. Klin. Woch.* for June 28 makes some observations on these congresses in general, with which, we doubt not, most of our readers will agree. Incidentally, also, he throws out a hint to our medical authors, which we think well worth their consideration.

While wishing for the ensuing Congress a prosperous issue of their labours, he says that he cannot, judging from the experiences of former congresses, entertain any sanguine hopes on the subject. Although some of the questions for discussion are happily chosen, one can only feel surprise at the presence of others. Thus, how can it deal with such a subject as the inoculability of tubercle? Is a resolution upon it to be passed by a majority; or is the statement by the reporter, which possibly may be one-sided, and may overlook important labours on the subject, to be merely listened to and accepted? How can an assembly like this sit in judgment upon a purely scientific question? A single quiet observer, industriously pursuing his investigations at home, and carefully weighing the results obtained, is far more competent to deliver a judgment than a large and important assembly, only a very small minority

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which really understands the subject. For the determination of scientific questions, congresses are unsuited. As long as these are undecided, only laborious work will attain the desired end. A congress can advantageously have but two objects—either a common action in the framing of hygienic rules, especially for averting or combating threatened epidemics, as the cholera; or, the adoption of general rules for the carrying on of observations and investigations. Some of the subjects of this programme may be said to come within this scope, but it is doubtful whether any practical results will follow, as experience has shown that these have not attended the labours of former congresses. When they are even on the right course, these bodies do not possess the power or authority to carry their views into practice. In regard to epidemics, too, the governments of different states have had their own official international congresses, the deliberations of which serve as a basis for combined action.

Have we reason to expect that an international congress would prove of more utility in the second point—the establishment of scientific rules in common in the method of investigation? For example, if we look at the medical works of the English—even the most important of these,—we find the temperatures still given according to the Fahrenheit scale, so that any foreign reader is obliged to convert these into the scale of Celsius. All the rest of the scientific world is a matter of indifference to the English author, who scorns to give himself the trifling labour of conversion while writing his work, or of making his observations with a centigrade scale, leaving the trouble of doing this to all his numerous foreign readers. We really think the time has arrived when English scientific literature should dispense with the unscientific Fahrenheit scale, and many other things as well, and sacrifice its conservative disposition to the cause of progress. If authors and journalists would only resolve to make the calculations in each case,(a) much would be done; but the most important thing would really be to attack the matter at its root, and insist that in all scientific institutions the education should be so directed that every English practitioner (as is done in Germany, although Réaumur's thermometer is used in practical life) should acquire complete facility in the use of the centigrade scale. As long as this is not done, the English author will be always considered as only thinking of his own countrymen, and caring nothing for any others. No international congress has ever brought about even so small a reform as this; while ought we not expect at its hands rules for hearing-distances, and for the formation of an international pharmacopœia? With respect to this last, we first require that similar denominations of weights and measures should be employed in the scientific works of different countries, so that the inch and various kinds of feet, grains, minims, ounces, fluid-ounces, etc., may no longer torment the reader and set him on endless searchings. As long as such an obvious hindrance is allowed to persist, the idea of a general pharmacopœia is a mere phantom of the brain. To the differences in weights and measures of different countries, we have to add the obstacle of the language in which the pharmacopœia would have to be written. This, it would appear, could only be in Latin, but to this would be opposed those countries which suppose they have been contributing to progress by publishing their pharmacopœias translated; or are we to follow a certain French author, who, publishing it in his own language, dubbed his work as a "Formulaire International," under the pretext that French was actually the international language? Such being the difficulties, we might limit ourselves to insisting at least upon the composition of the different extracts, tinctures, ointments, etc., being identical in the various pharmacopœias; but here the differences in weights and measures offer such an obstacle, that it is doubtful whether even such a small portion of the undertaking as this could even be accomplished.

We can only repeat that international medical congresses meet no necessity, and cannot supply what is really wanted. Even an animated, instructive general discussion cannot be entered upon, for there is no international language in which it can be carried on. Oftentimes he who could speak most to the point is obliged to be silent, owing to his not being sufficiently acquainted with the language of the country; and here is the great gap which separates these congresses from the meetings of national scientific associations. In the latter, free discussion supplies the stimulus which calls forth all who have anything new or instructive to communicate. Everyone offers the best that he has, the only aims of these assemblies being the progress of science, and the furtherance of good-fellowship. The international congress has higher aims, aspiring to become a law-giver; but, unfortunately, fails, either often for want of a scientific basis, or from want of executive power to carry out its resolutions. The best thing that could happen, if the congress has the courage for self-destruction, would be to determine that this fourth congress shall be the last of the series.

(a) We would suggest that English authors, while giving the temperatures according to Fahrenheit, should always place the equivalent centigrades in a parenthesis. Not only would this obviate what must be considered a great annoyance to foreign readers, but it would accustom the English reader to the conversion of the centigrade, and hasten the substitution of this for our at present insular procedure.—*Translator.*

Chloral in Sea-Sickness.

In a communication to the *Archives de Médecine Navale* for June, Dr. Obet, who has been four years engaged on board the vessels of the Transatlantic Paquebot Company, plying between Havre and New York, states that of all the numerous remedies which he has tried upon passengers suffering from "naupathie" or sea-sickness, chloral, recently recommended by M. Giraldès, is by far the best, and is indeed very efficacious. Bromide of potassium, which, before the introduction of chloral, was the substance that did most good, is far too slow in its effects, and requires to be given in too large doses before any marked effect is produced, while the quantity of water necessary to enable it to be swallowed forms a serious obstacle to its employment in this affection. Chloral, on the contrary, given in the form of syrup, in a dose of from 1 to 1½ or 2 grammes, procures a calm and tranquil sleep, on awakening from which the patient finds himself, if not completely cured, at least in a state of relative comfort. On the first day of the voyage, this sleep should be at once secured by giving the patient 1 gramme (15 grains) at a single dose, and the following days 1½ or 2 grammes may be given during the day, by taking a spoonful of the syrup every hour. As a general rule under this plan, in two or three days the sick passengers have become accustomed to the sea, and are even able to take their meals at the table. The chloral, to be useful, must always be free from all alteration, and from the action of humidity. When it has not been kept in a very dry place, so that it has become somewhat deliquescent, in place of the calm sleep so much desired, it may produce nervous irritation, sometimes of great violence. In pregnant women, several of whom the author has had in charge, this medicine also furnishes excellent results. He has not found voyaging by sea exercise any effect upon the progress of pregnancy, even violent sea-sickness not having induced either hæmorrhage or premature labour. Still, voyages exert a special effect on the uterus, for under their influence there is always produced a premature return of the menses, and, in feeble women, the discharge may be sufficiently great to call for medical intervention. Constipation, which is the usual accompaniment of sea-voyages, should be most carefully obviated in the subjects of sea-sickness. Moral treatment, too, especially for women, is of great consequence, for no one can be more demoralised than the subject of sea-sickness. Chloral acts here admirably, by reason of the refreshing sleep which it procures; and the presence of the medical man greatly encourages the patient in his efforts against the state of depression that prevails. He should be encouraged, whenever possible, to come on deck to inhale the fresh air and escape the abominable smells of the cabin. The subjects of sea-sickness usually complain of insatiable thirst, and many take an immense number of lumps of ice to relieve it, but at the end of thirty-six or forty-eight hours this immoderate use of it gives rise to violent irritation of the stomach, to which is added the sensation of a hot iron passed along the œsophagus. Others prefer iced lemonade, of which they drink glass after glass, rejecting it by vomiting immediately afterwards. Brandy or whisky is the favourite drink among the American passengers. But of all such liquids iced champagne is the best, taken in tablespoonfuls every ten or fifteen minutes. In these small quantities it is easily borne, and acts beneficially. With respect to food, the patient should be left much to his own tastes—underdone and broiled meat being, however, preferable when he can eat such. He should not be restricted to fixed hours of meals; and although on the boats the table is served five times a day, the intervals are still too long for him. It is preferable to follow Dr. Brown-Séquard's mode of treating dyspepsia with obstinate vomiting, the patient taking every quarter- or half-hour one or two mouthfuls of bread and meat, or other food, with a little iced champagne.

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REVIEWS.

The Commercial Handbook of Chemical Analysis. By A. Normandy. New edition, enlarged, and to a great extent rewritten by Henry M. Noad, Ph.D., F.R.S. Lockwood and Co.

The previous (second) edition of Normandy's Handbook long enjoyed a considerable and deservedly high reputation among commercial analysts, but has of late become somewhat out of date. There was, consequently, an urgent demand for a new edition, and this was stimulated by the impetus given to certain kinds of commercial analysis by the Adulteration Act of 1872 coming into force. Indeed, the want of a good manual of analysis of food, drink, and drugs has been much felt; for, till recently, the chemistry of the existing manuals was decidedly below par. We have, therefore, perused Dr. Noad's edition of the late Dr. Normandy's manual with a good deal of interest.

The subjects are treated in alphabetical order, and we note that Dr. Noad has very carefully followed the lines laid down by his predecessor, but has supplemented the work by the addition of several articles describing new analytical processes —in some cases to the exclusion of those given in the previous edition; and, very properly, the sources whence new matter is taken are acknowledged. Most frequently, indeed, the processes are copied *verbatim* from the original papers, and are thus given on the authority of their devisers. In this way the articles on Bread, Butter, Wine, Milk, Water, Tea, and several others, have been enriched with new matter by Tidy, Campbell Brown, Thudichum, Griffin, Voelcker, Wanklyn, Chapman, Allen, etc.

This method of treatment has some advantages, but we imagine that the new processes laid down are not, as a rule, those which have commended themselves to practical analysts by their trustworthiness and simplicity, but are sometimes those which experience has proved to be unreliable, valueless, or inappropriate. It is almost impossible for an editor to hit upon the best processes without he himself has tested their value in the actual working. Thus, we find under the article "Bread" a process for the estimation of alum, given on the authority of Dr. Tidy, which cannot possibly lead to accurate results, whilst the excellent process of Dr. Dupré, now pretty generally adopted, is unaccountably omitted. Under "Butter" we find Dr. Campbell Brown's scheme for the examination of butter given *in extenso*, although its adoption has led to lamentable results; and we find no mention of the process of Angell and Hehner for the determination of the fixed fatty acids. Under the head of "Milk," also, we find a cumbersome process of analysis given, whilst more modern, simpler, and better processes are excluded. Very singularly, no means are described for the estimation of the percentage of admixture of chicory with coffee.

Notwithstanding these defects, the volume before us is a useful and, on the whole, reliable manual, and its publication will be welcomed by medical officers of health and public analysts, as well as by all who have to do with technical analyses. The editor has in most respects done his work well, and has called in able assistance for special articles. It is not to be expected that in a closely printed volume of 480 pages no errors could be detected. We are, however, surprised to find, under the heading "adulteration of beer," that the clauses of the statutes 56 Geo. III., cap. 58, and 1 Will. IV., cap. 51, are quoted, which relate to the use of certain substances which are to be deemed adulterants, whilst no mention is made of the fact that, by the 10th Vict., cap. 5, and 25th Vict., cap. 22, the forbidding clauses of the former statutes are repealed, so far as relates to sugar, under certain restrictions, and to hops.

We may add, by way of further recommendation, that the volume is got up in a neat and handy form.

A Manual of Hygiene, Public and Private, and Compendium of Sanitary Laws. By Charles A. Cameron, Ph.D., M.D., F.R.C.S.I. Dublin and London. 1874.

Manuals of hygiene have appeared in considerable number during the last few years, and an impetus has been given to this class of literature by the passing of the Public Health Act of 1872. Previously it was difficult to obtain from any work full instructions as to the course to be pursued by a medical officer of health in the discharge of his duties; but now there is an abundance of fairly reliable manuals on this subject. Indeed it may be fairly asked, Is there a *raison d'être* for another handbook of hygiene?

We think that a satisfactory answer to this question may be given. Dr. Cameron's work is not offered as a complete treatise on sanitary science and political medicine, but is intended to contain information in relation to public hygiene sufficient for the requirements of the majority of health officers, and is professedly written for the use of both professional and non-professional persons. Other handbooks are intended for professional men alone. Moreover, the book before us has special reference to the duties of Irish medical officers of health, and the selected statutes, which are printed *in extenso*, are those which relate to Ireland more especially.

The author gives us a closely printed octavo of 475 pages, and nearly every page is replete with valuable and instructive matter. It is not to be expected that all the twenty-six chapters into which the work is divided should be of equal worth. We note as especially valuable those portions of the book which treat of matters involving chemical points. It is here that Dr. Cameron is thoroughly at home; and his position as Analyst for the City of Dublin, where the Adulteration Acts have been rigorously enforced for some years past in a way that would strike terror into the hearts of our English tradesmen, has given him almost unrivalled practical knowledge of the details of sanitary chemistry. No less than five chapters, extending over fifty pages, are devoted to the consideration of water-supplies, the composition and examination of waters, their purification and softening, bad water as a cause and carrier of disease, and the quality of the water used in Irish towns. These chapters might be perused with advantage, not only by medical officers of health, but also by all those chemists who are interested in water-supply; and they will here find a vast mass of novel and useful information. The subject of adulteration of food and drink is briefly but carefully treated of, whilst the special chapter on diseased and unsound food is evidently the work of one who has a practical knowledge of his subject.

The chapter on Contagion is necessarily of a somewhat theoretical character. It contains a fair summary of the views advanced up to about the period when Dr. Burdon-Sanderson's report on microzymes was published in the Reports of the Medical Officer of the Privy Council; but the more recent Continental researches on this interesting subject are not noticed. The average medical officer of health is perhaps more interested in the practical preventive aspects of the matter than in discussions as to the exact pathological changes involved in contagion; but, like most systematic writers on the subject of hygiene, Dr. Cameron has little to tell us with regard to this point.

Though the work lacks condensation and compactness, and is too apt to run into mere statements of the opposing views held on various sanitary questions, it forms, on the whole, a valuable treatise, and is a real addition to our not overstocked sanitary literature. The author has not followed the old lines of other systematic writers, but his work displays a good deal of originality. Dr. Cameron deserves the thanks of his professional brethren—more especially those who live in the sister island—for the manner in which he has fulfilled his task.

A Practical Treatise upon Eczema, including its Lichenous and Impetiginous Forms. By Dr. McCall Anderson, Professor of Clinical Medicine in the University of Glasgow; Physician to the Royal Infirmary, to the Dispensary for Skin Diseases, and to the Cutaneous Wards of the Western Infirmary, Glasgow, etc. Third edition. Pp. 208. London: J. and A. Churchill.

We do but call attention to this valuable work on skin disease by Dr. McCall Anderson, now in its third edition. Its ideas are of the broadest and widest, using the word "eczema" in what we cannot help thinking its proper sense. As a teaching-book it is excellent. Dr. Anderson is to be congratulated on the wider scope the cutaneous wards of the new Infirmary give him for the advancement of such work.

A Practical Description of every Form of Medico-Electric Apparatus in Modern Use; with Plain Directions for Mounting, Charging, and Working, etc. By Salt and Sons, Anatomical Mechanicians to H.R.H. the Prince of Wales, Birmingham, etc. Pp. 66. London: J. and A. Churchill.

The practitioner will find this the very kind of book or booklet —for it only costs half a crown—which he wants. Many a

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time have we gone into a country, not to say metropolitan, dispensary, and have found the eagerly purchased electric apparatus in disorder. The reason is but too apparent—the batteries are dirty, worked out, and want to be cleaned or removed; the connexions have been broken, or are interfered with by dirt; the whole thing wants doing up. We cannot always stop to show what is wrong, still less show how that is to be remedied; but we think we can fairly say—Buy Salt's little book on the subject.

Clinical Remarks on Diseases Peculiar to Women. By Lombe Atthill, M.D. Dub., President of the Dublin Obstetrical Society, and Obstetric Physician to the Adelaide Hospital, Dublin. Third edition. Dublin: Fannin. Pp. 294.

This little volume, the product of Dr. Atthill's pen, is already in a third edition. It is a capital little work, well worthy of general perusal; and if any word of commendation of ours can do it good it amply deserves it.

GENERAL CORRESPONDENCE.

CROTON-CHLORAL HYDRATE.

Letter from Mr. J. J. Trayer.

[To the Editor of the Medical Times and Gazette.]

Sir,—In estimating the value of any new medicine it is important to compare the results reported by experimenters practising under all possible varieties of circumstances. You may perhaps consider the three following cases, from the practice of a country doctor, worthy of insertion as a contribution *ad hoc*:—

Case 1.—Mrs. T., a young married woman, at an early period of her first pregnancy is threatened with abortion. Pains quickly relieved by chloral hydrate, with bromide of potash, of each ten-grain doses; but each day brings a return at about the same hour if the medicine is not continuously used. The croton-chloral is now tried as an antiperiodic in three-grain doses, at intervals of half an hour for three doses; one or two doses of chloral at night to secure sleep. Result: A complete and speedy cessation of all the threatening symptoms.

Case 2.—A little girl, B. C., aged four, threatened with acute hydrocephalus (an elder sister I had lost, and the death of several first cousins had been reported to me, by the same disease), while under treatment is seized with a most distressing night-cough, simulating pertussis, but without the characteristic whoop. I prescribed two-grain doses to be repeated at short intervals for three doses at bedtime, and again between 3 and 4 a.m—the times of greatest distress. In a few days I had the satisfaction of obtaining complete relief from this distressing complication (or consequence?) of the head affection, with very marked improvement of my little patient's general health.

Case 3.—Mrs. C., mother of a large family, a sufferer from dyspepsia in a very severe degree, and one who will not pursue any systematic treatment, is at times subject to most intensely painful neuralgic dyspepsia (if I may be permitted the expression). This comes on for several successive mornings with clock-like punctuality, and seems quite independent of food. I prescribed three-grain doses to be taken at intervals of half an hour on the recurrence of the pain, to be repeated for three times, if required, each day. The first dose relieved, the second removed the pain, and on subsequent days one dose only was required. This lady is a most unwilling witness, one of those who prefer growling at the doctor and medicine to either following directions with any sort of system, or giving credit to treatment for relief.

These three cases were all in private practice, and though the number is small they seem to myself to justify the following deductions:—1. Croton-chloral given with care is a safe medicine. 2. It is one of considerable value in cases of neuralgia or presenting a neuralgic periodicity. 3. It did not appear to me to possess hypnotic powers of any importance, but to be simply what our Western cousins call a "pain-killer."

I am sorry it did not occur to me in the first case to combine the two chlorals, but I venture to suggest such a proceeding to those who have more frequent opportunities of treating analogous cases, and book it for my own use on the first suitable occasion. I am, &c.,

Jas. J. Trayer, M.B.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 7.

W. O. Priestley, M.D., F.R.C.P., President, in the Chair.

Adjourned Debate on the Relation of Puerperal Fever to the Infective Diseases and Pyæmia.

(*Continued from page* 109.)

Mr. Spencer Wells: The great difficulty I have in replying to-night in the few minutes that remain before the end of the discussion consists principally in the great number of speeches that have been made, and the extremely numerous and important topics which have been suggested by different speakers. But I think I may congratulate the Society upon the very great importance of the discussion that has been carried on, and upon the very great ability which has been shown by a great number of gentlemen who have addressed us, and by none more so than by our friend from the other side of the Atlantic, to whom we have all listened with so much pleasure and instruction to-night. I will, with your permission, while what our friend has said is fresh in our minds, refer to two or three topics which he has raised, inasmuch as that will perhaps prevent the necessity of a good deal of repetition in discussing the first three questions which were placed before the Society in the little programme by which I endeavoured to give a direction to the thoughts of gentlemen who were going to speak. There was really nothing in those questions intended, in the way that Dr. Farre supposed, to lead to any very definite conclusion, or to any kind of suggestion that I myself had formed any decided or positive opinion upon them; it was more with the hope that different gentlemen would take up the different questions according as their opportunities gave them means of information, and would bring before us the results of their own individual experience upon these different questions. Dr. Barker at once started the question by his statement that we must, as he says, from identity of cause presume identity of result; or, at any rate, that if we have a specific morbid poison to deal with, that specific morbid poison always produces the same results; or, as I think I understood him to say, that you might, from the same specific morbid poison, get very different results in different women under different conditions. For instance, given a morbid poison, and that morbid poison received by a healthy woman, it would produce in her a very different condition from what it would produce if received by a puerperal woman, and by the puerperal woman if she be in an unhealthy condition at the time. I do not know that I exactly interpreted his meaning; but, if I did, I should like to say that I would go somewhat beyond that, and assert that, if you have a specific morbid poison, it must, under all conditions, produce identity of results. I do not believe, if you inoculate small-pox in a patient, that you can produce a chancre; I do not believe, if you inoculate a chancre in a patient, you can produce hydrophobia; I believe you as certainly produce identity of result from identity of cause in the animal body as you do in the vegetable. If you sow a grain at the proper season in a fruitful soil, the seed will germinate; if you sow a grain of wheat, you do not get barley or oats. The seed germinates, and you get the same variety of vegetable produce. It is the same, I believe, with animal poisons. If you sow a seed of hydrophobia, or a seed of syphilis, or a seed of small-pox in a patient, you get a crop of small-pox, a crop of syphilis, a crop of vaccine, or a crop of erysipelas, according to the poison you have sown. It is the same with medicine. If you give a dose of castor oil, you do not send the patient to sleep; if you give a dose of opium, you do not produce purging. All these poisons produce the same result. So with puerperal fever. If you suppose that in puerperal fever you have a specific disease different from any other fever, or from any other condition which we meet with in surgical or medical practice, you must show us some cause which will, under all conditions, produce that disease just as certainly as you produce small-pox by inoculating small-pox, or scarlatina by exposing a patient to the poison of scarlatina. That carries me to the question which Dr. West started, as to what share bacteria or some other form of vegetable or animal life in its lowest form may have in producing these diseases, or

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carrying the poisons that produce them. I agree with Dr. West, that we are only on the threshold of this inquiry, and the question which I put before the Society was simply—What relation have bacteria and allied organic forms to the pyæmic process in the puerperal state; in other words, to puerperal fever? I put that question in hopes that Dr. Burdon-Sanderson or some other gentlemen, who have lately made important investigations on this subject, who have investigated the subject of splenic fever, sheep-pox, relapsing fever, diphtheria, and erysipelas, would have come here and given us the benefit of their experience. The great use of this discussion has been, that it has brought here not only the ordinary Fellows of the Society, but others from distant parts: a professor from Glasgow, whose candour and ability excited universal admiration amongst us, and a hope that some day he may occupy a still more important position than that which he now fills so creditably; some of our past presidents, and several of our honorary Fellows and gentlemen from the provinces practising obstetrics very largely. It has also brought a visitor equally distinguished as physician and physiologist, and another who is among us to-night, and who I was in hopes would have spoken, who has done more perhaps to prevent disease in the country than any other man—Dr. William Farr, who, by making known the spread of diseases, and showing their causes, has done more perhaps to check preventable disease than anyone else. I hope that, at some future time, he will favour the Society with some statistical account of the prevalence of this fever in different localities. We have been favoured by a promise from Dr. Farr of another paper on the subject, so that, at any rate, the discussion has not been fruitless in good to the Society, and I trust that it will be beneficial to the profession at large. We have been favoured by Dr. Farr with an account of a recent epidemic of puerperal fever in the district in the South of London. In the printed return of deaths for the week ending June 19 it was stated that the cause of death in three cases was given as peritonitis and fever, which were presumably cases of childbed fever. There were three cases in that week and one in the preceding week, which it was found, on investigation, were all attended by one medical man. Between the first case and the other three, he attended two cases without a fatal result, so that the first case was probably the cause. It has not yet been quite ascertained how the first case began, whether it was a case of ordinary peritonitis or not. The investigation is still being carried on. Scarlatina is still prevalent in the district; in the same week there were nine or ten deaths registered. An interesting question arises, and is being investigated, whether the two women who escaped from childbed fever between the first and third cases by this gentlemen were protected by previous attacks of scarlatina. That is a most important matter; it is still being investigated, and I hope Dr. Farr will let us know the results. I have one or two letters here, showing the very close connexion of scarlatina with puerperal fever, which it will perhaps be interesting to the Society to read. One is from Dr. Jackson, of Notting-hill. He gives the particulars of a case that occurred in September, 1864. "The husband, about thirty, had a severe attack of scarlet fever, from which he recovered. The wife, who had some years previously had the fever, and who was in the end of her eighth month of pregnancy, waited upon and attended her husband day and night. In about fourteen days from the date of her husband's illness she began to feel ill, shivering and feverish, but had neither sore throat nor eruption. Labour suddenly and sharply set in. The child was born alive, well developed, and strong, but covered with the distinct and characteristic scarlatina rash. From birth it was restless and uneasy, and died on the third day. The mother progressed most satisfactorily, and feverish symptoms abated. Milk and lochia were well established. Some slight, apparently dyspeptic, symptoms were complained of at the end of a fortnight, but these gradually disappeared. The cuticle on both hands desquamated. At the end of the fifth week she was quite well, and left town for the country." I have several other letters giving instances of the close connexion, which Dr. Barker has alluded to, between erysipelas and puerperal fever. One is a letter from Mr. Freer, of Stourbridge—"Some years since, I left home for a few days' holiday, leaving two patients expecting their confinements. The evening before I started, my father was thrown from his horse upon the forearm and right olecranon. The next morning the arm was red and swollen. Two days afterwards, he attended both my patients, who had very natural labours, not requiring any assistance, and my father was not half an hour with either of them. Upon my return on the fifth day, I found both my patients dying, and my father's arm so much inflamed that I had to make incisions from the elbow to the wrist. Each case had rigors in twenty-four hours. Two years since I was engaged to attend the wife of a clergyman in her first confinement—a very fine healthy lady, aged twenty-six. Upon entering the bedroom, I found a nurse in attendance with an erysipelatous blush and swelling upon the side of the face. Upon inquiry, she told me that, two days before, she had been in a Liverpool hospital to have the nasal duct opened. My patient was seized with rigors at the end of thirty hours, and died of puerperal fever on the eighth day. The nurse died of rapid erysipelas of the head and neck on the twelfth day." I have also a letter from Mr. Pemberton, of Banbury, which I need not read through. It goes to show that, in a house where there is typhoid fever, a woman being confined may get puerperal fever; but then I do not think at all that it follows from that that the cause was the same. You may from drains get a variety of poisons, a variety of chemical and organic products thrown out, and one patient may get one and another another. You may get sulphuretted hydrogen, phosphoretted hydrogen, and a variety of chemical substances and vegetable or animal organisms of a low form, and one may affect one patient and another another. Showing how this bears upon surgical practice, and somewhat in answer to the question which Dr. Playfair started, I will read a letter from Dr. Keith, of Edinburgh, giving me an account of a most remarkable series of cases in which erysipelas with the puerperal fever and septicæmia after ovariotomy, seem to have been in close association. "Not many years ago, on May 19, my friend, who assists me at my operations, became uneasy for the first time about a puerperal case. The patient died on the 26th. On the 24th, he helped me at an ovariotomy, but did not see his puerperal patient till after the operation. Next morning, my patient was in a typhoid state; had bad bedsores, all sorts of eruptions, and superficial abscesses. She recovered after this pyæmic condition had lasted a month, and had no suppuration in the pelvis. On the 30th, he assisted me at a tedious ovariotomy. The patient was quite well for six days; pulse and temperature were natural. She then suddenly shivered; the pulse rose to 170 and the temperature to 106° within a few hours, and she died five days after. On the same day (the 30th), he opened a small superficial abscess in a lady's neck. She went, after this, to the country; was quite well for five days, then shivered, and died five or six days after of erysipelas of the head. On June 6, he attended a simple case of natural labour in a healthy woman. She shivered the next day, and died on the 10th, of septicæmia. As he went home from this confinement he himself shivered, and was laid up with erysipelas of the face, from which he recovered. The medical man who attended the last puerperal case during the few days she lived examined for an instant a patient in the first stage of labour four days after the death of the last case, but declined to attend her. This patient had metritis, and is now recovering, the veins of the left limb being all plugged up." I have seen this kind of thing myself in surgical practice, and it has led me to be extremely careful in getting each gentleman who attends the operations at the Samaritan Hospital to sign a paper before going into the room that he has not attended an infectious case for seven days, and has not attended a post-mortem examination during that time. I believe that a precaution of this sort would really very much protect puerperal women from many of the infectious diseases to which they are subject, and which, I believe, are, as scarlet fever, or as measles, or as small-pox, or as erysipelas, confounded together under the name of puerperal fever. I hope the end of this discussion will be to give more accurate names to the different conditions which have been confounded together under that one name. I should like to say a single word as to the great question of what is called homicide by infection, and the attempt that has been made, I think unfortunately, to enlist the sympathies of this Society in the protection of careless and ignorant women, who deserve the punishment they have got. I think, if a woman be cautioned by her medical man, who tells her that she has attended a woman in her confinement who has died of puerperal fever, and that, if she attend other women, she is liable to poison them, and if she go on, in defiance of this caution, to attend other women, and says, "Well, if this one die, I will give up," such a woman is not deserving of the sympathy or help of the Society. I think we should do good service if we rather stimulated the Fellows of the

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Society, and the midwives that they employ, not to carelessness, but to additional caution, teaching them not only to wash their hands, but to use disinfectants, and, above all things, to avoid any possibility of doing damage to the patients who employ them. Only this day I heard of a case which shows that a practitioner would do well to err on the side of over-caution. I was asking about a gentleman, whom I knew some twenty years ago, who had settled down in practice in a large town. He was an able man, a gentleman in every sense of the word, a person of good character and great ability. I was told that he did not get on. I asked why, and it appeared that, in early life in that town, he was introduced to two families. He attended a lady in one of those families, who died of puerperal fever through no fault of his. He attended another lady shortly afterwards, and the people blamed him, and said that, having attended one woman with puerperal fever, he ought not to have attended a second, and he never got over it. I will not say that he deserved his fate; but certainly, if he had shown a little more caution, he would have proved the truth of the old maxim, that "honesty is the best policy." I believe the Fellows of the Society will do great good, not only to themselves, but to all whom they influence, if they inculcate, not carelessness, not protection of ignorant midwives, but instruction to those midwives that they must be over-cautious, and that, if they find themselves in danger of propagating or carrying about disease, they must err on the safe side, and say, "For a time I will give up practice; I will not run the risk of damaging the patient who has entrusted her life to my care."

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, MAY 25.

Sir JAMES PAGET, Bart., F.R.S., D.C.L., LL.D., President, in the Chair.

NASAL LUPUS.

MR. GAY read a paper on the above subject. His object was to show that lupus exedens is a topically malignant form of ulceration, and that the alleged cures of this affection by constitutional means are probably due either to errors in diagnosis, or the inclusion under the generic term "lupus" of forms of disease with which typically it has no natural affinity or alliance. From the ulcers for which, from its objective features, it is most likely to be misapprehended, viz., epithelioma and rodent ulcer, it may be clearly distinguished (*a*) by the periods of life at which these diseases are most prone respectively to attack individuals; (*b*) by their several histological features; (*c*) by some certain dissimilarity in their objective symptoms; and (*d*) by the test of systemic contamination, as indicated by ganglionic infection. Bearing on the practical point in the paper, which is its curability by excision, the question of its systemic complication is of the first importance, and in this respect the author infers, from the results of his experience of the knife as a remedy, as from his observations on the idiosyncrasy of persons affected with lupus, that it is, like rodent ulcer, as shown by Mr. Hulke's investigations, essentially a local disease. It may, and certainly does, occur in persons with some of the ordinary general systemic indications of struma, but not, so far as the author has observed, with those of strumous joints or glands. The conclusion to which dermatologists have come with regard to the influence of systemic remedies is favourable to this view of its essential character, for they have been compelled consistently to deny to drugs any therapeutic influence over an established lupoid sore. The only principle upon which it can be successfully treated is that of eradication by topical means. Caustics, however, have repeatedly failed, apparently from a want of definite aim in using them. There has been no clear mode laid down of ascertaining the depth to which the virus of lupus has penetrated from its ulcer-surface; consequently, the amount of tissue that has to be destroyed in order to insure its perfect eradication has been a matter of conjecture. The author believes that the limits of the poisoned tissue may be satisfactorily determined, and that these are not so wide as to be beyond the reach of the destructive powers of caustic potash. The objection to this agent, however, and the pre-eminent favour in which the author is disposed to hold excision, arise from the fact that in nasal lupus, especially in which disfigurement follows in the event of its being removed by caustic, cicatrisation, or an advance towards it, must be allowed to take place before any restorative operation of a plastic kind can be done—one of the most important objects in the treatment of cases of this kind. If the removal of the diseased parts be made by the knife, any such operation that may be deemed expedient may be simultaneously done; and thus tissue is saved, the loss of which would be incumbent on the use of caustic. Cases were cited illustrative of the mode of treatment which the author recommends.

MR. MARSHALL agreed with Mr. Gay that it was necessary to destroy the tissues surrounding the ulcer. He found the use of the galvanic écraseur best.

MR. GAY preferred the knife in such operations.

DOUBLE FACIAL PALSY, WITH LOSS OF TASTE IN THE FORE PART OF THE TONGUE.

DR. ROBERT MCDONNELL read a paper giving a detailed account of a case of complete paralysis of the portio dura of the seventh pair of nerves in an otherwise healthy young man of twenty-four years of age, occurring on both sides. There was no evidence of any central lesion of the brain, nor were any other cerebral nerves engaged. There was complete loss of the sense of taste in the fore part of the tongue, which the author attributed to paralysis of the chorda tympani. Tactile and thermic impressions were perceived in the fore part of the tongue quite as distinctly as in healthy persons. In conclusion, the author compared his case with one recorded by Dr. Althaus in vol. liii. of the *Medico-Chirurgical Transactions*, in which there was paralysis of the fifth pair on both sides, and in which the sense of touch in the tongue was lost, that of taste persisting.

ON THE SO-CALLED DISLOCATION OF THE HUMERUS.

MR. GEO. G. GASCOYEN communicated a paper on this subject, by MR. EDMUND OWEN. The author endeavoured to show, by the aid of four recent dissections, that the cases which have been recorded as examples of true partial dislocation of the humerus are due to the effects of disease rather than of accident. The case instanced by Sir Astley Cooper, in his treatise on Fractures and Dislocations, and that described by Mr. John Soden in the *Transactions* of this Society, vol. xxv. (1841)—which have hitherto been considered as evidence that this form of displacement may result from injury—were specially referred to as lending support to the opinion advanced by the writer.

MR. GASCOYEN had examined Mr. Owen's specimens, and certainly there were signs of disease. He had long doubted the possibility of partial dislocation upwards.

MR. GAY was disposed to think that the morbid changes might follow the dislocation. He had seen with Mr. Hutchinson a case where there was clear displacement upwards and forwards. A bandage was applied, and when seen some time afterwards it was much better.

MR. HOWARD MARSH said no doubt some of the cases were chronic rheumatic arthritis, but he also thought dislocation might occur. The bone might be held up by displacement of the long bend of the biceps.

MR. OWEN, in reply, said in some of the specimens described the tendon of the long head had been torn through.

CONGENITAL DEFICIENCY OF THE PERITONEUM RESULTING IN INTESTINAL OBSTRUCTION, AND SIMULATING AN ABDOMINAL TUMOUR.

A paper was read on the above subject by MR. LAWSON TAIT. The author said that on January 21 of this year he saw Miss M., in consultation with Dr. Hickinbotham and Mr. Pugh of Nechells. She had been suffering for three weeks from severe symptoms of intestinal obstruction, for which no treatment gave any effectual relief. At no time had there been any symptoms of peritonitis. She was thin and of small size; the temperature was normal, and the pulse little over a hundred. There was obstinate vomiting, and slight headache. A small tumour in the rectum was diagnosed as an ovarian cyst, which could have no influence in the production of the obstruction. A tumour existed in the left hypochondriac and lumbar regions, about the size and shape of a large lemon. It seemed to fluctuate obscurely. It was dull on percussion, and could not be moved freely. The patient died unrelieved on the 24th, and in the evening of the same day Mr. Pugh made a post-mortem examination in the presence of Dr. Hickinbotham and myself. The note of the condition of the parts has the concurrence of all three. On

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making the usual median incision it was found that there was no appearance of an abdominal cavity, the tissue of the anterior wall seeming to run on to the stomach and small intestines, and these latter lay matted together, looking exactly like the convolutions of the brain, only they were not covered with any glistening membrane. The coils were readily separable, and their union was due to an abundance of ordinary areolar tissue identical with what is seen on separating fresh muscles by tearing. Nowhere was there any trace of inflammatory action, as everywhere the loose extensile tissue prevailed. The tumour in the left lumbar region was found to be composed of a number of knuckles of intestine, which were occupied by numerous nodules of hard fæces. The inability of the intestines to move these masses onward seemed to constitute the whole cause of the obstruction, as we found no actual constriction of the tube. In the pelvis, none of the usual peritoneal limitations existed, so that it was impossible to identify the organs *in situ*, and it was only after very considerable dissection that the tumour which had been diagnosed as ovarian was found to be really so. The menstrual history of this patient was marked by no great abnormality, and there was no history of any peritonitis.

OBITUARY.

SIR CHARLES LOCOCK, Bart., M.D., D.C.L., F.R.S., etc.

On Friday, July 23, died at Binstead Lodge, Ryde, Sir Charles Locock, Bart., M.D. So long had he held the foremost position in his own department of professional work, that it is with some surprise we learn that he was born in 1799, and had not attained to more than seventy-six years of age. He was born at Northampton, in the year just mentioned, and was son of Mr. Henry Locock, by Susannah, daughter of the Rev. E. Smyth, of Great Lynford, Buckinghamshire. He received his professional education at Edinburgh, where he became M.D. in 1821, and soon migrated to London. We next hear of him as lecturing on Midwifery at St. Thomas's Hospital, and holding the appointment of Physician-Accoucheur to the General Lying-in Hospital, York-road, Lambeth. This is a post which generally leads to large and lucrative obstetric practice, and Dr. Locock seems to have succeeded to the position which was held by Denman, Clarke, and Gooch in succession. He has not left any very notable contributions to the literature of the profession, except some essays on obstetric subjects, published in 1834 in the "Cyclopædia of Practical Medicine" edited by Forbes, Tweedie, and Conolly, and to the "Library of Practical Medicine," published soon afterwards. He was made a Licentiate of the Royal College of Physicians in 1823, and a Fellow in 1836, and as his eminence in obstetric practice was incontestable, he was chosen to be first Physician-Accoucheur to the Queen in 1840, and attended her Majesty at the birth of each of her nine successive children. Professional and public honours were now heaped upon him; he was made D.C.L. of Oxford, and Fellow of the Royal Society in 1864. He was President of the Royal Medical and Chirurgical Society in 1857; and this was as much indicative of a high place in the opinion of the profession, as the baronetcy which was conferred on him the same year was of public repute. On the establishment of the Obstetrical Society he was elected Honorary President.

If Sir Charles Locock made no important additions to the literature of medicine, his influence was abundantly felt by those who came into contact with him in professional life. As a practitioner, he formed and enunciated his views of the nature of each case with unmistakable clearness and decision; his remedies were direct and simple; and his whole manner was that of a man who feels just confidence in himself, and inspires it in others. His experience in the class of maladies to which he particularly devoted himself was enormous, and his prognosis was usually justified by the event. He was a plain-speaking, thoroughly independent man, whose advice was sought in all kinds of contingencies by a large number of persons of the highest rank, who appreciated his shrewdness and good sense. As a *raconteur* he was unrivalled; his stories were of the raciest, and his aptitude at retort unsurpassed. His great repute had induced certain vendors of quack medicine to advertise cough lozenges under the title of "Locock's Pulmonic Wafers," or "Locock's Cough Lozenges." This, of course, caused him some annoyance. One morning he met the Duke of Wellington in Hyde-park, who said, "Locock, I have a bad headache from taking your damned lozenges." "Well," said Sir Charles, "I might as well say that I am lamed by wearing your damned boots, for I wear Wellington boots." But it was not only the vivacity and anecdote, seasoned with copious pinches of snuff, nor yet the unfailing store of experience whence he could draw material for comfort and precedents of treatment, so much as a conviction of his unflagging kindness, and gentleness, and consideration, which endeared him to a large circle of the highest rank. He was particularly esteemed by the Queen, to whom he was a valued and confidential friend; and her Majesty visited him in his illness, and expressed her grief at his loss in a few touching words.

We may add what appears in the *Morning Post*—viz., that "Sir Charles married in 1826 Amelia, youngest daughter of Mr. John Lewis, of Southampton-place, Euston-square, by which lady, who died in 1867, he leaves issue five sons—namely, Charles Brodie Locock, M.A., barrister-at-law, born in 1827, and educated at Trinity College, Cambridge, was called to the Bar of Lincoln's-inn in 1853, married in 1859 to Fanny Bird, daughter of the Rev. Thomas Pitman, vicar of Eastbourne; Alfred Henry, M.A., in holy orders, married in 1859 to Anna Maria, youngest daughter of the late Ven. Archdeacon Dealtry; Frederick, born in 1831, married in 1867 to Mary, eldest daughter of Mr. A. Blackshaw, of Cheshire; Sidney, First Secretary to the Embassy at Constantinople, married in 1859 to Abbie, daughter of the Rev. Dr. King, of Athens; and Herbert, major in the Royal Engineers, born in 1837, and married in 1863 Edith Agnes Fanny, daughter of Mr. F. T. Coxworthy."

RICHARD SMITH, B.A. Cantab.

There are many of our readers, especially students, whose business has directed them to the office of the Secretary of the Royal College of Surgeons, who will regret to hear of the death of the above most estimable gentleman, who expired on the 18th ult., at St. Leonard's, at the early age of twenty-eight. Mr. Smith received his preliminary education at Lancing College, after which he entered Jesus College, Cambridge, where he obtained his B.A. A few years ago he obtained an appointment in the College of Surgeons, where he at once became an especial favourite, and in all probability would have been elected Assistant Secretary, but, naturally of a delicate constitution, he was ill able to bear the hard work on examination-nights, and at one of these a sudden attack of hæmoptysis compelled him to resign. The remainder is soon told: other attacks followed, and he gradually sank to rest, regretted by all who had the great pleasure of knowing him.

MEDICAL NEWS.

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst., viz.:—

Bartlett, Henry, L.S.A., Great Dover-street.
Briggs, Harry Beecham, L.S.A., Horncastle.
Bruce, Peter, L.S.A., Valparaiso, Chili.
Cock, Williams, Redruth.
Godfrey, Robert Frederick, M.D. Bellevue College, Montreal.
Hancock, Charles James, Bath.
Hancock, John Gatchell, Halse, Taunton.
Jameson, George Herbert, M.B. Edin., Heywood.
Lacy, Alexander Gairdner, L.S.A., Guernsey.
Le Quesne, Edwin Joseph, Jersey.
Makins, George Henry, L.S.A., Walton-on-Thames.
Shadwell, St. Clair Brockway, Walthamstow.
Stevenson, Robert Addison, M.D. McGill, London, Canada West.
Turnour, Charles Chad, Millman-street, W.C.
Vernon, Mark Henry Herbert, Battle, Sussex.
Williams, Neville, B.A. Cantab., Ruthin.

Henry Abdy Collins, L.S.A., Bayswater, who passed in Surgery at a previous meeting of the Court, having subsequently obtained a Medical qualification, was also admitted a Member. Three candidates passed in Surgery, and when qualified in Medicine will be admitted Members of the College. Six candidates were referred to their professional studies for a period of six months.

The following were admitted Members on the 23rd inst., viz.:

Barton, James Kingston, Doughty-street, W.C.
Bowen, Alfred Longmore, Ludlow, Salop.
Burtonshaw, Thomas, L.S.A., Hackney-road.
Carter, Frederick Heales, Pewsey, Wilts.
Continho, Joaquin Vicente, Ladbroke-road.
Cundell, George Richard, L.S.A., Lock Hospital.

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Ground, Edward, Whittlesea.
Hay, William Alfred Edward, L.S.A., Bridport.
Hovell, Thomas Mark, Clapton.
Humphry, Reginald, Kensington.
Johnson, Chadd Moore, L.S.A., Lancaster.
Karop, George Charles, L.S.A., Camden Town.
Langley, John Geoffrey, Mildmay-grove.
Pettigrew, Augustus Joseph Walford, L.S.A., Hounslow, W.
Rees, Charles, L.S.A., Cape Town.
Roughton, Walter, The Grove, Hammersmith.
Todd, John, Tufnell-park.

Three candidates passed their examination in Surgery, and when qualified in Medicine will be admitted Members of the College. Five candidates were referred to their professional studies for a period of six months.

The following were admitted Members on the 26th inst., viz.:

Baker, Albert de Winter, Dawlish.
Brenchley, Algernon Dutton, L.S.A., Denmark-hill.
Brookes, Walter John, Westminster-bridge-road.
Crocker, Henry Lawrence, Plymouth.
Dickinson, William Gilbert, Hampstead.
Druitt, Lionel, Strathmore-gardens, W.
Fisk, George Henry Bradwell, Camden-square.
Lancaster, Henry Francis, Amersham-park-villas, New Cross.
Leeson, John Rudd, Teddington.
Lucas, Arthur, L.S.A., Burwell, Cambs.
Mason, John Wallis Barron, Osnaburgh-terrace.
Morgan, David Craven, Llanddear Brefi, Cardigan.
Mugliston, Thomas Crichton, Plymouth.
Newland, Charles Francis, Bradleigh Down, Tiverton.
Phillips, James Alfred, Guildford.
Scott, Alexander Thomas, L.S.A., Camden-road, N.W.
Sworder, Horace, L.S.A., Luton, Beds.

Joseph Berridge Richardson, L.S.A., Castle Bytham, near Stamford, who passed in Surgery at a previous meeting of the Court, having since obtained a Medical qualification, was also admitted a Member. Two candidates passed their examination in Surgery, and when qualified in Medicine will be admitted Members of the College. Five candidates were referred to their professional studies for a period of six months.

The following were admitted Members on the 27th inst., viz.:

Brown, Thomas Lloyd, Camberwell.
Burton, Herbert Campbell, Lee, S.E.
Davies, T., Barmouth.
Greenish, Robert William, New-street, Dorset-square.
Harrison, Edwin, Wrexham.
Hind, Henry Joseph, L.S.A., Twickenham.
Needham, Joseph, Victoria-park.
Routh, Alfred Curtis, Meyrick-square.
Sangster, Alfred, M.B. Camb., Streatham-hill.
Symonds, Edmond, Thaxted.
Taylor, Henry Cumberland, L.S.A., Trinity-square, S.E.
Traill, Mark Windeyer, Kinross, New South Wales.
Wakefield, Thomas, B.A. Cantab., Nottingham-place.
Ward, Austin George, Carlton-hill, N.W.
Wilding, Leonard James, L.S.A., Worcester.
Willis, Charles Fancourt, Penton Hook.
Woollett, Charles Jerome, Monmouth.

Two candidates passed their examination in Surgery, and when qualified in Medicine will be admitted Members of the College. Six candidates were referred to their professional studies for a period of six months.

The following were admitted Members on the 28th inst.:—

Barker, Walter Herbert, Brighton.
Collyns, Robert Thomas Poole, Gower-street.
Cory, Frederick William, L.S.A., Buckhurst-hill.
Coom, Richard, Bodmin.
Couldrey, James, L.S.A., Abingdon.
Curwen, Cecil, Workington, Cumberland.
Farfan, Joseph Vincent, Claverton-street.
Grasett, Frederick le Maitre, M.B. Edin., Toronto.
Harvey, Frederick George, Spalding, Lincolnshire.
Henley, Edward Whishaw, Derby.
Jones, Benjamin, Chorley.
Noott, Henry Curtis, Dudley, Worcester.
Sibbering, George, Merthyr Tydfil.
Tamplin, Charles Harris, Old Burlington-street, W.

Alexander George Hattie, M.D., of Pennsylvania, Antigua, who passed his examination under the old regulations, was also admitted a Member. Three candidates who had previously qualified in Surgery, having passed in Medicine, were admitted Members, viz.:—William Conway Cooke, Brompton, Kent; John Hopkins, Northwich; Henry Colborn, Wimbledon. Three candidates passed the examination in Surgery, and when qualified in Medicine will be admitted Members of the College. Six candidates were referred to their professional studies for a period of six months.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 27:—

Branson, John, Rotherham, Yorkshire.
Clarke, Arthur, Brill, Bucks.
Davies, John, Queen-street, Worship-street, E.C.
Eames, James Crompton, Kearsley, near Manchester.
Laverick, John Valentine, Hindewell, Yorkshire.
Morgan, William, Ynysmudw, Swansea Valley.
Richardson, Joseph Berridge, Castle Bytham, near Stamford.

The following gentlemen also on the same day passed their primary professional examination:—

Campbell, Robert Huntley, St. Thomas's Hospital.
Carlyon, Thomas Baxter, St. Bartholomew's Hospital.
Pritchard, Ernest James, Guy's Hospital.
Owen, Charles James Rayley, St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DUDLEY, J. G., M.A., M.D. Cantab., M.R.C.P.—Consulting-Physician to the North London Hospital for Consumption.

BIRTHS.

BRIETZCKE.—On July 26, at Ryde, the wife of Henry Brietzcke, F.R.C.S., of a daughter.

CHILD.—On July 26, at New Malden, Surrey, the wife of Edwin Child, M.R.C.S., of a son.

DUDGEON.—On July 23, at 53, Montagu-square, W., the wife of R. E. Dudgeon, M.D., of a daughter.

FRASER.—On July 20, at Knutsford, Cheshire, the wife of Thomas R. Fraser, M.D., of a son.

GWYNN.—On July 26, the wife of Edmund Gwynn, M.D., of Hampstead-hill-gardens, N.W., of a son.

JEFFERY.—On July 20, at Trinity House, Eastbourne, the wife of G. A. Jeffery, M.D., of a son.

LEWIS.—On July 16, at Loughton, the wife of W. T. Lewis, M.R.C.S. Eng., of a daughter.

PERRY.—On July 25, at Canon House, Canonhold, Melksham, the wife of George J. Perry, M.R.C.S., of a son.

THEOBALDS.—On June 13, at Jubbulpore, the wife of Surgeon-Major J. R. Theobalds, 16th Regiment Madras Native Infantry, of a daughter.

TICEHURST.—On July 21, at Silchester House, the wife of A. R. Ticehurst, M.R.C.S. Eng., of a daughter.

MARRIAGES.

CLOUSTON—TRAILL.—On July 20, at St. Andrew's, Fifeshire, Charles Stewart Clouston, M.B., Hay, Breconshire, to Emma, eldest daughter of William Traill, M.D., of Woodwick, Deputy Lieutenant of the county of Orkney, and late of the Madras Army.

GAMGEE—CLARK.—On July 22, at Stamford-hill Congregational Church, Arthur Gamgee, M.D., F.R.S., Brackenbury Professor of Physiology in the Owens College, Manchester, to Mary Louisa, second daughter of James P. Clark, Esq., of London and Montreal.

MEAD—SMITH.—On June 29, at All Souls' Church, St. Marylebone, Major Henry R. Mead, R.E., to Eleanor, only daughter of H. Spencer Smith, F.R.C.S., of 9, Queen Anne-street, W.

MIDDLETON—MAXTON.—On July 22, at St. Peter's Church, Belsize-park, William Henry Middleton, M.D., of Mullingar, Westmeath, to Maria Louisa, daughter of Peter Maxton, Esq., 37, Belsize-park, Hampstead.

PAYNE—JAMES.—On July 24, at St. Paul's Church, Avenue-road, Hampstead, William George Payne, L.R.C.P. Edin., M.R.C.S. Eng., Resident British Surgeon, Suez, Egypt, to Caroline Blake, daughter of the late Thomas James, Esq., Newton House, Finchley New-road, London, N.W.

STOKOE—WOODYER.—On July 22, at the parish church, Sutton, Paul Henry Stokoe, M.D., B.A., of Peckham Rye, to Alice Ruth, only daughter of the late C. Mason Woodyer, Esq., of Lansdown Lodge, The Fort, Margate.

THOMSON—PORCH.—On July 27, at St. John's, Glastonbury, W. Thomson, M.D., to Jessie, daughter of Thomas Porch Porch, Esq., J.P., of Edgarley, Somersetshire.

DEATHS.

BETTS, GEORGE HARVEY, M.D., M.R.C.S. Eng., L.S.A., at The Villa, Bonchurch, Isle of Wight, on July 20, aged 66.

CARNEGIE, ANN, widow of David Carnegie, Esq., member of the Bombay Medical Board, at 76, Upper Berkeley-street, W., on July 24, aged 81.

CLARKE, WILLIAM JAMES, M.R.C.S. Eng., L.S.A., of Huddersfield, on July 25, aged 61.

DAVIDSON, CHARLES JAMES, late Surgeon to the 47th Regiment, Bengal Native Infantry, at 2, Heathcote-street, Mecklenburgh-square, on July 26, aged 64.

DICKSON, MARY ANNE, widow of Robert Dickson, M.D., formerly of 16, Hertford-street, Mayfair, W., at Harmondsworth, Slough, on July 21, aged 68.

JOHNSON, FREDERICK PHILLIPPS, M.B. Oxon., at the Manor House, Bishop's Hull, Taunton, on June 30, aged 32.

LATHAM, PETER MERE, M.D. Oxon., F.R.C.P. Lond., Physician Extraordinary to the Queen, late Physician and Lecturer on the Practice of Medicine at St. Bartholomew's Hospital, London, at Inglewood, Torquay, on July 20, in his 87th year.

LOCOCK, CHARLES, Kt., M.D., F.R.S., at Binstead, Isle of Wight, on July 23, aged 76.

LOVELL, JOHN, of Porthledge House, Bath, late Inspector-General of Hospitals of Her Majesty's Madras Medical Service, on July 19, aged 71.

WILLING, HARRY BRUTTON, only surviving son of G. F. B. Willing, L.R.C.P., M.R.C.S., Eng., of Great Wakering, near Southend, suddenly in India, on June 15, aged 24.

YOUNG, DONALD, H.E.I.C.S., eldest surviving son of the late Donald Smith Young, F.R.C.S.E., H.E.I.C.S., at Edinburgh, on July 18.

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VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Borough of Rochdale.—Medical Officer of Health. Candidates must be duly qualified and registered. Applications, with testimonials, to Z. Mellor, Esq., Town Clerk, Town Hall, Rochdale, on or before August 7.

Carlow Union.—Medical Officer for the Tullow Dispensary District. Applications, with testimonials, to B. Furney, Esq., Honorary Secretary, Butter's Grange, Tullow, before August 11.

Carlow Union.—Medical Officer for the Tullow Fever Hospital. Candidates must be duly qualified. Applications, with testimonials, to Mr. R. L. Jameson, Clerk of the Union, Board-room, Carlow, before August 12.

Cheltenham General Hospital.—Surgeon to the Branch Dispensary. Candidates must possess both a medical and surgical qualification, and be registered. Applications, with testimonials, to the Secretary, at the Hospital.

Christchurch Union.—Medical Officer for the Eastern District. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Board of Guardians, Christchurch, before August 16.

Consumption Hospital, Brompton.—Resident Clinical Assistants. Applications, with testimonials, to the Secretary, on or before August 2.

Croydon General Hospital.—House Surgeon. Candidates must possess both a medical and surgical qualification. Applications, with testimonials, to the Secretary, on or before August 18.

Dudley Dispensary.—Resident Medical Officer. Particulars may be obtained from Mr. Thomas Sheppard, Dudley.

Great Northern Hospital, Caledonian-road, N.—Ophthalmic Surgeon. Candidates must be F.R.C.S. Applications, with testimonials, to the Secretary, on or before August 6.

Liverpool Royal Infirmary School of Medicine.—Demonstrator of Anatomy. Applications, with testimonials, to the Registrar, on or before July 31.

Middlesex Hospital Medical College.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

North London Consumption Hospital, Mount Vernon, Hampstead.—Two Physicians. Candidates must be M.D. and F. or M.R.C.P. Applications, with testimonials, to the Secretary, 216, Tottenham-court-road, W.C., on or before August 5.

Norwich Dispensary.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary.

Royal Free Hospital, Gray's-inn-road.—Senior House Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 4. Also vacancies for two Junior House-Surgeons. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 4.

Royal Sea-Bathing Infirmary, Margate.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 14.

Royal Surrey County Hospital, Guildford.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Assistant-Secretary, on or before July 31.

St. George's Hospital Medical School.—Teacher of Physiological Chemistry. Applications to Dr. Wadham, at the Hospital.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Christchurch Union.—Mr. W. Watmough has resigned the Eastern District; area 14,311; population 3490; salary £50.

Daventry Union.—Mr. C. H. Gibson, Medical Officer for the First District, has resigned; area 14,739; population 6142; salary £60.

Maldon Union.—Mr. Wigg, Medical Officer for the Southminster District, has resigned; area 12,737; population 2420; salary £50.

Uckfield Union.—Mr. Thomas Hobbs Cresswell has resigned the Maresfield District; area 16,559; population 4119; salary £85.

APPOINTMENTS.

Mere Union.—Frederick Augustus Alfred Smith, M.R.C.S. Eng., L.R.C.P. Edin., and L.M., to the Union Workhouse, in the room of Mr. Wilton Provis, deceased.

Whitchurch (Salop) Union.—Thos. L. Bookey, L.K. & Q.C.P.I., L.R.C.S. Ire., to the Iscoyd District.

Wincanton Union.—Robert Bath Wybrants, L.K. & Q.C.P.I., M.R.C.S., L.M., to the East Wincanton District and to the Workhouse.

Worcester Union.—Joseph R. Buck, L.R.C.P. Edin., M.R.C.S. Eng., to the Second District.

Derbyshire.—Alfred H. Allen, F.C.S., and Henry Goode, B.M., as Analysts for the Northern and Southern Divisions.

Dr. Tholozan on the Plague.—Dr. Tholozan, Physician to the Shah of Persia, now on a visit to Europe, in a communication to the Académie des Sciences, states that from the statistical information which he has collected concerning the outbreaks of the plague in different countries from the commencement of this century, he has come to the conclusion that it has shown itself at different epochs simultaneously in places at a great distance from each other; and that, consequently, neither its appearance nor its propagation can be referred to contagion. The remedy is, therefore, not to be sought for in the means recommended by the International Sanitary Commission, in ignorance of the facts collected by Dr. Tholozan. The plague is an endemo-epidemic malady which is spontaneously developed at a given point as a result of special circumstances which science has as yet not been able to determine. As a proof of his allegation, Dr. Tholozan refers to the results established by documents which he has collected concerning the appearance and disappearance of the disease in the various provinces of the Caucasus, in Georgia, Armenia, Anatolia, and elsewhere.—*L'Institut*, July 21.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Inquirer.—There is no such name since the death of the old and well-known "Jemmie" Wardrop.

Patrick, Cork.—Dr. Mosely, one of the first of the anti-vaccinists, described a boy whose face and part of his body, after vaccination, became covered with cow's hair, whereupon a satirical poet of the day wrote—

"Oh. Mosely! thy book's mighty phantasies rousing,
Full oft make me quake for my heart's dearest treasures;
For fancy, in dreams, oft presents them all browsing
On commons, just like little Nebuchadnezzars.
There, nibbling at thistles, stand Jem, Joe and Mary,
On their foreheads, oh horrible! crumpled horns bud;
Here Tom with a tail, and poor William all hairy,
Reclined in a corner, are chewing the cud."

O. F., Carnarvon.—Apply to Kimpton, medical bookseller, 82, High Holborn.

A Mummy.—The Duke of Sutherland has presented a mummy of the period of the twenty-sixth dynasty to the Museum of the College of Surgeons. The body is that of a woman of advanced age, and is in perfect condition. The inscriptions on the outer cartonnage, together with a short statement by Dr. Birch, will be published by the Society of Biblical Archæology.

Secundus.—The Asylums District Fever and Small-pox Hospitals at Homerton and Stockwell are certified for 576 beds.

J. J.—In the City of London, under the new Act on Artizans' Dwellings, the Local Authority is the Commission of Sewers; in the metropolis, the Board of Works; and elsewhere, the Urban Sanitary District.

Donald S.—Dr. Herbert Mayo was Professor of Anatomy and Physiology in the London University, 1836. He died near Mainz-on-the-Rhine, August 15, 1852.

An Italian.—Jean Méry, the anatomist, was surgeon to the Queen of France in 1631, and was the first surgeon of the Hôtel-Dieu, 1700. He died at Paris, November 3, 1722.

Gregory is thanked, but the subject is not suitable for our columns.

Alpha.—1. December 16, 1858. 2. The Middlesex Magistrates have resolved to take measures in reference to an amendment of the Act relating to coroners; and a deputation from the court is, or is about to be, appointed to wait upon the Home Secretary for a conference as to legislation in the next session on the subject.

Oliver, Essex.—Butler satirises the philosophical credulity of his day, and ridicules a belief in sympathetic powder and similar nostrums, thus:—

"Cure warts and corns with applicati n
Of medicines to the imagination;
Fright agues into dogs, and scare
With rhymes the toothache and catarrh;
And fire a mine in China here
With sympathetic gunpowder."

Quintus.—Dr. Francis Bernard was chief physician to King James II.

A Student should lay the matter before the Hospital Committee.

A Junior Partner.—The arrangements verbally made can be set aside, and the written agreement only enforced. The matter should be referred for settlement to a medical referee.

Ford S.—It was Sir Astley Cooper who used to assert, of ancient surgery, that the human frame was better understood in his time by students than it had been previously by professors.

A Provincial Teacher.—The examinations for membership of the College of Surgeons have been brought to a close for the present session, and will not be resumed until November next. There may, however, be an examination for the licence in Midwifery; you had better write to the Secretary.

Wasp's Stings.—Mons. Dauverne states, as the result of several trials, that the pain and suffering caused by the stings of bees and wasps may be immediately assuaged by the application of lime-water.

A Surgeon's Widow.—As your son has passed a recognised preliminary examination, he can commence his hospital studies in October. Write to the Secretary of the College of Surgeons for the regulations, and consult the Students' Number of the *Medical Times and Gazette*, which will give you full information on the subject. We never recommend particular hospitals; the fees are about the same, 100 guineas.

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Dr. Thompson.—The late Mr. Jones, of Jersey, was the first to give digitalis in large doses for delirium tremens. We cannot publish the extract, but you will find it fully stated in Dr. Silver's work on Medicine.

A Member of the Association.—It has been left to private enterprise to carry out a delightful round of excursions after the meetings. The Messrs. Cook will do that which the railway companies and others equally interested are unwilling or unable to undertake, and those who have had experience of "Cook's tours" know they will be well done.

"*L.D.S.*"—This is the only qualification of the College of Surgeons not registrable, neither does its possession exempt you from serving on juries. Messrs. Rogers and Barrett have been elected members of the Dental Board in the vacancies caused by the retirement of Messrs. Cartwright and Ibbetson, both of whom are Fellows of the College.

Archæologist.—When Sir William Walworth slew Wat Tyler, the dead body was carried into St. Bartholomew's Hospital, and laid in the Master's Chamber.

Dr. B.—Write to Messrs. Cook, Fleet-street, who will send you a programme of the excursions for the members of the Association. The whole affair should be left entirely to these gentlemen, who, we understand, are quite willing to be guided by a majority of the members.

COMMUNICATIONS have been received from—

Professor Williams, Edinburgh; Professor Huxley, Edinburgh; The Registrar of the University of St. Andrews; Mr. W. Gurner, London; Professor Jakowatzky, London; Our Paris Correspondent; The Secretary of the Society for the Relief of Widows and Orphans of Medical Men; Inquirer; The Registrar of Apothecaries' Hall, London; Mr. A. G. Burness, London; Mr. Plimsoll, London; Mr. Wilks, Salisbury; Mr. Lawson Tait, Birmingham; Dr. Strange, Worcester; The Registrar-General, Scotland; Mr. T. M. Stone, London; Mr. German Reed, London; Mr. E. Nettleship, London; Mr. D. Hartley, Cheltenham; Mr. Jonathan Hutchinson, London; Dr. Kirby, Brighton; Mr. Fenn Clark, Leamington; Dr. J. Hughlings-Jackson, London; Mr. J. Chatto, London; Mr. H. Fox, Bristol; Dr. J. M. Minor, New York, Dr. Duffield, London; Mr. H. K. Hebb, Lincoln; Captain Fortescue, London; Mr. Bevan Lewis, Wakefield; Dr. T. Grainger Stewart, Edinburgh; Mr. G. Brown, London.

BOOKS AND PAMPHLETS RECEIVED—

Green's Introduction to Pathology and Morbid Anatomy, third edition—Ashe's Medical Politics—Holland's Health in the Nursery—Report of the National Association for Providing Trained Nurses for the Sick Poor—Goodwillie on Anchylosis of the Temporo-Maxillary Articulation of long standing.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Guy's Hospital Gazette—Worcestershire Chronicle—The Scotsman—American Journal of Medical Sciences—New Orleans Medical and Surgical Journal—Leisure Hour—Sunday at Home—Monthly Microscopical Journal—Dietetic Reformer—New York Evening Post.

APPOINTMENTS FOR THE WEEK.

July 31. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m. Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

August 2. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

3. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

4. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

5. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

6. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 24.

BIRTHS.

Births of Boys, 1161; Girls, 1169; Total, 2330.
Average of 10 corresponding years 1865-74, 2081·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	737	734	1471
Average of the ten years 1865-74	795·5	726·5	1536·0
Average corrected to increased population	...	...	1633
Deaths of people aged 80 and upwards	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	4	17	...	10	...	2	...	17
North	751729	...	6	15	3	15	...	5	1	41
Central ...	334369	...	3	11	2	7	1	1	...	10
East	639111	...	10	14	3	9	...	3	2	26
South	967692	...	12	39	3	17	...	3	4	44
Total	3254260	...	35	96	11	58	1	14	7	138

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·622 in.
Mean temperature	60·2°
Highest point of thermometer	77·4°
Lowest point of thermometer	52·2°
Mean dew-point temperature	57·4°
General direction of wind	W.S.W.
Whole amount of rain in the week	0·49 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 24, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending July 24.	Deaths Registered during the week ending July 24.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2330	1471	77·4	52·2	60·2	15·67	0·49	1·24
Portsmouth ...	122832	27·3	83	31	...	...	...	...	...	...
Norwich	82849	11·1	34	27	72·0	54 0	60·3	15·73	3·34	8·48
Bristol	196186	44·1	143	85	72·2	50·6	59·7	15·39	0·90	2·29
Wolverhampton ...	71718	21·1	47	29	72·9	50·6	59·7	15·39	4·07	10·34
Birmingham ...	366325	43·6	270	155	73·0	50·8	59·3	15·17	5·13	13·03
Leicester	109830	34·3	70	63	79·0	52·8	60·5	15·84	3·46	8·79
Nottingham ...	92251	46·2	53	60	76·9	50·8	61·9	16·61	1·94	4·93
Liverpool	516063	99·1	339	228	67·0	49·2	57·5	14·17	1·50	3·81
Manchester ...	356626	83·1	237	210	71·5	52·5	60·8	16·01	2·33	5·65
Salford	135720	26·3	112	63	71·5	48·7	58·8	14·89	2·40	6·10
Oldham	87437	18·7	55	41	...	...	...	...	...	...
Bradford	168305	23·3	130	80	71·0	53·0	60·2	15·67	1·55	3·94
Leeds	285118	13·2	229	157	72·0	54·0	61·5	16·39	1·77	4·50
Sheffield	267881	13·6	192	112	74·0	50·5	59·9	15·50	1·46	3·71
Hull	133932	36·8	112	74	71·0	52·0	58·2	14·55	1·71	4·34
Sunderland ...	106342	32·2	79	44	73·0	53 0	59·0	15·00	2·16	5·49
Newcastle-on-Tyne	137665	25·6	94	77	66·0	45·0	54·4	12·44	3·46	8·79
Edinburgh	211626	50·5	135	87	78·0	48·0	59·9	15·50	...	...
Glasgow	534564	88·6	499	319	76·7	46·3	59·5	15·45	1·15	2·92
Dublin	314668	31·3	170	144	76·0	41·5	59·9	15·50	1·59	4·04
Total of 21 Towns in United Kingdm	7742889	87·0	5413	3556	79·0	41·5	59·6	15·34	2·25	5·71

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·62 in. The highest was 29·79 in. on Tuesday evening, and the lowest 29·50 in. on Friday at noon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 115.)

The Echinodermata.—The members of this singular group are provided with a skeleton, composed of calcareous rods, spicula, or networks, which commonly unite into definite plates. The nervous system consists of a ring, which surrounds the gullet, and gives off five equidistant longitudinal cords to the parietes of the body; and there is a remarkable system of vessels, termed "ambulacral," which also form a ring around the gullet. The most conspicuous and familiarly known Echinoderms—the Star-fishes (*Asteridea*), Sea-urchins (*Echinidea*), and Feather-stars (*Crinoidea*)—have a marked radial symmetry, similar parts, usually to the number of five, being arranged around a central axis; and the body is spheroidal, discoidal, or stellate. The Sea-cucumbers and Trepangs (*Holothuridea*) are elongated and vermiform; but the radial symmetry is still traceable in the oral tentacula, the nervous, and the ambulacral systems.

With a few exceptions, the embryo leaves the egg as a bilaterally symmetrical larva, provided with ciliated bands, and otherwise similar to a worm-larva, which may be termed an *Echinopædium*. The conversion of this Echinopædium into an Echinoderm is effected by the development of the ambulacral system of vessels and nerves, and the metamorphosis of the mesoblast into radially disposed metameres, the result of which is the more or less complete obliteration of the primitive bilateral symmetry of the animal.

The simplest and least modified Echinoderms are to be found among the *Holothuridea*.

In the *Synaptæ*, for example, the body is greatly elongated and cylindrical, the mouth being placed at one end, and the anus at the other. The oral aperture is situated in the centre of a circle of tentacula, and the gullet leads from it to an alimentary canal, without marked distinction of stomach and intestine, which extends through the body, and is connected by mesenteric folds with the parietes of the latter.

The intestine presents external circular and internal longitudinal muscular fibres, and is lined by a cellular endoderm.

The body-wall consists of an external cellular ectoderm, covering a layer of connective tissue with circular and longitudinal muscular fibres. The latter are disposed in five longitudinal muscular bands, attached anteriorly to a corresponding number of the ten or twelve pieces of a calcareous ring which surrounds the gullet.

The integument contains numerous perforated, flat, calcareous plates, to which protruding anchor-like hooks of the same substance are attached. According to Semper, these anchor-like bodies are developed in special sacs with an epithelial lining.(a)

A spacious perivisceral cavity lies between the parietes of the body and the alimentary canal, and the cells which line it are more or less extensively ciliated. Pedunculated ciliated cups are attached to the mesentery.

The circular vessel of the ambulacral system surrounds the gullet. Posteriorly, it gives off various cæcal prolongations, which depend freely in the perivisceral cavity. Some of these—the *Polian vesicles*—are mere cæca; but, in addition to these, are one or more tubular prolongations, the perforated extremities of which are invested by a calcareous network, and are termed the *madreporic canals*. Through the openings in the free end of the madreporic canal, the interior of the ambulacral system communicates with the perivisceral cavity. Anteriorly, the circular vessel gives off branches to the tentacula. The ambulacral vessels are filled with a fluid containing numerous nucleated cells.

Contractile vessels, which accompany the intestine and lie on opposite sides of it, filled with a similar corpusculated fluid, represent the pseudhæmal vessels of the Annelids.

The nervous system consists of a ring which lies superficial to the circular water-vessels, and from which five principal equidistant cords proceed, pass through the apertures or notches in the circum-œsophageal plates, and reach the middle of the longitudinal muscular bands, along which they proceed to the opposite extremity of the body.

The genital gland is single, and opens near the oral end, in the line of the attachment of the mesentery. The branched cæcal tubuli of which it is composed contain both ova and spermatozoa, so that the *Synaptæ* are hermaphrodite.

In other *Holothuridea* the skeleton may attain a much greater development, and even take the form of conspicuous overlapping plates. Moreover, the circular vessel of the ambulacral system not only gives origin to Polian vesicles, madreporic canals, and tentacular vessels, but five canals proceed from it, pass through holes or notches in those circum-œsophageal plates to which the longitudinal muscles are attached, and run backwards along the centre of the area occupied by each of these muscles, on the deep or inner side of the longitudinal nerve. These are the *ambulacral vessels*. In the higher *Holothuridea*, each ambulacral vessel gives off many lateral branches; these enter contractile processes of the body-wall, which subserve locomotion, and are the *ambulacral feet* or *suckers*. In accordance with the disposition of the ambulacral vessels, these ambulacral feet are usually disposed in five longitudinal bands, which are the *ambulacra*. Sometimes (*Psolus*) the feet in two of the five ambulacra are suppressed, and the other three are disposed upon a flattened surface upon which the animal creeps.

In the higher Holothurians the intestine terminates in a distinct cloaca, into which two hollow ramified organs, which lie in the perivisceral cavity, open. Water is taken into, and expelled out of, the cloaca and these appendages, which, doubtless, subserve an excretory function, and are commonly called "respiratory trees." It seems probable that the ultimate branches of these appendages open directly into the perivisceral cavity.(b)

The "Cuvierian organs" are solid, simple, or branched appendages of the cloaca, the function of which is unknown. In some *Holothuridea* the anal aperture is provided with a circlet of calcareous plates.

In many Holothurians the blood-vascular system attains a great complexity, and its branches not only extend over the alimentary canal, but closely embrace one of the branched excretory organs. In most Holothurians the sexes are distinct.

The most aberrant form of *Holothuridea* at present known is the genus *Rhopalodina*. The body is flask-shaped, and at the narrow end of the flask are two apertures. One of these—the mouth—is surrounded by ten tentacula; the other, which is the anal aperture, has ten papillæ, and as many calcareous plates. A spacious cloacal cavity, provided with excretory organs, traverses the neck of the flask, and opens at the anus. The gullet, which lies beside, and at some distance from, the oral aperture, presents a ring of ten calcareous plates. The genital duct is situated between the cloaca and the gullet. Ten ambulacra diverge from the centre of the enlarged aboral end of the body, and extend like so many meridians to near the commencement of the neck of the flask. In correspondence with each ambulacrum is a longitudinal muscular band; and it is an especial peculiarity of *Rhopalodina* that five of these are attached to the anal circlet, and five to the circum-œsophageal circlet. Until, however, it has been shown that the circular ambulacral vessel encloses the cloaca, as well as the œsophagus—which is highly improbable,—it is justifiable to assume that the anus of *Rhopalodina* is really, as in the *Crinoidea*, interradial in position.

The development of the *Holothuridea* is extremely instructive. Yelk-division gives rise to a vesicular morula, which undergoes invagination, and becomes converted into an oval ciliated gastrula. The opening of invagination becomes the anus, while the mouth is a new opening formed at the blind end of the endodermal sac. The alimentary canal becomes differentiated into a gullet, a rounded stomach, and an intestine; and the cilia usually become restricted to a single band, bent upon itself, though its general direction is transverse to the axis of the body. At a subsequent period, this single band may be replaced by a series of hoops of cilia.

In the earliest condition yet observed,(c) the ambulacral vascular system appears as a cæcal tube, which opens ex-

(a) See, on this and all points relating to the structure of the *Holothuridea*, the beautiful monograph in Semper's "Reisen im Archipel der Philippinen."—*Wissenschaftliche Resultate*, Bd. i.: *Holothurien*.

(b) Semper, *loc. cit.*, Heft iv., p. 133.

(c) Metschnikoff, "Studien ueber die Entwickelung der Echinodermen und Nemertinen,"—*Mem. de l'Acad. de S. Petersbourg*, xiv., 1869.

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ternally by a pore situated on the anterior dorsal region of the larva, while its blind end abuts on the œsophagus. The inner end of this tube elongates, curves round the stomach, and divides into three portions. Of these, one remains connected with the dorsal pore, and, dilating, becomes a five-lobed vesicle, which grows round the gullet, and gives rise to the tentacular and ambulacral canals and the Polian vesicle; while the primitive canal, detaching itself from the dorsal wall, becomes the madreporic canal.

The other two vesicles lie at the sides of the stomach, which takes on a more cylindrical shape, and these vesicles become the "Würstfömige Körper" observed by Müller. They gradually increase in size, and, growing round the alimentary canal, unite above and below it. Thus a double cylinder is formed in the position of the mesoblast, between the endoderm and the ectoderm. The inner layer of the double cylinder applies itself to the alimentary canal, and becomes the muscular and peritoneal coat of that viscus; while the outer layer, attaching itself to the ectoderm, is converted into the muscular and peritoneal lining of the body-wall. The interspace between the two is the perivisceral cavity.

In the meanwhile, the body of the embryo elongates, the tentacula are developed around the mouth, the ciliated bands disappear, and the Holothurid form is complete.

Observations on other Echinoderms render it highly probable that the primitive ambulacral tube is a diverticulum from the alimentary canal, and that, in the first condition observed, it has become shut off from the latter, while it has acquired a secondary opening—the dorsal pore. In this case it is clear that the perivisceral cavity of the Holothuria is an enterocœle, and that it answers to the perivisceral cavity of *Sagitta* and of the *Brachiopoda*.

It is further obvious that the structures which are developed in connexion with the enterocœle answer to those which are evolved from the mesoblast in other animals; and that the Echinoderm stands in the same relation to its embryo as an Annelid does to its embryo; the adult form being due to the peculiar arrangement of the parts developed from the mesoblast. No part of the Echinopædium is cast off in the course of the development of the *Holothuridea*.

The *Asteridea*.—A Star-fish is comparable to a Holothurian, the ambulacra of which are restricted to its oral half, flattened out so as to have a very short axis, while its equatorial diameter is greatly increased, and produced at each ambulacrum. The resulting form would be a disc, having the form of a pentagon, or of a five-rayed star, with ambulacra only on that face of the disc which bears the mouth.

In all the *Asteridea* there is a skeleton made up of definite plates or thick rods, each formed of a dense calcareous network. A deep groove, radiating from the mouth to the end of each ray, marks the position of each ambulacrum, and the sides of this groove are supported by two series of ambulacral ossicles, which meet and articulate together in the middle line or roof of the groove. There are neither oral tentacula nor circum-œsophageal calcareous ring.

The alimentary canal is very short, and sometimes devoid of an anus; but it sends off cæcal prolongations into each ray. On the aboral face of the body, in an interradial position, are placed one or more madreporic tubercles; and the canal which leads from the madreporic tubercle to the circular ambulacral vessel is strengthened by a peculiar skeleton.

The ambulacral vessel lies superficial to the ambulacral ossicles, at the bottom of the ambulacral groove, covered by the ambulacral nerve and by the integument; and the nerve, in many Star-fishes, terminates at the end of the ambulacrum in a compound eye.

The principal trunks of the pseudhæmal vessels form two rings, one round the mouth, and one round the anus, which are connected by a vessel—the so-called heart—which runs parallel with the madreporic canal. The sexes are distinct, and the genital organs correspond in number with the rays.

The aboral integument is provided with many cæcal processes; and pincer-shaped bodies, provided with an internal skeleton—the *pedicellariæ*,—are widely spread over the integument.

In some Star-fishes, as in some Holothurids, the embryo passes into the Star-fish form without any free larval stage. But, more usually, an Echinopædium is formed in the same way as in the Holothurians, but differing in the arrangement of its ciliated bands, and especially in their prolongation into numerous lobes or narrow processes, as in the remarkable *Bipinnaria*.

According to the observations of A. Agassiz, which have been confirmed by Metschnikoff, the ambulacral vessels commence as diverticula of the stomach, which become detached from the alimentary canal, and, like the lateral discs of Holothurians, give rise to the perivisceral cavity, and to all the substance of the body between the endoderm and the ectoderm. A portion of one of these diverticula, however, separates itself from the rest, opens externally by a pore, and becomes metamorphosed into the ambulacral vessels. But this ambulacral diverticulum does not surround the gullet, and consequently a new mouth is developed in the centre of the ambulacral ring. The larval mouth and gullet are abolished, and the greater part of the body of the Echinopædium is separated from that portion which contains the stellate Echinoderm. The latter results from the metamorphosis of the mesoblast, which is modelled upon the enterocœle, and encloses the middle portion of the alimentary canal.

(*To be continued.*)

FORTY-THIRD MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

HELD IN EDINBURGH ON AUGUST 3, 4, 5, AND 6, 1875.

WEDNESDAY, August 4.

THE Association has now got fairly to work, and promises to be in every way successful. On Tuesday there is not a great deal of work done: the meeting is duly constituted, the formal business of the Association is got through, and the President delivers his address. That of Sir Robert Christison was chiefly remarkable as a kind of protest on the part of the Scottish Universities and Corporations against much that has been lately said and done in England as regards medical education. Especially it was directed against the senseless outcry for the abolition of formal lectures, and the substitution therefor of what is called practical work. Again, as regards the Conjoint Scheme, he formally announced that all the Scottish medical authorities are now dead against it in any shape. The address was long, but well listened to; and it left a profound impression on the minds of the auditory.

In the evening, the President held his reception in the Music Hall. The place was thronged, and all would have ended splendidly had it not been for the unfortunate *contretemps* of a heavy downpour of rain just as people were leaving. Few cabs were to be had, and many ladies had to walk home in the drenching rain.

This morning, Dr. Begbie delivered the Address on Medicine, now before our readers, to an audience crammed to the uttermost; and in the afternoon the sections began work. In the evening, the College of Physicians gave a *conversazione* in the Industrial Museum. We need hardly say that the Edinburgh Faculty are doing their best to maintain the old Scottish reputation for hospitality.

A little matter has somewhat agitated the meeting this morning. Ladies are unusually plentiful at this meeting, and among them more than one of the medical sort. Some belong, or would wish to belong to the Association, and are down for papers. Mrs. Hoggan, for instance, is at last to unbosom herself of the dreadful secret which so agitated the Pathological Society when darkly hinted at by her husband. However, certain members object to these things, and the address of this morning was for a time deferred by a discussion on the subject. Mr. Oliver Pemberton moved that the sense of the Association be taken in the matter, and it was determined that this should be done by circular. It is to be feared that it will go hard with the ladies.

In the morning, Professor Lister gave a demonstration of his antiseptic method, opening a knee-joint, and showing a tarsus which had been cut into, with the clot *in situ* beginning to attach itself to the surrounding parts. The whole demonstration was remarkably successful; but the Infirmary just now is in a wretched state.

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THE PRESIDENT'S ADDRESS.

By Sir ROBERT CHRISTISON, Bart., D.C.L. Oxon., M.D., LL.D., F.R.S. Ed.,

Ordinary Physician to the Queen in Scotland; Professor of Materia Medica in the University of Edinburgh.

GENTLEMEN,—My first duty is to bid you all welcome to this seat of medical learning, familiar of old to many of you as the school in which they were initiated into the mysteries of physic,—to welcome you in name of my medical brethren of the city, in name of my fellow-citizens at large, in behalf of the good town, too, herself, who, I see, means to put on her fairest sunshine smiles to greet your arrival—no common favour, let me tell you, in this the usual week of the Lammas Floods.

My next duty is to offer you my gratitude and thanks for your great kindness in choosing me for your President during the meetings of your present annual session. You might fairly have bestowed that great honour on another; and perhaps I might have thanked you in that case also for sparing me a task, which I find it not easy to perform to my own satisfaction. You might well have bestowed your favour on another; for, when this Association last met in Edinburgh, the health of your then President and my dear colleague Dr. Alison was such as to throw his work in a great measure upon me as his deputy, placing me virtually at your head, so that, were I inclined to take the most flattering view of my present position, I might almost claim for myself the singular distinction of now occupying for the second time the chair of the British Medical Association.

So much the more am I called on to look well to the next and most trying of the duties I have to discharge towards you now: the delivery of the address which you are now assembled to claim from me. Especially is it incumbent on me to look warily to its subject. Assuredly my subject should be a high one, when so many hundreds of the chosen among the members of our profession, as well as some from foreign countries, are met together, as they never do meet unless under the auspices of your annual convocation.

After hesitating between several topics coming up to this valuation, and well worthy of being considered by you, I ultimately thought I should fulfil my duty to you, to our medical brethren generally, and to the public interest too, by fixing on a topic which for some years has been uppermost in the minds of many thinking men of our profession: the question, "Whether, and what, change is desirable in the present system of education and of examination in the medical schools of our country?" I am led to choose this subject, among other reasons, because in the public prints only one side of the question has been hitherto shown, while there is unquestionably another, and a good one too. I hope I shall not be thought to intend the slightest disrespect to this Association when I add that I am all the more inclined to take up the subject here, because my own views do not altogether coincide with those which are understood to be popular in the Association, and which at least have been powerfully advocated from time to time in its *Journal*. My subject, then, is—What sound reason exists for a fundamental change in medical education and medical examinations?

I beg you not to be startled by my choice of a rather hackneyed theme. It would be very dry and hackneyed indeed, alike to you and to myself, were I to undertake it methodically and in whole. I mean, with your leave, to view the question from a quarter whence it has not yet been looked at. I propose to give you historically some insight into the school-life of one of our chief seminaries of medical education, in the hope that there may be found in its history some safe guidance in the present somewhat wild struggles of our profession to improve itself, to redress what seems faulty, and to frame, if possible, a masterpiece of medical examination and precursory study. In singling out for this end the medical school within whose walls we are to be assembled, I do so from no vain-glorious pride in the school to which I have myself for many years belonged, but because—firstly, I know its history, constitution, and work best; secondly, being here, you will probably take some interest in a subject with which most of you are but slightly acquainted; and, thirdly, because it is most surely worth while to inquire in the present conjuncture into the causes which have led the medical department of the University of Edinburgh, situated in an outlying quarter of the kingdom, to become for well-nigh a century, with little interruption, the most populous medical school in the British Islands.

The University was founded by James I. (of England) in 1582. In the following year the Faculty of Arts was started at once by the teaching of six of the seven subjects now required for graduation in that faculty; and the Theological Faculty was instituted at the same time, by the founding of a chair of divinity. A Law Faculty was not initiated till a few years after the commencement of last century. That of Medicine had its beginning in 1685, through the energy and influence of three of the most remarkable medical men of the day in Scotland—Sir Andrew Balfour, Sir Robert Sibbald, and Dr. Pitcairn. Botany seems to have been their first object. Fifteen years earlier, Balfour and Sibbald created the rudiments of a botanic garden, one object of which expressly was to introduce into Scotland the cultivation of foreign plants yielding medicinal products, which in those days of not easy intercourse among nations were not readily got when wanted. Our modern Royal Botanic Garden of twenty-seven acres (too small for its 340 students), had its origin in 1670 in a little plot of ground close to Holyrood Palace, measuring forty feet square, in which, nevertheless, were reared no fewer than 900 plants. The site was soon transferred to a large garden, where now flourishes the city station of the North British Railway. Dust and iron, hurrying engines, interminable rows of trucks and carriages, clouds of steam-vapour, and the scent of coal-gas from the neighbouring gasworks, have taken the place of the groves and avenues, the perfumed airs, and the scientific seclusion of the old Physic Garden. But one relic survives in a fine yew, now adorning the garden in charge of Dr. Balfour and Mr. Macnab, twice transplanted successfully after becoming a considerable tree, and proving its own age by the *modulus* of De Candolle, according to which it must be above two hundred years old. The success of the Physic Garden was so great, owing to the fostering care of its promoters, and the ability of its first keeper, James Sutherland, originally a clever young gardener, that in 1676 an Act of the Town Council of the city, then the founders and patrons of professorships, established in Sutherland's favour a chair of botany in the University. But for some unknown reason the Act was not given effect to; so that a second Act of foundation became necessary to make him effectually a university professor in 1695. In the meantime Sibbald had influence enough to obtain also, in 1685, the establishment of a chair of medicine. It is a fact not unworthy of notice, as throwing some light on the early history of medical education in this country, that in every other University of what is now the United Kingdom there existed for a long period of years only a single professorship of medicine. Oxford had its professor of medicine first in 1535, and no other medical professor for nearly a century. Cambridge got its chair of medicine in 1540, and no other till 1702. Dublin began in the same way in 1637, without addition till 1783. Of the Scottish universities, Glasgow was slow to undertake the teaching of medicine; its professorship of medicine having been founded in 1713, of anatomy in 1718, of no other branch till 1807. St. Andrews had its first professor of medicine in 1722. Singularly enough, the University of Aberdeen has the merit of having anticipated all others, even Oxford and Cambridge, and been the very foremost in the United Kingdom to possess a chair of medicine. Under the name of Mediciner, King's College, Aberdeen, had a professor "before 1522" [Calendar 1875]—probably so soon as 1505. In the younger Marischal College there was a professorship of medicine in 1701, but no support to it till a chair of chemistry was erected in 1793.

Plainly, then, it was understood in all these universities for more than a century that one man was competent to educate students for the medical profession. Whether Sir Robert Sibbald and his coadjutors, trained at a continental school and by continental travel, were aware that this was a faulty arrangement, we cannot now tell. But they were the means of establishing, for the first time in Britain, three professorships of medicine in the University of Edinburgh. Thus they may have introduced the valuable novelty of dividing its special branches among special men. But it is not now known how they taught, or even that they did all teach. If they did, it is quite possible that, according to the system pursued in the Faculty of Arts, each professor carried his students through a three-years course of study, taking up "freshmen" every third year, each in his turn. As little is

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now known of their success. They have left no mark upon the University except the foundation of their own chair and that of botany. Their teaching, at all events, made no graduates; for there was no medical graduation in Edinburgh till 1726, forty years almost after their appointment.

The University of Edinburgh was not the only theatre in which efforts were early made to institute medical education in the Scottish capital. The Royal College of Surgeons also appears to have given it encouragement. Alexander Monteith, a member of the College, and the chief surgeon of Scotland at the time, certainly so soon as 1699, and until at least 1702, delivered a six-weeks course of lectures on chemistry, followed by demonstrations in materia medica; and he divides with Dr. Pitcairn the distinction of first overcoming the prejudices of his countrymen and persuading the city authorities to grant licence and means for pursuing anatomy by dissection of the human body. But the College of Surgeons never established a school of anatomy and surgery. I should add, perhaps, that lectureships, in default of professorships, were appointed for several branches of medicine by the Universities of Glasgow and Aberdeen, but not till last century was far advanced. In Edinburgh alone were the roots of a medical school, in the true sense of the word, fairly planted in its University so early as the end of the seventeenth century, and brought to maturity in the first quarter of the century following. The school of Sibbald and Pitcairn was but a beginning, and probably not very successful. But soon afterwards matters took the right direction—towards a separation of subjects—by the establishment of a lectureship on anatomy in 1705, and the foundation of a professorship of chemistry in 1713. In fact, it was not till the appointment of Alexander Monro *primus* to be professor of anatomy in 1720, that the University school of medicine put on a shapely form, and entered upon its career of prosperity. Monro has his place in history as one of the European anatomists of last century. But anatomy was not his sole gift by any means. Highly educated, favoured by his conspicuous office, which he entered when only twenty-three, and bringing to the task he had set himself an intimate knowledge of the organisation of the schools of Paris and Leyden, a profound knowledge of men, and polished affable manners, he won the confidence of men of station and influence, attained popularity with all ranks, and is understood to have had much weight in the general affairs of the city and country. Thus it was that he not only soon placed the University medical school on a sound and prosperous footing, but likewise mainly created the Royal Infirmary. In the University he found ready to his hand a chair of chemistry and a chair of botany; there was also the old chair of medicine, capable of being moulded into the fitting shape of practice of physic; anatomy and surgery were his own province; in 1724 was added a chair of theory of physic, which then embraced physiology, pathology, and therapeutics; in 1726 midwifery was also provided for, and materia medica was early taught by the professor of botany in winter, botany itself occupying his attention during the summer months. Thus the whole round of medical science and practice came to be skilfully partitioned, anatomy, chemistry, botany, physiology, medical practice, and midwifery being each taught separately; surgery, too, by one of the six professors, and materia medica by another of them. This arrangement, extensive, complete, and harmonious for the times, was carried into effect very long before anything of the kind was attempted at any other university, or, indeed, so far as I can discover, in any other school of medicine in the United Kingdom. Several of these professorships have been subdivided since that time. Surgery has been assigned to a separate professor, pathology to another, and therapeutics have been transferred to materia medica. But all branches were taught from the first; and the only new creations in the University have been those for natural history, medical jurisprudence, and clinical medicine and surgery. The first of these is a general rather than a medical chair. In the establishment of the three others the University of Edinburgh took the lead by a long way of all other British schools, as it had done in the organisation of a school complete according to the times immediately after 1720.

I have said that Monro was mainly instrumental in originating the Edinburgh Royal Infirmary. For this end he took advantage of his influence with the Royal College of Physicians, and also with a very able and enlightened man, of great weight in city affairs, Lord Provost Drummond. He must have set about this enterprise very early, for in 1728 subscriptions enough had been got to set on foot next year a small hospital. A larger one having been subsequently built and gradually extended, a royal charter of incorporation was obtained in 1736. Monro evidently had designed from the first that the hospital should be devoted not more to the cure of the sick poor than for the education of students of medicine. Repeated early minutes of the Infirmary managers prove this, and show how zealously they concurred with him. The culmination of the fabric, so far as education is concerned, was the inauguration of the teaching of clinical medicine in 1748 by Dr. John Rutherford, professor of the practice of physic. The hospital managers espoused warmly the cause of clinical teaching, as appears from sundry minutes of their proceedings in favour of the University professors and their students. In consequence, Rutherford was joined ere long by some of his colleagues; and in 1756, as we find from the Infirmary records, clinical instruction was given by Rutherford, Whytt, professor of the theory of physic, Cullen, then professor of chemistry, and Monro himself. The coalition of four such men in training up a medical school from its infancy was a mighty element of success. Priceless, too, was its own organisation, as fashioned by the genius of Monro. What, then, was the success of this new University school of medicine? Monro himself began his lectures on anatomy and surgery in 1720, with 57 pupils, and increased them to 182 in 1746. It is impossible to arrive at a knowledge of the number of medical students generally for many years later. The earliest register, in 1772, when it was far from being complete, makes the matriculated medical students 269. In 1791—when Black taught chemistry, John Hope botany, James Gregory practice of physic, Monro *secundus* anatomy, Francis Home materia medica, Andrew Duncan *senior* theory of physic, and Alexander Hamilton midwifery—the list had risen to 430, and at the close of the century it exceeded 500. By this time the youth of England, Ireland, and the British colonies flocked to Edinburgh to fill the class-rooms of Monro, Black, Gregory, and their colleagues and successors. Of 383 medical graduates in the ten years following 1790, only 71, or scarcely a fifth, were Scotsmen; 102 were English, 115 Irish, and 35 from the West Indies. Of the remainder, 27 were from the United States and chiefly Virginians, 15 Canadians, 7 Swiss, 7 Portuguese, 4 French—probably of refugee families—and the tale is made up with a Prussian and a Dutchman, whose patronymics, however, unmistakably betray British blood.

After the beginning of the present century still further progress was made, so that in 1815 the medical matriculations were 929, in 1824 939, and till 1830 very close upon 900 every year. Subsequently a succession of adverse events, betokening, however, the prosperity of the nation, conspired to bring down this great school population. It was inevitable that the University medical school should feel the influence of the establishment, on its own model, of University College and King's College in London, the London University, and the Colleges of the Queen's University in Ireland; of the gradual advancement of the universities of the United States; and of the great demand made by the rapidly increasing colonies and commerce on the supply of the half-educated youth of the mother-country. Thus it fell out that in thirty years more the medical school sunk by degrees to about 500. A great change in 1861 made in the plan and conditions of graduation, through the action of the Universities Parliamentary Commission of 1858, brought about a further temporary fall, till the students in 1868 numbered only 445. But the elasticity of the University soon put the stamp of wisdom on the measures of the Commissioners. A steady annual increase of from fifty to ninety has restored the list to the high standard between 1815 and 1830, till at last in the present year the medical students number 898.

Graduation has marched, on the whole, in a line with matriculation—in the number, at least, of the recipients. During the five years preceding 1831 the graduates in medicine were 575, or on an average 115 annually. Of these 187 were from Scotland, 168 from England, and 175 from Ireland, showing a nearly equal resort from the three countries of the kingdom; and the remainder was made up of 34 colonists and 11 foreigners. At that time the University gave no other medical degree but that of Doctor. But since 1861 the candidate who aims at the Doctorate must pass through the stage of Bachelor of Medicine at least two years previously; and hitherto about a third only of Bachelors go on to the higher degree. During the last five years, ending with 1874, the Bachelorship has been taken by 358 candidates.

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or 72 annually on an average; and 113, or 23 annually, have been made Doctors of Medicine. Their relative nationalities show a remarkable change during the last forty-five years in the sources whence the graduates, and consequently the students, have been derived. Of 113 doctors, 53 are from Scotland, 47 from England, 9 from the colonies, 3 from foreign parts, and 1 from Ireland. Of 358 Bachelors, 154 are Scotch, 126 English, 62 colonists, 10 foreigners, and 6 Irish. The proportion of English to Scotch remains nearly the same as formerly. Colonial men have increased threefold, but the supply from Ireland has been almost dried up; for, in the ratio of the earlier period, the Irish Bachelors, instead of 6, should have been 150, and the Doctors 50 instead of 1.

So far as the relations of Ireland to the medical school of Edinburgh are concerned, it has accomplished the isolation aimed at by the Irish people in weightier matters. In medical education, Home-Rule has been attained effectually. I hope it has been exercised wisely. In that case, Scotland's loss may be Ireland's gain. And, perhaps, the latter will not regret to learn that the loss she has thus occasioned has been fully compensated by the increased afflux to the University of Edinburgh from other quarters. Thus has been reached the old high standard of the period between 1815 and 1830. It is true that, had Ireland still entrusted the medical education of her sons to Scotland, there would have been above 1100 medical students in Edinburgh, instead of 900. But, as matters actually stand, do not the attractions of its school stand out all the more conspicuously, since the present standard has been reached with scarcely any contribution from the sister island?

Such are the facts we have to deal with. On proceeding to inquire into the causes of this great prosperity, the first to catch the observer's notice is the organisation of the University—very different as it has been from the not less prosperous Universities of England.

The king who granted its charter did not himself, in strict language, found his college. He remitted that honour to the Town Council of the city. The Council naturally created themselves not only patrons, but likewise sole irresponsible governors. They were possibly led to take this step by the knowledge that the more independent universities elsewhere had proved very troublesome neighbours to a meddlesome municipality; and in their frequent squabbles and encounters, not always bloodless, always in the end won the victory on appeal to their mutual sovereign. The Town Council proved hard taskmasters during the first hundred years of their government. They appointed professors to hold office during pleasure only; and in the troublous times of alternate episcopal and presbyterian persecution they put them up and knocked them down like nine-pins. On one occasion, they delicately intimated that "the affairs of the College were to be treated of in the Council, and the professors sent for *pro re natâ*." They interdicted the professors from electing their own representative in the General Assembly of the Church. They fixed the days and place of graduation, appointed even the College porter, and took fatherly charge of the College bell. In all things which concerned the professors, they never lost sight of proverbial Scottish parsimony. Founding, in 1586, one of the Arts professorships, they attached to it a salary equivalent to £3 6s. 8d. English, and 13s. 3d. for board. When, a century later, they founded, in 1685, the three chairs of medicine for Sir R. Sibbald, Dr. Pitcairn, and Dr. Halket, they did so "with express condition that they should never have any salary from the town." This was a disagreeable precedent, which their abler, wiser, and more liberal successors of last century scrupulously followed. Perhaps they thought it best that their professors, left to their fees only, should know they had to live by their wits alone. Some people are of that opinion still, and imagine that such provision was one of the sources of success of Monro, Whytt, Cullen, Black, Hope, Gregory, and the other University lights of last century. For my part, I should think a moderate salary scarcely capable of abating the zeal of such men, or of their successors; and, on the whole, the case of a professor with a moderate salary is probably much akin to that of the "frugal swain" in the tragedy of Douglas, "whose constant care was to increase his store."

Setting aside this peculiarity of unendowed chairs, as probably not requiring to be taken into account among the causes of prosperity, we see nothing yet in the organisation of the University to give it elasticity and progress. Nor had it yet come forth from obscure mediocrity. But early in last century, the genius of Monro and the high place in public esteem, at home and abroad, attained by him and his coadjutors, not medical alone, but also in all the other faculties, imposed a powerful check on Town Council interferences, to which greatly contributed the superiority of Lord Provost Drummond over municipal prejudices and jealousies, and his reliance on those who were now allowed to take charge of their own University affairs. So completely was University government thus thrown for full one hundred years into the hands of the principal and professors, at last really deserving their title of "Academic Senate," that within this body it came to be thought and assumed that they were in University business legally the council and executive. But in 1825 they were painfully roused from this delightful dream; and two costly lawsuits proved that the Town Council still possessed autocratic authority in all things; and that the Senatus had scarcely any power whatever, except that of doing each man his special duty to his students. Softened by time, my memory shrinks from recalling the heart-burnings, the strife, and the decadence which ensued. Let it suffice that the highest authorities here and at the seat of government came to see, not too soon, that things could not be allowed to go on so; and, as the result, there has been granted to the "College of King James the Sixth," by Queen and Parliament, a true University constitution. All matters are now ruled within the University itself by the Senatus Academicus as administrators, by a University court as comptrollers in all affairs, and originators in some, by a general council of some thousand graduates as advisers,(a) and by her Majesty in Council for certain specified objects It is only thirteen years since the new constitution, granted in 1858, was set in free motion. During that time the matriculation list has increased by one-half; in the Medical Faculty it has been doubled; important professorships have been founded and endowed liberally; many good bursaries, scholarships, and prizes have been instituted; students—and professors too, as I can see—have been stirred up to renewed zeal; vast improvements have been made by the introduction, wherever it has been attainable, of thorough practical teaching; and this has been rendered possible by a material augmentation of the general University funds through the greater afflux of students, as well as the generosity of donors. Such are the natural results of free, liberal self-government, duly controlled, however, but within itself.

Under the permissive government by the Senatus Academicus during last century, the Medical Faculty was organised by Monro and his colleagues or their immediate successors, as already partly indicated. Their first principle of action, borrowed from continental schools, was to assign special subjects to special professors. Of all the schools in the British dominions, theirs was the first to discover this now very obvious element of success. At first, indeed, they could not carry it into every branch of medical tuition. But this has been done gradually since with all but clinical medicine. Clinical medicine was systematically taught almost a century before it was similarly taught anywhere else in this country. Soon after its introduction it was entrusted to four of the medical professors; and such continues to be the practice in the present day,—three or four teaching every academic year. There were also, at first, other exceptions, the most instructive of which was the conjunction of surgery with anatomy. The first Monro, his son, and his grandson, whose singular fortune it was to fill the chair of anatomy in succession for 126 years, kept fast hold of surgery also till near the close of that long period. A useful lesson is conveyed in the fact, that, until after the foundation of a chair of surgery in 1831, the University was almost unknown as a surgical school. Very different was the fortune of physiology. That subject was detached in 1724, alike from anatomy and from the practice of physic; and as the result, physiology has flourished, and flourishes more and more in the hands of a succession of able

(a) In an account, otherwise correct, which has been given of the University of Edinburgh, in last Saturday's *British Medical Journal*, the writer has unfairly represented the privileges of the General University Council, and the administration of the University Court in relation to the Council. In recounting the Council's privileges, he strangely omits one, to which most people would attach some value—that of choosing a Member of Parliament; and in stating their right to be consulted by the Court as to its measures for "improving the arrangements of the University," he adds that "this rule is generally honoured in the breach." The Court of eight members has had from the beginning the aid of one or more of them being of the first rank at the bar or on the bench, who are not very likely to have winked at such illegality; and I can testify, as a member since the commencement to the present day, that after the first year or two of experience of its novel functions, the Court has never failed to consult the General Council in all matters which by statute must be referred to them.

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professors. We know, on the other hand, what has been its fate in other British schools, where, till only a few years ago, it was linked with the great subject of anatomy,—as if that were not ample enough, singly, to strain the energy of the ablest instructor.

Another ruling principle with the originators of this medical school was, that they should admit no slovenly half-measures into their school-work. Having chosen for their system of teaching, not the detached tutorial method of the English Universities, but the delivery of lectures by professors to the students in mass, they determined that each subject should be taught in all its details by full courses of lectures of five months' duration, which were afterwards, in the progress of medical knowledge, extended to six months about the close of their century. Thus it came about that, when I studied medicine from 1815 to 1819, the winter session began with the last week of October, and lasted till the end of April. Several professors disposed of their whole subjects in a hundred and twenty lectures; the professors of anatomy and of the practice of physic got through two-thirds of their materials, varying the omitted subjects in alternate years; and Dr. Hope, by making use of Saturdays and occasionally a second hour on other days, went over the whole chemistry of the period in a hundred and thirty-six lectures, so as to leave very little not illustrated by his luminous discourse and splendid never-failing experiments. A different opinion is now in vogue from what was then entertained of the utility of such full courses of oral instructions; and pressure on the University has led to the reduction of the winter session again to five months—with what advantage, I confess I have not been able to discover.

During last century, medical education consisted almost entirely of an elaborate system of lecturing. We may form some idea of the labour bestowed on it, as well as the high appreciation of it at the time, from many MSS. still extant—manuscripts so detailed, that they must have been written almost *verbatim*, and, indeed, have been mistaken by inexperienced book-hunters for originals by the professors themselves. Thus an enormous folio volume of Cullen's "Lectures on the Practice of Physic," in 1775, in our University library, would make three goodly octavo volumes, of five hundred pages each, of the close class-book print of the present day. One copy I have seen consists of a hundred and forty-six lectures.

But it is not a little strange that the able professors of that century seem not to have thought of helping their oral instruction by practical teaching. Anatomy, indeed, was made the subject of practical teaching; how soon I have not been able to discover. But even so far down as 1815 it was by no means a universal study; and, though it became so not long after that date, it was not made an imperative part of education for the medical degree till 1832. Nothing else was taught practically. Botany, for example, was not taught thus till Dr. Graham introduced field-instruction on his succeeding Dr. Rutherford in 1820. Nor at that time was even chemistry taught otherwise than by lectures. In 1820, indeed, there was no school for practical chemistry for students in the British Islands; so that in the same year I had to resort to Paris, and Dr. Edward Turner to Göttingen, to study chemical analysis. Matters are differently circumstanced nowadays. Every branch of medicine taught in the University, save one, is now fully taught by the practical method; and those who desire to cultivate any one of them as the subject of special research may command easily the opportunity. The sole exception is my own subject—materia medica—one branch of which, pharmacy, eminently lends itself to practical teaching. I should have taken advantage of this circumstance long ago had not the large accommodation required been absolutely unattainable in the present University buildings; but I have taken care that for this purpose ample provision shall be made in our new medical college, for myself or my successor in office.

It is very difficult to account for the neglect of practical instruction by the great Scottish physicians and professors of last century; but, nevertheless, amidst the enthusiasm in the present day for practical instead of systematic instruction, let this lesson—handed down to us by the experience of the medical luminaries of the last age—never be forgotten by us, though it seems to be put out of sight by many: that their system of tuition bred physicians of great name in British medicine, and spread able practitioners over the whole British dominions, who, among other conspicuous incidents in their lives, filled many of the highest medical offices in the State, and often took, in medical practice, the foremost place not only in the great metropolis, but likewise everywhere in the large county towns of England and Ireland, as well as in Scotland.

From the commencement of the University medical school till after the close of the first quarter of the present century, no measures were taken for securing regularity of attendance on the part of students. For that the professors trusted to the good sense of the students themselves. Nor were they trusted in vain. I am confident at least that, when I was one of them, attendance was quite as regular as now under the strictest regulations which could be well enforced at a populous school of gentlemen. Neither then nor now can those who are idly disposed be forced to attend. I am even afraid that the present regulation may call forth the natural contumaciousness of not a few youthful minds, so familiar with the Horatian maxim, "Nimium in vetito semper," as to consider it a necessity which must be obeyed, and who are restive under a rule for no other reason than that it is the rule. On the other hand, the present practice, though it may not check absenteeism, certainly detects it, and was expressly adopted to supply the want of such a test. A few years before 1830 one of the London licensing boards complained that men from England, after matriculating and entering their names in one or more class-books, returned home at once, and never looked near the University again, producing their mere ticket of admission as their qualification, and, indeed, the only proof of attendance ever issued by their teachers. To end this malpractice, monthly signature was required. But the same London board subsequently urged that certificates of due attendance at each class should be given; to effect which the regulation now in force to ascertain the student's presence in each class very many times during the session was passed in 1832—in my opinion, unfortunately. But occasional signature, to ascertain residence, was quite right, because some check of the kind was called for in consequence of another custom adopted by the founders of the University school, and adhered to ever since. This was, that there should be no rule of residence in college-halls for the students. At the foundation of the University, when it possessed a Faculty of Arts and Philosophy only, college residence was evidently intended by its patrons; for in the following year (1583) the Town Council records bear that the Town Council "orders the chambers to be set at forty shillings" (Scotch, equal to about as many pence English), "and two to be in a bed." The scheme was a very humble one, suited to the scanty means for carrying it through; for it ought to be mentioned that, although King James, when founding his College, undertook to endow it, the promise was not kept by the parsimonious monarch. It is well that the poverty of the city prevented the continuance and extension of the rule of residence in college, for, apart from the fact that university education is attainable at less cost without it, grave doubts may be entertained whether harm, rather than good, may not come of gathering in college-halls crowds of young men at the age of those who are undergoing their professional training. A few years ago, indeed, an attempt was made to establish a college-hall, the projectors being moved thereto partly by the knowledge that some anxious parents, in sending their sons from home, hesitate to turn them adrift under nothing but their own guidance, and partly by the desirableness of providing home discipline and superintendence for the lazy, the giddy, and the evil-disposed. But the scheme failed; and it fairly admits of question whether residence in the families of medical men of the city, who receive and guide students of the University in their studies, is not far better provision for troublesome youths of these several denominations.

For enforcing diligence on the part of students, the only surety possessed for a long time in this University was examination.

Whether the early medical professors held class-examinations, I have not been able to discover. By some, however, though not by all, oral examinations were held in their classes early in the present century. The practice was easy then, because the paucity of subjects of study left abundance of free hours for work of this kind. It is otherwise now, and ever since the subjects of separate lectures have been doubled in number. The difficulty thus arising is not taken into account by many who inconsiderately urge that all teachers should practise frequent oral examinations. For some years examination by written papers has been substituted, and practised with apparent success in all the medical classes.

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This method has the advantage of testing all who undergo the trial with far less consumption of their time; but it cannot be practised so often as some reformers would have it, who forget, or may not know, that the labour and consumption of time involved in examining the written papers of a large class are enormous, and that such work is a by no means grateful task.

For the degree examinations, when the Faculty of Medicine here was short-handed, examiners were supplied chiefly by the Royal College of Physicians. But, as soon as the professorial staff was complete, the professors themselves became for a long period the sole examiners. In 1861, the Universities Commissioners, with the hearty approbation of the examining body, added three extra-university examiners; and last year, by recommendation of the Medical Faculty, the number was raised to thirteen; so that there may be an extra-academical examiner, qualified, like each professor, specially for each subject, and two examiners constantly present at each act of examination. In the old way, until the present century was well advanced, the rule was that one professor, in presence of the whole Faculty of Medicine, occupied about an hour in examining a candidate upon the anatomy and physiology of a particular organ, its diseases, their diagnosis and treatment, and the chemistry and pharmacy of some of the remedies mentioned; and then each of his colleagues put a few excursive questions on other topics, not necessarily belonging to his own professorship. If I may judge from my single experience as a candidate in 1819, these examinations were a true and searching test of competence and incompetence, of ignorance and knowledge, and of talent too. The system had the advantage that all the judges heard all the examinations. I shall never forget the masterly and fair examination of Dr. James Gregory as examiner-in-chief. The subsequent short skirmishing by the other professors would probably amuse you, had I time for such details—more, probably, than it did me at the time,—until the last question of all. I thought myself pretty safe with Dr. Rutherford on botany, as it was a favourite pursuit of mine. But he, thinking, I am sure, that success had made me over-confident, threw botany aside, and determined to cool my courage with a question very much out of the way of a tyro. He asked me the symptoms of a calculus passing down the ureter from the kidney. A few days earlier, and he would have attained his wish. A fortnight previously, however, a well-marked case of the kind had passed through my hands as Resident Physician's Assistant in the Royal Infirmary, and interested me greatly; and so there was neither difficulty nor merit in both mortifying and satisfying Dr. Rutherford.

This old method of examination has been completely abandoned, as I understand, at every university in the kingdom, and in the University of Edinburgh has been given up for at least forty-five years in favour of the plan now followed, according to which every candidate is examined specially on every branch of medicine by one or more—in Edinburgh by two—examiners specially qualified in one branch. Although I was actively instrumental in carrying through and perfecting the change, I do not feel confident that it has substituted a better test. While the old method is apt to degenerate in careless hands into superficiality, the newer way is apt to dilate into too great vigour in the hands of an examiner who may appreciate too highly the relative importance of his own branch of culture. It is also an objection to the latter mode that it prevents every examiner from hearing what the candidate has to say on every subject but one—viz., his own. At least double the time, too, is consumed as in the old way; and I am afraid the candidate is liable to be oppressed with too minute and too numerous examinations, and, which is worse, with too much and too frequent preparation for them. I entertain no doubt, however, that either method is a full and fair test when in the hands of able, impartial, and faithful examiners.

I have thus put before you the leading particulars in the history of the medical department of this University during the last 150 years. I now beg to draw your attention to the inquiry proposed at the outset: Whether this narrative may not yield some useful lessons to the many who, with praiseworthy zeal, have lately proposed to alter and innovate largely in medical education and medical examinations?

Everyone, I hope, will acknowledge it to be only justice and common sense, that all reforms of the kind should bear some relation and due respect to success. I submit that the Edinburgh school of medicine—as proved alike by the great afflux of students, and by the multitude of men of mark trained in it who have held a high professional place in all parts, and in all public medical offices in the British dominions—has thus been so eminently successful, that its system deserves great consideration; perhaps for guiding other schools, but certainly in dealing with itself. Nevertheless, there are some essential parts of that system, which the opinions of some recent reformers, if acted on, would abrogate or dangerously injure.

Take, for example, the duration of the courses of lectures. The ordinance of the Universities Commissioners of 1860, on medical education, which by statute has the force of an Act of Parliament, requires that the courses of instruction during the winter session shall extend to at least one hundred lectures and during the much shorter summer session to fifty. But a late eminent authority, whose name, were I to mention it, would be received with universal high respect in his department, used to sneer at this regulation whenever it was spoken of, and held up his hands in horror at the idea of the poor student being compelled to listen to one hundred lectures in a session. Other men, taking more precise views of this subject, have urged that such full courses may be reduced to fifty, as sufficient at least for any branch except anatomy. It has even been propounded in print that some branches of medical instruction, which in Edinburgh are taught in one hundred lectures in winter, may be advantageously disposed of in thirty-five summer lectures in London and the English provincial schools. At length, one confident writer in a weekly journal made the discovery that it might be better if certain of these subjects were not lectured on at all; and in one sense of the question I am disposed to agree with him.

It is true that these thorough reformers go further, and contemplate the substitution of practical teaching and home study for lectures. Reading, however, at the student's home forms an essential ingredient equally of both systems of tuition. It is scarcely necessary to say, that every student who means to profit fully by a course of lectures, possesses works of reference for enforcing, recalling, and expanding what he hears in the lecture-room. But reading cannot be advantageously substituted altogether for what he hears. The poet's maxim—

> "Segnius irritant animum demissa per aures
> Quam quæ sunt oculis subjecta fidelibus,"

applies to the relative influence of the description, and the exhibition of visible things or events, not to the respective effect of hearing and of reading about them. On the contrary, the theatre, the pulpit, and the bar prove familiarly to all how impressive are the words of a speaker compared with the words in a book. There is a magic in the human voice, a contagion in the listening attitude of a surrounding crowd, which command and intensify attention. A speaker may thus stir up enthusiasm in all who hear him; an author never, except in those endowed with unusual sensibility. The few who possess the attribute of being thus impressed by reading owe it to a rare idiosyncrasy. But idiosyncrasy cannot be called in to countervail the general experience of mankind in all ages of civilisation.

Moreover, in teaching the medical sciences, demonstration to the eye may generally be employed to aid demonstration through the ear. Our predecessors of last century seem not to have been so fully aware of this as we ourselves are. Anatomy, chemistry, botany, and natural history were indeed taught by them with that aid. But during my four-years course of study the professor of the practice of physic did not so much as once make use of a specimen, a drawing, a diagram, or a black board. So was it with his colleagues of clinical medicine, of physiology and pathology, and even materia medica. It was not till my predecessor, Dr. Duncan, succeeded to this chair in 1821, that demonstration by specimens and experiment was added to lecturing. But now, in every branch of medical instruction, the eye is appealed to as well as the ear. Wisdom is let in at both entrances; and at small additional expense of time, and no pecuniary cost to the student.

In order that lectures may be attractive, however, they cannot be very brief, not so brief as many reformers of the present day would have them. When too much curtailed, they must consist mainly of bald principles, and naked facts enunciated with the scantiest garnishing; and thus all zest is lost. No observant lecturer can fail to notice that, so long as he is dealing with abstract principles, general statements, bare descriptions, and dry facts slightly associated, it is difficult to secure the attention of his students. It is quite different

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when his discourse is argumentative, when he supports his propositions by suitable instances, when his description of objects is made clearly diagnostic by comparison with others, and, above all, when he is under no restraint in the copiousness of illustration by examples. The attention of his hearers is then fixed; and if he can prop up a conclusion by a well-chosen, telling case of his own, all heads are raised, and all ears on the alert to take in his information. This blending of general statements with richness of illustration it was which constituted the charm of some of the lecturers in my younger days, and eminently of Dr. James Gregory, Professor of the Practice of Physic. Gregory was the most captivating lecturer I ever heard. His course of a hundred and twenty lectures was attended to the last day with great regularity by classes of from three hundred to three hundred and sixty students. I never heard anyone complain that they were tedious; and I am convinced that his success was chiefly owing to the tact with which he freely used illustrations drawn from the exuberant store of his own vast experience. Everyone acquainted with the history of British medicine during the present century knows how powerful an impression Gregory made on medical practice throughout the whole British dominions. Right or wrong, he was the apostle of blood-letting, which stood the test of half a century's experience. The sway of his doctrines was owing entirely to his lectures, and to the publications of his pupils; for he himself never published on any branch of the practice of medicine. But would Gregory have found scope for his rare talent in the beau-ideal course of fifty or eighty lectures—the hobby of present-day reformers? Let Gregory himself supply the answer. In his annual course of a hundred and twenty lectures he overtook only two-thirds of his subject.

Those teachers and guardians of youth who lament, and those students who complain, that it is found irksome to attend lectures at the schools where the very short courses of instruction I refer to have been adopted, will now probably understand the cause. I know some teachers at these schools who have themselves made the discovery. It will probably be also understood why, when tuition by systematic lectures has been made so very barren on any subject, I agree with those most radical of all reformers that it is well to have, on that subject, no systematic lectures at all.

But I must keep in mind that the reformers, with whom I thus disagree so widely, propose to substitute practical instruction for full systematic courses of lectures. Their theory of medical education—short systematic, and full practical instruction—is a favourite with many at the present time. Especially was it much in favour with some prominent members of the General Medical Council, while I was their colleague; and, if I mistake not, it has met with favour also from not a few members of the British Medical Association. This is a matter as to which there exists considerable misunderstanding and some risk of error.

Practical instruction cannot take the place of systematic instruction. For, in the first place, the latter is an essential preliminary to the former; and, secondly, the student's period of study is much too short for his acquiring an extensive acquaintance with the great leading details of all the required subjects by practical study.

Systematic instruction is an essential preparation for practical study. This no man, I presume, will deny. But the more thorough the systematic instruction, the better the preparation. Take anatomy, for example. Practical anatomy is studied longer and more thoroughly by the general mass of students now than fifty years ago. But I have never understood that the systematic teaching of it has been curtailed on that account at any of the great medical schools. On the contrary, in consequence of the extension of anatomical science, what is called "anatomical demonstration"—which formerly meant daily demonstration, by the professor or his "demonstrator," of what had been done during the day by each dissector in the practical rooms—has been converted at several schools into an additional course of systematic lectures on anatomy, carried on at a second hour.

How far ought other branches of medical education to be treated differently? What of chemistry, for instance, the importance of which to medical science and medical practice is becoming more and more apparent every year? Chemistry was the next science, after anatomy, which was taught effectively in this University in the practical way. For many years Dr. Hope offered his students no opportunity of practical instruction. At length, in 1823, the teaching of practical chemistry was begun by his assistant, Dr. Anderson; it has been improved, and ever since continued, by Anderson's successors in office; it has been long adopted by every extra-academical lecturer on chemistry here; and it was considered by the Universities Commissioners of such value to the medical student that it was added by them, in their education ordinance of 1860, to the curriculum of study for medical degrees. Dr. Hope, I have said, gave no opportunity for practical study. But, as I well know from personal experience, his course of a hundred and thirty-six lectures on systematic chemistry was so complete, and so fully illustrated by never-failing experiments, that no diligent student ought to have found difficulty in taking up any branch of the subject practically, after learning the use and the handling of instruments and apparatus. I found none, at least, when subsequently, at Paris, I embarked in what were then the highest objects of chemical research, the analysis of the gases, the proximate analysis of vegetable poisons and medicines, and the elementary analysis of nitrogenous organic bodies. No such thorough preparation, however, could have been attained by the brief systematic course of sixty or eighty lectures proposed by the practically-minded of the present day. The introduction of practical chemistry into the University qualifications for medical degrees was not the cause of the reduction of our winter session from six to five months; and I am much mistaken if that change has not been found to cramp the systematic instruction given by the professor of chemistry, to limit unduly the branches included in it, and to curtail the experimental illustrations of those which he is able to overtake.

A third branch of medicine in which practical study is imperative on candidates for graduation in the University of Edinburgh is pharmacy. It is enjoined to be taken at the laboratory of a hospital, dispensary, or private practitioner; and it cannot now be studied in the University. But provision will soon be made for supplying that defect; and when it is made, the course of lectures on materia medica may be relieved and shortened by being confined chiefly to therapeutics.

A fourth branch is midwifery, in which practical instruction may be taken at a hospital or dispensary, or by attending the private practice of a medical practitioner.

But, besides all these subjects, botany, physiology, pathology, and natural history have been successively made the subject of practical instruction by their respective professors; in several of its branches, surgery, too, is now taught practically; and there is no reason why medical jurisprudence should not be taught in the like manner. Great success has attended such instruction in every branch of medicine in which it has been undertaken, in none more than in physiology. Hence some have proposed to add several of these newer practical studies to the imperative list, especially physiology and pathology.

But now we meet in the face a formidable question. Trusting to found on the theory of practical education a mode of escape from one horn of a dilemma, are we not about to rush on another precisely similar? Can the usual time-limit of medical study admit of such diversified practical training? Systematic instruction cannot be given up, were it merely as preliminary to practical instruction; and it cannot be given in short space. Whatever extent of it be held to be necessary, no part of it can be curtailed, without practical instruction being extended to supply the loss. But for every detail thus withdrawn from the former, treble or even quadruple the time is required to teach it by the latter method. This will be acknowledged by all who are conversant with both—by teacher as well as by pupil. In the same space of time the lecturer can go over in his systematic course, even with the addition of demonstrations and experiments, three or four times the amount of details which the student can overtake in any plan of practical study. It is a mere hallucination, then, to suppose that the latter can materially take the place of systematic lectures. In every way in which we look at the question, with the eye of experience, it will be seen that, in a sound system of medical instruction, systematic teaching must be the principal means, and practical teaching ancillary only. Care must, therefore, be taken, that the practical method be not extended beyond due bounds.

These considerations lead me to observe that many labour under an exaggerated and mistaken idea of the extent to which the medical sciences can be acquired by the practical method in the course of a student's curriculum of study. In

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fact, some teachers, in consequence of the same mistake, have erred, I think, as to the kind of practical instruction which they have endeavoured to impart. Some aim at covering a large extent of ground, and thus making the student acquainted practically with a great variety of objects. By this way, the knowledge acquired is necessarily superficial, and consequently fugitive; besides proving not very serviceable afterwards in actual practice. Others, confining the attention to comparatively few objects, teach familiarity with instruments and other means of research, the principles of scientific investigation, and skill and invention in inquiry. The information so gained, though limited as to its objects, is precise, profound, lasting, and such as enables the pupils to study any other similar subject with the same accuracy and success. The one method crams the student with surface knowledge, much of which he soon forgets. The other trains him to research, and teaches him, in short, how best to acquire knowledge for himself. The latter surely is the real object of school instruction; but it is apt to be lost sight of by modern theorists, who seem to think that the purpose of education at a medical school is to furnish the student with all the professional knowledge he needs, and to turn him out an accomplished physician or surgeon. I wish practical teachers would turn their minds to this question. For my part, I entertain considerable doubts of the practical utility of those courses of practical instruction which aim at embracing a great variety of matter. In regard to practical chemistry, for example, I well remember the time when a highly popular course of the kind was given in this school; and that, on one occasion, I found my four clinical clerks, who had all gone through it, were unable to make a filter, to pour a fluid securely into it, or to boil urine with confidence in a glass tube.

The conclusion I come to on the whole question of medical training is, that the most efficient system consists of full systematic lectures, and auxiliary practical instruction carefully chosen and limited. Such has been the system pursued in the University of Edinburgh; and hitherto the University of Edinburgh has been eminently successful.

I have purposely reserved for separate notice the most important of all practical training, clinical study, because it is somewhat peculiarly circumstanced. Clinical teaching ought to comprise lectures, demonstration of actual cases, and examination on them. This constitutes practical instruction auxiliary to the systematic courses on the practice of physic and practice of surgery. But by practical clinical instruction is meant something more; every student ought also to acquire such experience as is gained in the office of clinical clerk in a hospital. Unless he has served as a clinical clerk, or in a similar capacity at a dispensary, or with a private practitioner, so as to have been brought into close contact with cases of disease, and in a position of some responsibility for the knowledge and treatment, he is not yet prepared for entering upon independent medical practice.

Herein lay a great mistake of our predecessors. The majority of their graduates and licentiates were sent forth into independent practice, possessing no more practical acquaintance with disease than was got from clinical lectures; and, indeed, at most schools in the kingdom, with no more than they could pick up for themselves by what was aptly called "walking the hospitals"; that is, looking on as they best could, without lectures, bedside demonstrations, examination on cases, or any other help or guidance whatsoever. But now the rule, at least at this University, is for the graduate, if not already trained as clinical clerk, to seek that or some similar opportunity of thorough practical study, before taking advantage of his newly acquired legal right to settle in independent practice.

If this rule be so general—almost, indeed, universal—as I suppose it to be, here, at least, there is perhaps no call to enforce it by educational statute; and there is the serious objection to a statutory rule, that it is one very difficult to define and enforce without inflicting frequent hardships, owing to the impediment which is sure to start up in the way of all important additions to medical study, the limit of time allowable for a student's education. But if this, the most valuable of all his practical training, is to be demanded of all medical aspirants, it may be effected in one of two ways.

The first mode is to induce the student to commence his professional studies, not with the month of October or November, as is usual, but in the beginning of the previous May, so as to take his botany and natural history before commencing his statutory four-years curriculum. It is gratifying to find that very many of the students of the University of Edinburgh are now doing so of their own accord; if they could add to these chemistry in the preceding winter of preliminary education, so much the better. The four usual "Anni Medici" would thus escape crowding, and the last six months might be left nearly clear for a clinical clerkship. This clear half-year could be obtained with certainty if the present courses of lectures were better co-ordinated. Some are too long; several are too short; and at least two, anatomy and practice of physic, are much too short. But by altering the sessions, from a winter period of five or six months and a summer period of three months, to two equal periods of four months, with an interval of one month for holidays or graduation examinations, I am convinced that almost all our courses of lectures would be materially improved, none injured, and the concluding six months left free for clinical clerkships or other practical training of the same kind.

Under the present system, four years of study are rather too short a period; under a different system, they would generally suffice. But it will be said, Why not lengthen the period of study at once to five years? This measure was a favourite one in the General Medical Council during the first years of its life, but no more has been heard of it since the following objection was mentioned. The additional year cannot be subtracted from the years for preliminary education, but must be added to the four professional years, and, therefore, licence or graduation must be postponed to the age of twenty-two. But if a man may join the church, the bar, or the senate at twenty-one, why not the profession of medicine too, especially as many years must elapse before he can attain to remunerative practice? Moreover, a careful examination of the books of this University prove that, although of two hundred graduates in two successive years, four-fifths took at least five years of medical study, and graduated at a greater age than twenty-one, the remaining fifth, who graduated at twenty-one after four years of study, comprised three-fourths of those who passed their trials with distinction. Why, then, should these forty young men be prevented from beginning professional life early, and thus be defrauded of the advantages of the talent with which they had been blessed by Providence? And why in the profession of medicine alone?

Another way of securing the advantage of some such practical study as a clinical clerkship affords, is to require it to be taken, as I have said that a great proportion of the students of the Edinburgh school actually do take it, immediately after graduation, or licence, and before settling in practice for themselves. In that case, let it precede registration; for which purpose, remove the present statutory prohibition against entering certain subordinate offices before being registered.

But it may be said that there ought also to be a further examination. By all means. I think there is an insane rage for examinations at the present time; but there can be no great objection to a clinical examination at any period of life. Every new case of disease which a medical practitioner has to treat is a clinical examination to him. Of course, a young man who has just passed through the required training, and who professes himself competent to enter upon independent practice, may well be called on to prove his competency by examination—that is, by exemplifying what his practice is to be.

Such examinations might be fitly conducted by any of the present examining boards; or, if a Government pass be advisable, as many believe, to serve as a check on these boards, and for a greater surety to the public, there is here offered a simple and effectual opportunity for interposing a separate and independent board, to secure the sole object for which a conjunct board, or Government board—which are one and the same thing—can be reasonably demanded, viz., to see that a young man is competent to enter upon the practice of medicine independently on his own account.

Thus I approach the last topic with which I propose to occupy your attention at the present time. It is one about which the general sense of this Association and my humble opinion may hitherto have been not much in accord; but I entertain hopes that the case may prove different before we part.

For many years past there has been an outcry in our profession, and murmuring even amongst the general public, against a multiplicity, or even a plurality, of examining boards for licensing entrants into the medical profession. Many have seen, as they think, such evils in that system as even to have advocated the establishment of a single board,

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to supersede, or at least to override, all those now existing. Out of this feeling has been engendered the scheme of a conjunct board, or boards, to be made up of examiners selected from the existing boards, and whose province it should be to examine all candidates whomsoever, and necessarily either to supersede existing examinations, or to repeat and multiply them.

At first, measures of this kind were very popular—very much so with the General Medical Council, and not less so, I believe, with some men of note, members of the British Medical Association. For my part, however, I very early took quite a different view of the proposed revolution. There was no opportunity of stating in the General Council what could be said against it before my retirement from that body; but I have raised my warning voice since then in several other councils, and also in correspondence. Whether from this cause, or more probably through the influence of calm reflection, which time has allowed to all public bodies concerned, the result has been that every licensing board in Scotland is now opposed to the change; and in the two other divisions of the kingdom, where all boards seemed about to rush into one another's arms, for the purpose of being conglomerated and individually extinguished, zeal has of late been greatly cooled in this direction, and there has arisen a prudent hesitation in coming to closer quarters. Let us now, then, look a little into the whole matter, with the aid of the light which time has thrown upon it.

At a period not very distant, some licensing examining boards were too short-handed; others were undoubtedly too facile. Corruption even was charged—with what justice it is needless now to inquire. To correct these faults was one of the well-understood objects of the Medical Act of 1858, and one of the duties of the Medical Council which that Act has founded. Has the Act been found to fall short of its purpose in this particular? Certainly not. The Council may have set about the work of reforming the examinations rather slowly; but they are not to be blamed on that account. They had much besides on their hands. They were too numerous to deliberate promptly. It was well that they should gain public confidence before approaching the most delicate of their tasks. Their powers were thought not clear enough, nor sufficiently direct for vigorous action; nevertheless, much good has been done in several directions, and now the Council appear to have set about the duty of controlling examining boards with determination. It is well that they have done so in the present crisis, for the results will supply, if I mistake not, valuable advice in the present conjuncture. I have gone carefully over the reports of the able inspectors who have finished this year's duty, and I find that they pronounce various examinations to be all but faultless; that they point out an important fault in the examination of one of the most powerful medical bodies in the kingdom—a fault which, I doubt not, will be at once mended; and that they declare one board so far behind in duty that both the examination and the board of examiners must be remodelled.

The Medical Council, therefore, now know that they can command the services of inspectors who will report to them the truth without fear or favour. The Council are also already made aware of insufficiency existing in some quarters; but have they power enough to correct? Hitherto they have carried all their other measures by persuasion merely; but if in the present matter persuasion fail, have they the power to employ force? Such power is given by statute, but it is roundabout. A charge must be laid against the accused board before the Privy Council, who may or may not confirm it, and enforce the remedy. The statute has been thought in this respect too feeble; it must not, however, be treated as such until it is tested by actual trial, and the trial has not yet been made. If the statutory power prove too feeble when fairly tried—for example, against a powerful recalcitrant adversary,—I see no reason why the Medical Council should not receive direct power to enforce its mandate, subject to appeal to the Privy Council. Such appeals are apt, indeed, to be costly; but, perhaps, so much the better: there will be no appeal by a board not quite satisfied of being in the right. But the Medical Council and the public now know also that no small number of the examining boards of the country are without fault; therefore they can point to models from which defective boards may take example—nay, must do so. Therefore, too, they may say to Government and the public, and the members of this Association who have taken a strong and laudable interest in the reform of examinations, "In regard to the former bodies, there is no call for any legislative interference; in respect to others, we know what is to be done with them; let us try whether we can do it with the powers already entrusted to us; it is probable that no further legislative aid will be required." This is a plain and reasonable policy. Surely it is right that the Medical Council be not disturbed in their present efforts, and perpetually paralysed at the opening of every Parliamentary session by new Medical Bills, founded on mere theory, proposing to revolutionise and overturn what has gradually arisen as adapting itself to the wants and wishes of the nation.

One condition, however, must be admitted to be indispensable. As every physician ought to be educated in surgery, and every surgeon in physic, so every board, which simply qualifies a man for registration, must possess the power and the means of examining on all required subjects, medical and surgical. The universities, with few exceptions, enjoy this advantage. The three corporate colleges in Scotland have found no difficulty in acquiring it by combining together. In London, however, the medical corporations have hitherto been unable to unite, or mutually lend examiners, for reasons the cogency of which it is not easy to comprehend, but which assuredly ought to be put an end to one way or another. If these bodies cannot combine, why should they not obtain by charter the right to do, each of them, that which the Edinburgh University lately accomplished, without either difficulty or delay, under its new constitution granted by Parliament in 1858? It possessed twelve professors, specially qualified to examine, each on a special subject, and, in addition, three examiners from without who examined on any of the subjects. But the professors saw the advantage of having twelve non-professorial examiners, specially qualified like themselves on each of the twelve subjects of examination, to do duty *pari passu* with themselves. In two or three months the legal forms were gone through, and twelve first-class men obtained—five in Edinburgh, two in the Scottish counties, five in England, and three of these in London. You will now understand what I meant by the "elasticity" of this University. There is, in fact, scarcely any right and wise thing wanted which may not be attained under its constitution, provided the cost be forthcoming; and that, too, is seldom long in being supplied. Why should not each of the important Royal Colleges of England possess, for their efficiency, the same power with the University of Edinburgh of borrowing all round them, completing their examinations, and each qualifying singly for admission to the Register in the fullest sense of a practitioner entitled to practise according to his education? Why not, indeed, but for mutual jealousy, and the antiquated fondness for keeping up a bygone distinction—a distinction which really exists no longer, except for the limited few who stand at the top of each branch of our profession? Nevertheless, these bodies are said to countenance at the same time a complicated project of conjunction for themselves, and unhappily, for all their sisters too, and for all the universities likewise, which threatens to imperil the prosperity of all, and the very existence of several of them: this is the erection of a joint examining board for the whole kingdom.

Much has been said in Council and in print in praise of some such measure; but what has been uttered hitherto has been addressed to the general question only; and no one, so far as I am aware, has looked either to details or to consequences. Those who do so will not be much enamoured with it.

A favourite idea with many is, that there should be for entrance into the medical profession what they call a "one-portal" system, a single-door scheme, a single examining board, to subject every candidate in the kingdom to one uniform system of examination. In England, no one has yet done more than announce the theory, which, however, has met with a favourable reception. From Ireland there was sent over, a few years ago, a scheme of the kind, which went so far as to recommend an examining board of twelve, and for each a fee of ten guineas a day. There are, however, ten subjects of examination, for each of which we must have two examiners sitting constantly together, or twenty in all.

Let us see what will be the amount of their work. From a return, for which I am indebted to the kindness of Dr. Hawkins, Registrar of the General Council, the annual addition to the Register may be taken in round numbers, for the last three years, at 900. To these may be added sixty for those who, going to the colonies, or for other reasons, do not require to register. On calculating the returns of all exami-

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nations for two years, as annually published by the General Medical Council, 240 rejections must be added, in order to make up the total number of persons to be annually examined by this single board.

Long experience warrants the conclusion that the oral examination of 1200 candidates will occupy each examiner at least 400 hours. Experience also teaches that, for a moderate continuity of time, four hours of such monotonous uninstructive occupation are as great a strain upon the human mind as most persons will sustain. Further, large experience shows that the setting, watching, perusing, and judging written examinations will take each member of the board 184 days, on the assumption that 200 candidates are set to work at one time; but as this sort of labour is of a more contemplative kind, we may ask each examiner to give eight hours a day to it. Thus his whole annual duty will occupy 124 days; so that, deducting Sundays and half-holiday Saturdays, he will be engaged, if continuously, for five entire months.

As such lengthened absorption of time involves the surrender of almost every other ordinary professional object, and the members of such a board must be men of the first water in their several spheres, to secure public confidence, the proposed remuneration will not prove so unreasonable as it might appear at first. The cost of salaries would thus consequently be £20,000; and secretary, clerks, halls, offices, and examination expenses would certainly raise the whole cost of the single board to £27,000 annually.

What return is to be got for all this inordinate outlay? In the first place, as the scheme charges the cost upon the candidate, each of them will have to pay at least £25 for his examination. The candidate—at least in Scotland and Ireland—will be subjected to the additional expense of travelling a long distance to the seat of examination, which may be presumed to be destined to be London. Thirdly, one-half of them will have to wait for their turn three, four, or five months after being ready for examination on completing their studies. Fourthly, all this trouble and expense are in addition to what are required for their degree from a university or their licence from a corporation. Corporation licentiates, indeed, may be relieved of part of the expense, and all the superfluous annoyance, of a double examination by adopting the provision of a different joint scheme, to be mentioned presently, which provision would make the single-door examination sufficient for obtaining also the licence of any of the incorporated bodies. It will be seen by-and-by whether the corporations can safely thus give up their own examinations. But, in the meanwhile, what about the universities? The single-door examination, being the winding-up of the General Medical Council's plan of medical study, which is avowedly a minimum, cannot be a major examination; if not also a minimum, it must at least be minor. The examination of the Universities, however, generally is, and must be made at all of them, a major examination; and the Universities cannot give it up for one which is lower. Thus would arise the absurd anomaly that, after paying smartly in time and study for a high title obtained through a high examination, the University candidate would be called on to undergo another and minor examination, and to pay another large fee for the superfluity. Fifthly, it is unnecessary to add, in the present place, the risk of a single national board of examiners conducting a minor examination over all the kingdom, without rivalry, becoming the fountain of mediocrity in all things medical, in education, in professional qualifications, and in scientific advancement. This result of centralisation and loss of freedom was so luminously put by Dr. Lyon Playfair some time ago in the House of Commons, in his speech on one of the great education questions, that few can have forgotten the deep impression which it made upon the country.

So much for the candidate. The case of the examiner should also be looked to. I presume this single-door or national board, like the General Medical Council, would consist of a half from England, and a quarter each from Scotland and Ireland. Hence one-half of the members would have to pass annually almost half the year from home. I have not hitherto met with an examiner of some experience who did not find his duty in no long time irksome. A fortnight of such work four hours a day would try the powers of most men of the stamp of which such a board ought to be composed, the duty is for the examiner so monotonous and so unimproving. Five continuous months of such mental torture would probably land half the examiners in a lunatic asylum.

In order to meet some of these evils, it might perhaps be proposed that the work should be divided between two, three, or any other necessary number of similar boards. The cost would be the same, the labour would be endurable, and the convenience of candidates would be consulted. The expense to candidates, however, would remain the same, and the vexatious absurdity of a double examination. Moreover, what would become of the one-portal theory with more than one board? The written questions might be made the same for all, but not the appraisement of the answer. As for the oral examinations, it is evident that the differences could not be slight, and might be quite as great as now. Changing the examiners, and centralising their place, but leaving a plurality of boards, could tend but little towards uniformity of examinations. Such a scheme, in short, is no one-portal system at all, and it differs in no material respect, even in details, from the scheme of conjunct boards which has been for some time before the General Medical Council and the licensing bodies of the kingdom.

According to that scheme, all the universities and all the corporations are to unite in forming three boards, one for each division of the kingdom. In England, however, the labours of a single board would be intolerable for the examiners; and their sittings would be too protracted for the reasonable convenience of candidates. In Ireland and in Scotland, the duration of duty would be less, yet still too great; and in Scotland the hardship on candidates would be severely felt, because all the school sessions come to an end at the same time, and consequently the candidates of one school, instead of being examined there at once, as now, would have to wait till the other schools set the examining board free. The work of such a conjunct board could not be done to the satisfaction of the schools and the country with less than three or four sets of examiners for England, three for Scotland, and two for Ireland. This so-called conjunct scheme has, therefore, some disjunctions, and it has no alliance to the device of a single board.

In order to escape as far as possible the absurdity of double examinations, one for licence or graduation, and another for registration, a complex plan of equivalents and exceptions has been purposed under this scheme. The corporations are to accept the examinations of the conjunct board for their licences, and give up their own examinations altogether. The conjunct board is to receive as equivalent to their own the university examinations on the fundamental medical sciences. The university examinations on practice, such as physic, surgery, midwifery, pathology, therapeutics, medical jurisprudence, are not to exempt graduates from the examinations of the conjunct board on these subjects; but graduates so re-examined are to be let off easy in the matter of fees. Why university graduates should be exempted from the operations of the board in one class of subjects, and not in others, it is not very easy to perceive. The university examination is, or ought to be made, a major examination on every subject alike. Why a second, and minor, examination should be requisite for the security of the public, is to me, at least, a profound mystery.

Another part of the conjunct scheme is, that the candidate whose aim is a corporation licence shall receive one on passing his trials. For this favour the corporations are to divide among them a large proportion of the fees. That most ticklish of all points, their respective shares, has wisely not been mooted hitherto. But this much we know: the corporations will receive large fees without taking the slightest trouble for them,—a provision which looks odd when thus plainly expressed, but which is necessary to compensate them for the loss of fees now received for their own examination and licence.

The reasonableness of some such compensation is apparent to us of the present generation, who will, therefore, easily submit to it. But our followers in the next generation, probably as restless and fond of change as ourselves, will be apt to take a different view, when they find themselves severely mulcted for little or nothing,—for no privilege whatever,—for an empty title only. It is mere vanity to set forth as an equivalent the advantages of museums and libraries, which no one can enjoy who is not a resident of one of the three capitals. In no long time a new agitation will arise upon the most hateful, but most potent of all themes,—a money question; and it is easy to foretell the result. In fine, the universities may withstand the threatened revolution. But the corporations will be in danger of becoming mere clubs. Universities are a necessity for the highest walks of professional education in every civilised land. Corporations

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are not so situated. In the whole continental kingdoms there is not, and there never has been, anything approaching in constitution to our British incorporated colleges. Some, perhaps, may be disposed to ask, "Why, then, should corporations exist in any country?" and a rumour has reached us here that this question has been actually whispered among some vigorous reformers in the South. But I apprehend that such a question will find no resting-place in this Association or in any other public medical body; and I mention it merely to give a little cogency to my fears, that if the corporations part with their present important privilege, and the most important of the duties for which they were chartered—that of examining themselves the candidates for their licences—they may find they are opening the door for the question being seriously raised at some future period.

Why, then, venture on a complex plan of examination difficult to carry out, far from sure to attain its object, fraught with hidden dangers, and opposed by some of the chief professional bodies concerned? Why not rather take advantage of the present system,—itself, indeed, complex enough, but nevertheless the gradual product of the wants and the wishes of a free people; not, therefore, to be lightly set aside? Why not correct it, and improve it through means which the Legislature has not long ago put into the hands of our profession for the very purpose? The present entrance-door to the medical profession is not really, though nominally, a University, a Royal College, an Apothecaries' Hall, or a Faculty of Physicians and Surgeons; it is an examination. There is no reason I can discover why the examinations of all these bodies, numerous though they be, may not be brought up to a reasonable standard of equivalence, now that the Medical Council have put forth their strength towards that end. Let their endeavours have a fair trial. Should the result prove unsatisfactory, owing to insufficient control, support them in obtaining more direct powers; and allow time for further trial. This surely is a wiser course than to rush upon untried, treacherous ground, and daring measures entirely novel, which, though on the surface they promise reform, at bottom threaten revolution.

Allow me, in conclusion, to add a brief word or two on the general question. In this kingdom three denominations of practitioners are provided by education and examination—1. The ordinary class of general practitioners in town and country; 2. High-class physicians and surgeons, who practise chiefly in cities and large towns; and 3. An intermediate order, educated on the footing of the highest attainable education for the greatest possible number, and whom circumstances may attach, some to the first, some to the second class.

The corporations provide the first class by their licence; and most of them, by means of their fellowship, enable licentiates to pass into the second class, if they please. The two great and old English universities, through means chiefly of a protracted education, and the London University by elaborate examinations, aim at producing the second class, at least in physic, ready made, so to speak. The founders of medical education, as well as their successors in the three Scottish university schools, and likewise, I think, in those of Ireland, have aimed at supplying the third class, by supplying the highest education attainable by the greatest number.

It is no part of my present undertaking to settle which of the three educational aims is the most important. They are all highly so. It is as little a part of my present undertaking to inquire which of the three objects have been satisfactorily reached by the several bodies entrusted with them. All have undoubtedly been more or less successful; and none can be charged with failure. But I claim for the Scottish universities, and eminently for the University of Edinburgh, that they have attained the object for which they were destined, by supplying to the greatest number the highest education of which that number can take advantage; that also they enable men of superior original talent or industry to go out from their schools with high qualifications, not inferior to those of the graduates of any of the English universities; that these results flow from their system of education and examination, the fruit of long educational experience; and that their elasticity is such as to render it easy for them to adapt themselves to the progress of knowledge and of public opinion. It is well known that the Universities Commissioners, under the Act of 1858, took infinite pains to effect such adaptation at that time. I have put before you the remarkable result. Surely it is not too much to ask, that the universities of Scotland shall not be disturbed by further and doubtful innovations during so important an experiment, following recent and serious changes; and I venture to submit, that their neighbours may do worse than watch a little longer the experiment going on here before they venture upon dangerous innovations for themselves.

ADDRESS IN MEDICINE.

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Ancient and Modern Practice of Medicine.

When the late distinguished Professor of Logic and Metaphysics in the University of Edinburgh inquired, "Has the *practice* of medicine made a single step since Hippocrates?" and, in vindication of his own belief in the negative conclusion, referred to the recorded opinions of several eminent authorities of modern times in the profession, he put a question which no thoughtful mind within the pale of medicine will be inclined to evade, and the consideration of which, after some sort, may suitably engage our attention in such a meeting as the present.

Sir William Hamilton, in penning the question referred to, had under review, "An Account of the Life, Lectures, and Writings of William Cullen, M.D., the famous Professor of the Practice of Medicine in the University of Edinburgh from 1769 to 1790," by Dr. John Thomson; and having noticed, in terms of well-deserved commendation, the masterly execution of his task by the eminent author of the "Lectures on Inflammation," and accompanied him in a brief survey of the doctrines promulgated by the renowned triumvirate of the early part of the eighteenth century—to wit, Hoffmann, Stahl, and Boerhaave—he was tempted by a mild reflection of Cullen on the practice of Stahl—which censure, indeed, was judged too indiscriminating by Dr. Thomson—to indulge in a philippic against the modern practitioners of the healing art, quoting what for his purpose appeared to be the opposite phrase of Hoffmann, "Fuge medicos et medicamenta si vis esse salvus," and that of Celsus, "Optima medicina est non uti medicinâ." The vehemence of Sir William Hamilton's denunciation is more fully explained by a note, published in 1853, to the original article, which had appeared in the *Edinburgh Review* for July, 1832, where it is shown that the dangers which are to be apprehended in the practice of medicine arise, in Sir William Hamilton's opinion, from the illiterate rashness of its practitioners, for he transfers to his pages, with very evident satisfaction, the statement of Dr. Gregory: "I think it more than possible that in fifty or a hundred years the business of physician will not be regarded, even in England, as either a learned or a liberal profession." If the Medical Faculty of the University of Edinburgh had in any measure justly laid itself open to the charge of hastening the decadence of learning in the profession, it will be admitted by every dispassionate inquirer that the statutes and regulations of that University relative to degrees in medicine entitle it, at the present time, to be regarded as in the van of those bodies which are striving for the honour and advance of the medical profession. It is, indeed, impossible to read the animadversions of Sir William Hamilton without coming to the conclusion that learning in the practitioners of medicine, by which he evidently understood general culture and, in particular, classical attainments, was, in his opinion, the great desideratum. Between learning of the nature referred to, and usefulness in medicine, as dependent upon ample professional qualifications, there is really nothing antagonistic. Not a few of the most distinguished men in the profession in quite recent times have been accomplished scholars. But, while this holds true, let it be distinctly understood that learning of the kind in question is not supreme: it is secondary in importance to ability in the healing art. I make bold to say that not a few physicians, with no pretensions whatever to learning, have served their generation well, and have done much to recommend the profession they zealously cultivated, if they cannot be said to have adorned it. If, therefore, it were necessary to decide between the claims of medicine as a learned or so-called liberal profession and as an useful art, the preference must be awarded to the latter. Let us be thankful, however, that no such issue is before us. Medicine *is* a liberal profession, and will, doubtless, continue to be so, although the diffusion throughout its ranks of polite learning may have become

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diminished—a result which is to be in no small measure attributed to the very great enlargement which has taken place in all that is proper to medicine itself. Think of the rapid advances which have been made during the last thirty years in such departments of medicine as animal chemistry, physiology, pathology, and psychology; and then consider how limited is the time at the disposal of him who is expected to acquire at least a competent knowledge of these sciences, for the cultivation of other subjects, however elevating and attractive. That there exists nothing hostile in the study of medicine as now pursued, to distinction in other walks, is evident from the circumstance that members of our profession, in no way favourably placed for the study, have achieved distinction in scholarship. Look at the career of the late Francis Adams, toiling as a country surgeon in Aberdeenshire, and yet distinguished as the translator of Hippocrates, Aretæus, and Paulus Ægineta. Who can fail to sympathise with the feelings of that accomplished man when, in drawing his *magnum opus* to a close, he thus expressed himself:—"I shall conclude this argument and my present task by quoting the memorable words in which Cicero apologises for his having spent a certain portion of his time in the cultivation of elegant literature and of philosophy, leaving the reader to apply the same in the case of Hippocrates, and, I may be permitted to add, in that of the humble editor of the present volume, who trusts he shall not be set down as an idle and unprofitable practitioner of the art because he has found leisure, amidst the turmoil and distraction of a professional life, to communicate to his countrymen the important opinions contained in the genuine remains of the Coan sage."

It has been my happy lot to meet with others who, although less distinguished—some, indeed, wholly unknown to fame—have cultivated, in circumstances quite as trying, their natural taste for classical and other learning. In remote districts of the country, undergoing a daily round of fatigue and anxiety, which must needs try the strength both of body and mind to the very utmost, mine, moreover, has been the privilege to meet and have friendly intercourse with men who were ably discharging the duties of their calling, and were at the same time being leant upon by the whole community in which their lot was cast, not only as the advisers in sickness, but as persons on whose counsel and judgment all reliance was to be placed.

> "Along the cool sequester'd vale of life
> They kept the noiseless tenor of their way."

Having formed the acquaintance of such men, I have with pride reflected on the circumstance that the individuals who were the recipients of so much confidence, and whose friendship was so highly prized, were members of the profession to which we have the happiness to belong. It is not the least of the advantages possessed by membership of this great Association, that in our annual meeting the bands of fellowship among us are apt to be greatly strengthened.

The question of Sir William Hamilton, to which reference has been made, leads us, in the first place, to a brief consideration of the practice of medicine at the period of Hippocrates.

Intimately acquainted, as Sir William Hamilton was, with the whole history of philosophy, he knew the close alliance which existed between philosophy and medicine in ancient times. The most renowned philosophers, antecedent to and contemporaneous with Hippocrates, applied themselves to the study of medicine. Numerous are the references to medicine in the writings of these philosophers. Take, for example, the following passage from the "Phædrus" of Plato, in which not only is the relation referred to, but the name of Hippocrates is introduced:—

Socrates remarks: Rhetoric is like medicine.

Phædrus: How is that?

Socrates: Why, because medicine has to define the nature of the body, and rhetoric of the soul, if you would proceed not empirically but scientifically; in the one case, to impart health and strength by giving medicine and food; in the other, to implant the conviction which you require by the right use of the words and principles.

Phædrus: You are probably right in that.

Socrates: And do you think that you can know the nature of the soul intelligently without knowing the nature of the whole?

Phædrus: Hippocrates, the Asclepiad, says that this is the only method of procedure by which the nature of the body can be understood.

Socrates: Yes, friend, and he says truly. Still, we ought not to be content with the name of Hippocrates, but to examine and see whether he has reason on his side.

Phædrus: True.

Socrates: Then, consider what this is which Hippocrates says, and which right reason says about this or any other nature.(a)

But, while occupied with the study of medicine, and engaged in speculations as to the phenomena of disease, it is in the highest degree improbable that these philosophers ever practised the healing art. It is, indeed, worthy of remark that in subsequent, although still ancient, times, the intimate connexion which had subsisted between philosophy and medicine was not regarded as favourable to the growth of the latter, and the share he had in effecting their divorcement is held by Celsus as a reason for eulogising Hippocrates. "Hujus autem, ut quidam crediderunt, discipulus Hippocrates Cous, primus quidem ex omnibus memoriâ dignis, ab studio sapientiæ disciplinam hanc separavit, vir et arte et facundiâ insignis."(b) Medicine, however, had been cultivated after a fashion long antecedent to the birthtime of philosophy. The doctor-priests of the Grecian temples, or Asclepiadæ, has acknowledged Æsculapius as its origin. The Asclepia, or temples, were erected in many parts of Greece, were ruled by the Asclepiadæ, and used in a manner not very unlike that in which hospitals are employed in modern times. To them the sick resorted for advice and cure. In one of the most distinguished of these temples—namely, that of Cos, built on the island of the same name, one of the Sporades, a group of scattered islands, as their appellation denotes, in the Ægean Sea, off the island of Crete and west coast of Asia Minor,—Hippocrates, inheriting a recognised position, acted as an Æsculapian priest. He had been born, in all probability, in the four hundred and sixtieth year before the birth of Christ. But Hippocrates had not only the advantage of the most favourable study in the Asclepion of Cos; we know, on excellent authority, that under the direction of Herodicus of Selymbria in Thrace, he became intimately acquainted with the practice then pursued in the gymnasia, while, through the instructions of Gorgias and Democritus, the former of Leontini in Sicily, the latter of Abdera in Thrace, and himself illustrious as the originator of the doctrine of atoms, he became thoroughly versed in the literature and philosophy of the age.

The foundation of the practice of Hippocrates, with which we are now more immediately concerned, was experience; but this experience of Hippocrates was rational in character, not a mere blind or misguided empiricism. No one could be more convinced of the fallaciousness of a blind empiricism than he was, and his condemnation of it may be recognised in the earliest, the best known, and, perhaps, the grandest of all the Hippocratic aphorisms, "ἡ πεῖρα σφαλερὴ, ἡ κρίσις χαλεπή"—"experimentum periculosum, judicium difficile." Hippocrates believed in the existence of a principle, a spiritual essence, the preserver of all things in nature, the restorer of whatever had become disordered. The regulation and superintendence of all the actions of the system were due to this principle, to which he gave the name of Φύσις,—Nature. Thus he was led to consider that the chief duty of the physician consisted in watching the operations of Nature, endeavouring, as might be the case, to promote or restrain these; possibly in some, but these very rare instances, to counteract them. "Our natures," he remarks, or, if not he, one of his immediate descendants, who may reasonably be supposed to be expressing the views of the master, "our natures are the physicians of our diseases." "Νοῦσων φύσιες ἰητρόι." It is in reference to this exposition of the function at once of Nature and the physician in relation to disease, that Sydenham, "the chief of English practical physicians," who in many particulars resembled the Father of Medicine, observes: "He it is whom we can never duly praise. He it is who then laid the solid and immovable foundation for the whole superstructure of medicine, when he taught that 'our natures are the physicians of our diseases.'" And, again, "The great sagacity of this man had discovered that Nature by herself determines diseases and is of herself sufficient in all things against all of them." The belief which Hippocrates had in this "vis conservatrix," "vis naturæ medicatrix," would, in the first place, make him, as we know from his writings he really was, a very close observer of the operations of nature. It would further render him cautious in regard to interference with these, and resolute

(a) "The Dialogues of Plato," by B. Jowett, M.A., vol. i., page 603.
(b) "De Medicinâ," Liber primus.

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in his determination "to have two special objects in view with regard to diseases, namely, to do good, and to do no harm." There is, however, no ground for concluding that Hippocrates was an inert or purely expectant practitioner. On the contrary, there is abundant proof in the works which bear his name, that, in limiting, as Sydenham has expressed it, "the province of medical art to the support of Nature when she was enfeebled, and to the coercion of her when she was outrageous," Hippocrates found occasion to be bold and decided in his method of treatment. His employment of powerful remedies is best exhibited in the instances of diseases which, according to the humoral doctrine promulgated by him, were to be relieved by the discharge of some peccant humour. Evacuants of various kinds were used with this intention, purgatives more especially, but likewise emetics, diuretics, and sudorifics. He drew blood by means of the lancet, the scarificator, and the cupping instrument, but with what careful consideration and thoughtfulness is well shown in the treatise Περὶ Διαιτῆς Ὀξέων, "On the Regimen in Acute Diseases," in which he remarks concerning the treatment of pleuritis: "But if the pain be not removed by the fomentations, we ought not to foment for a long time, for this dries the lungs and promotes suppuration; but if the pain point to the clavicle, or if there be heaviness in the arm or about the breast, or above the diaphragm, one should open the inner vein at the elbow and not hesitate to abstract a large quantity of blood, until it becomes much redder, or instead of being pure red, it becomes livid; for both these states occur." What forcibly strikes the reader of the passage now quoted, and of those passages which immediately precede and follow it, is, as indeed Galen among the ancient, and many of the modern commentators of Hippocrates have carefully noted, the manner in which the Father of Medicine commences with the milder means of affording relief from the pain of pleuritis, such as the employment of fomentations, the rules for the preparation and application of which, as laid down by him, are simply admirable; and only in the event of these failing to accomplish the object in view, he counsels that recourse should be had to blood-letting and the use of other powerful remedies, including cathartics. In another part of the same treatise, the following rule is laid down for the employment of blood-letting: "Bleed in the acute affections, if the disease appear strong and the patients be in the vigour of life, and if they have strength.' Surely this is a most cautious limitation of the circumstances in which the remedy is to be, in the mind of the writer, advantageously employed. In one passage, however, if not in more than one of the Hippocratic writings, there is reference made to the production of "deliquium animi," "leipothymia," or "leipopsychia," as the Greeks termed it, by blood-letting in the treatment of acute diseases. This rule, which was opposed by the ancient authorities generally, cannot be said to have been invariably acted upon by Hippocrates.

A study of the method of treatment pursued by the Father of Medicine and his immediate descendants exhibits the fact that their rules of procedure were all based on experience. He had the merit of discovering the great truth, that accurate observation in medicine is the real foundation of all knowledge; and he proceeded in the true spirit of the inductive philosophy to generalise solely from the phenomena thus observed. It can never cease to afford material for wonder that through the genius of one man so much was accomplished, when we reflect on the circumstance that in the time of Hippocrates human anatomy had scarcely, if at all, been practised, that physiology was virtually unknown, and the use of remedial agents was almost entirely limited to articles of the vegetable kingdom, and these the indigenous plants of Greece and the neighbouring countries. To the subject of diet and regimen, however, Hippocrates paid the greatest attention. In the Hippocratic writings, there occur terms which exactly correspond with those we so frequently employ—full, ordinary, and low diet. In the treatise Περὶ Ἀγμῶν, the following passage occurs: "A diet slightly restricted will be sufficient in those cases in which there was no external wound at first, or when the bone does not protrude; but one should live rather sparingly until the tenth day, as being now deprived of exercise; the tender articles of food should be used, such as moderately loosen the bowels; but one should abstain altogether from flesh and wine, and then by degrees resume a more nourishing diet." And so, not to multiply quotations, in the treatise already referred to, and in Ἀφορισμοί, there are many interesting and instructive suggestions to be found regarding the administration of food and wine. It is sufficient, in passing, to make a brief reference to the paramount importance Hippocrates attached to the doctrine of crisis, and to the bearing which this had on the treatment of diseases. The doctrine of crisis, indeed, was an essential part of his system of humoralism, and had in consequence an intimate connexion with the method of treatment he pursued. Critical events were evacuations of different kinds, occurring chiefly by the skin, bowels, and kidneys.

With the views he entertained as to crisis, there is further intimately blended the so-called Hippocratic doctrine of critical days. Galen expressly affirms that Hippocrates was the first author who treated of these; but, whether this be true or not, we know that he attached very considerable importance to the doctrine. "Fevers," he remarks, "come to a crisis on the same days as to number on which men recover and die." It was the particular attention given by Hippocrates to the tendencies manifested by diseases to recovery, or, on the other hand, to an unfavourable termination, also to the occurrence of evacuations or of crises in their course, that led to the remarkable care with which he studied the whole subject of prognosis. There is no more interesting or valuable work in the whole Hippocratic collection than the one entitled Προγνωστικόν, Prænotiones, Prognostics; and happily concerning its authenticity, as the undoubtedly genuine work of the Father of Medicine himself, there has never been any question.

Again, we should be doing serious injustice to the Father of Medicine were we not to notice, and that in terms of the very highest commendation, the profound sagacity exhibited by him in the observation of the influence of external agents on men in health and on disease. This is fully exhibited in the treatise Περὶ Ἀέρων, Ὑδάτων, Τοπῶν, in which the operation of the atmosphere, of particular seasons, situation and dwellings of the people, in the production of health and diseases of different kinds is discussed. Dr. Adams says of it that "it relates to a subject of commanding interest, and deserves to be carefully studied, as containing the oldest exposition which we possess of the opinions entertained by an original and enlightened mind on many important questions connected with public hygiene and political economy, two sciences which of late years have commanded a large amount of professional attention." Since this passage was written by Dr. Adams, greatly increased interest has been awakened in these subjects. I venture to affirm that the most enlightened inquirer concerning public health, be he legislator or physician, will find much to instruct him in the pages of Hippocrates.

The narration of individual cases of disease commenced with Hippocrates; he may, indeed, be said to have been the originator of the clinical study of medicine. By way of comparison between ancient and modern medicine, some clinical observations of Hippocrates may be quoted in the first place, and thereafter certain passages cited from a modern clinical lecture not unworthy of being placed alongside of the former. In the first book of the "Epidemics," Ἐπιδημίων, α, it is thus written: "Philiscus, who dwelt near the wall, was laid up. On the first day, fever acute; he perspired; night very disturbed. Second day, aggravation of symptoms; in the evening an injection procured a good stool; night quiet. On the morning of the third day, and up to noon, appeared free from pain; but in the evening, acute fever, with perspiration; thirst, tongue dry; passed black urine; night disturbed; he did not sleep at all; his mind wandered on all subjects. On the fourth day, general paroxysms; urine black; night more endurable; urine of improved colour. On the fifth day, about noon, a little blood escaped from the nostrils; urine varied in appearance, with thready clouds resembling semen irregularly suspended in it. The urine did not deposit. A suppository caused passage of some feculent matter with wind. Night distressing; little sleep; talkativeness; delirium; extremities very cold, and could not be warmed; the patient voided black urine; he rested a little towards daybreak; lost speech; had a cold sweat; extremities livid. About the middle of the sixth day he died. The respiration was throughout large and rare, like that of a person who required to be reminded to breathe. The spleen was swollen, and formed a roundish tumour. The perspiration continued to be cold till the end; the paroxysms were on even days." It is to the description here given of the patient's breathing that I wish particularly to call attention. The words employed by Hippocrates are "Τούτῳ πνεῦμα διὰ τέλεος ἀραιὸν μέγα." Galen's commentary on the passage justifies the rendering

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which has been adopted. Further, we know that the word ἀραιός, when used by Hippocrates, whether in reference to the respiration or the pulse, invariably signifies "infrequent," "few in number," "with intervals." Before offering a few observations on this clinical history, I shall give an extract, or rather extracts, from a case recently recorded by Dr. Laycock.(c) "J. O'H., aged fifty-six, labourer, admitted to hospital November 18, 1863. No family history obtainable. Previously to admission, was employed in sinking a well, which kept him constantly wet; he has not been a temperate man, but enjoyed good health up to four days before his admission. On that day, he complained of pain in the chest and some shortness of breath. He attributed this to overwork, but it was so severe as to oblige him to leave off work, and he consequently went to bed. Next day, felt better; but the day after, he felt very giddy, and was forced to return to bed. On the 17th, about 7 a.m., his wife found him lying half out of bed, and passing urine on the floor; when spoken to, said his left arm felt very heavy, and he could not move it, and that the left leg was the same; he also complained of headache, frontal and temporal, but not severe." There follows a detailed and interesting statement regarding the patient's condition on admission to the Royal Infirmary. I quote the account of his breathing: "Breathing appears calm for the most part, with frequent intervals of accelerated and laborious breathing. When the act of respiration is suspended, the fact of coughing once or twice does not seem to bring it back; but, if the patient is roused and made to speak, respiration is resumed. The cessation appears to be quite regular in point of time, occupying generally about thirty seconds, and respiration then continues for about twenty-five respirations. The heart's action at such times was accelerated and tumultuous." The progress of the case is recorded as follows:—"On December 1, complained of pain in the right side; friction sounds detected; coughs slightly; no expectoration; delirium occurred during the succeeding night; the following morning, said he was better, and the ascending and descending respiration was not observed; friction heard in the right infra-axillary region; the right side moved but slightly in respiration, which was chiefly diaphragmatic; dulness was perceived over the right base posteriorly, where also friction and fine crepitation were heard. On December 3, the respiratory phenomena were less marked; but on the 4th, weeping was observed in the afternoon, although the patient was cheerful about himself, and the peculiar breathing was again manifested. On the 5th, heart's action was calmer; œdema of the left hand commenced. On the 9th, œdema of the lower part of the left thigh; foot and lower part of leg very cold. On the 12th, a fresh pulmonary attack commenced, the left pleura now being the seat. During the three following days there was considerable delirium; he was very troublesome at night, crying out and groaning. On the evening of the 16th he had more frequent paroxysms of apnœa; the cardiac action was hurried, about 130 per minute, but regular. On the 18th the symptoms were found to have subsided somewhat; but on the evening of that day dyspnœa came on, with greatly increased feebleness; pulse about 60, and irregular; respirations hurried and forcible, from 45 to 50 per minute. The pulmonary symptoms had become greatly aggravated, and the patient died about one o'clock on the morning of the 20th. Post-mortem was not permitted."

The case of Philiscus, as recorded by Hippocrates, is one of great interest. The occurrence of accession of fever towards the evening of the third day, freedom from fever having been noted in the morning, with supervention of several unfavourable symptoms—in particular, great thirst, dry condition of the tongue, black urine, delirium, and coldness of the extremities,—led Galen, in his commentary, to remark that the fatal issue of the disease might have been anticipated. It is, however, in respect to the peculiar character of the breathing that the case of Philiscus acquires its chief interest, and it is in this particular that a resemblance is to be found between the ancient and the modern clinical examples now quoted. The attention of Hippocrates had been arrested by the peculiar character of the breathing which existed throughout the fatal illness of Philiscus. Surely, it is matter of interest and for reflection that the respiration described by Hippocrates as ἀραιὸν μέγα—"rare and large,"—and to which Galen has attached the meaning "like a person who forgot for a time the need of breathing, and then suddenly remembered," or "the respiration throughout, like that of a person recollecting himself, was rare and large," has attracted great attention in quite recent times. The expression used by French writers, "besoin de respirer," corresponds in some measure to the meaning which is sought to be conveyed by the Greek words. In Latin, the rendering is, "Spiratio huic perpetuo rara et magna fuit." Daremberg, the learned French editor of Hippocrates, thus translates the passage: "La respiration fût constamment grande, rare comme chez quelqu'un qui ne respire que par souvenir." The relation of this peculiar character of the breathing with which, under the name of "ascending and descending inspiration" of the eminent Dublin physician Dr. Stokes, the profession is now familiar, to lesion of the nervous system, was, of course, unknown to Hippocrates, and for many subsequent ages could not be known to those who were ignorant alike of anatomy and physiology. In recent times, it has been described by the late Dr. Cheyne, of Dublin. "For several days," wrote Dr. Cheyne, in 1816, in his account of a patient, aged sixty, who had fatty degeneration of the heart, with irregular and intermittent pulse, and whose death was due to apoplexy, "his breathing was irregular; it would cease for a quarter of a minute, then it would become perceptible, though very low, then by degrees it became heaving and quick, and then it would gradually cease again. This revolution in the state of his breathing occupied about a minute, during which there were about thirty acts of respiration." Subsequently, Dr. Stokes connected the peculiar respiration with a weakened state of the heart, "a phenomenon to be looked for in many cases of fatty degeneration." I have never seen it, remarks the same authority, except in examples of that disease. In his description of it, Dr. Stokes observes: "It consists in the occurrence of a series of inspirations, increasing to a maximum, and then declining in force and length, until a state of apparent apnœa is established. In this condition, the patient may remain for such a length of time as to make his attendants believe that he is dead, when a low inspiration, followed by one more decided, marks the commencement of a new ascending and then descending series of inspirations. This symptom, as occurring in its highest degree, I have only seen during a few weeks previous to the death of a patient. I do not know any more remarkable or characteristic phenomena than those presented in this condition, whether we view the long-continued cessation of the breathing, yet without any suffering on the part of the patient, or the maximum point of the series of inspirations, when the head is thrown back, the shoulders raised, and every muscle of inspiration thrown into the most violent action; yet all this without any râle or sign of mechanical obstruction." Dr. Stokes refers to the fact of the sighing respiration, which is closely allied to the more formidable ascending and descending respiration, being observed in persons who are labouring under certain forms of gastric and hepatic derangement, and in connexion with undeveloped gout, and likewise to the significant fact of Laennec having described a form of asthma with puerile respiration, while the illustrious French physician attributed the malady to some special modification of nervous influence.(d)

Dr. Little, of Dublin, in an able paper published in 1868, while allying the peculiar breathing, as Dr. Stokes had done, with organic disease of the heart, does not admit its special connexion with fatty degeneration, but believes it to accompany atheroma of the aorta, valvular lesions, and hypertrophy, as well as dilatation of the left ventricle. Dr. Little has suggested as a theory of its causation that, in consequence of the existence of one or other of the lesions mentioned, there is an unequal action of the two ventricles. Consequently the left ventricle is unable to propel the aërated blood, and stops now and then. This blood, therefore, remains in the lungs, pulmonary veins, and left auricle; and as it has already been fully oxygenated, it no longer stimulates the respiratory centre through the vagus. Thus, the venous blood which is requisite to excite the vagus branches is not supplied, consequently respiration ceases, and the breathing takes on this irregular action. By degrees, the contractions of the ventricle partially free the auricle

(c) *Dublin Journal of Medical Science*, 1873.

(d) Cependant le malade étouffe; et, comme nous venons de le dire, il aurait besoin d'une respiration plus étendue que celle que permit son organisation: ou, en d'autres termes, la expiration est très-parfaite, le besoin seul de respirer est augmenté. Ce n'est pas dans le poumon qu'il faut chercher la cause de la maladie; et lors même qu'adoptant en entier la theorie chimique de la respiration, on voudrait supposer qu'un besoin extraordinaire d'oxygenation du sang est la cause de la dyspnée, il faudrait encore remonter plus haut et reconnaître que le mal est dans l'innervation même.

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and pulmonary veins; venous blood is again sent to the lungs, which stimulates the filaments of the pneumogastric and causes respiration to begin. Dr. Laycock, in his valuable contribution to the pathology of the ascending and descending respiration, or, as he terms it, "recurrent brief apnœa," from which I have already quoted, while offering objections to the completeness of the explanation according to Dr. Little's ingenious theory, does not hesitate to concur in the opinion that the vagus system is involved.

It is worthy of remark that, in the case of Philiscus detailed by Hippocrates, sleeplessness was a notable feature; and although the febrile condition under which the patient laboured may be the explanation of this symptom, it is at least as reasonable to suppose that the neurosis of the vagus on which the peculiarity of his breathing depended was its cause.

Laennec, the illustrious French physician, the modern discoverer of auscultation, he to whom we are indebted for the introduction of auscultation and for the great light which his discovery shed on the diagnosis and treatment of diseases of the chest, has rendered due credit to Hippocrates. To the Father of Medicine, indeed, and to Aretæus, among the ancients, Laennec confesses that he was alone indebted for any information on the subject which he has so signally made his own. He expressly states that Hippocrates practised immediate auscultation. "Hippocrate avait tenté l'auscultation immédiate"; and, in proof of his having made trial of this means of diagnosis, he refers to the well-known passage in the treatise Περὶ Νουσῶν, τὸ Δευτέρον, "De Morbis," Liber Secundus, a work which there is good reason for believing, although not composed by Hippocrates himself, was written either by one or more of his contemporaries or by some among his immediate descendants in the school of Cos, in which it is made clear that Hippocrates fell into error in supposing his ability to distinguish between the presence of water and of pus in the chest, by the peculiar sound heard on applying the ear. It is in the same chapter, and in close relation to the same subject, that Laennec makes the remarkable statement—a statement which cannot be read without feelings of admiration for the candour and modesty of that distinguished man—that he had read the passage in Hippocrates many years before the commencement of certain experiments in physics, which suggested to him the idea of mediate auscultation, but he never entertained the idea of repeating the experiment of Hippocrates; it passed entirely into forgetfulness; he simply regarded it as one of the errors into which that great man had fallen. But the passage reverted to his mind when he commenced his researches; and he felt surprised that its consideration had not proved suggestive to some readers. The error made by Hippocrates, Laennec further remarks, might have led him to the discovery of many valuable truths. He concludes a remarkable passage in the following words:—"But Hippocrates stopped with an incorrect observation, and his successors overlooked its import. This, at first sight, may appear surprising; nevertheless, nothing is more common. No man is permitted to embrace all the relations and consequences of the most simple fact; and the secrets of Nature are more frequently disclosed by accidental circumstances than they are wrested by scientific efforts."(e) Under the designation of Hippocratic succussion, we possess, as is well known, a means of physical exploration of the chest, which was practised by the Father of Medicine. In the same treatise as that already referred to, the method of procedure in the use of this means is laid down. It is directed that, after the patient has been carefully washed with warm water, he is to be placed in a firm seat, and his hands held by an assistant; the physician, meantime, taking him by the shoulders, shakes him, and attentively listens in order to determine on which side of the chest a sound is occasioned. Further, the rules for the treatment of empyema by operation are given with precision; it is directed that recourse is not to be had to paracentesis before the fifteenth day from the commencement of the effusion; where pain is chiefly felt and swelling is most conspicuous, the opening is to be made, while a preliminary incision through the integuments precedes the penetration of the pleura, effected by a sharper and more pointed instrument, protected by a piece of cloth. In some instances, it is mentioned, the perforation of the thoracic parietes was made, not through an intercostal space, but through a rib, a plan revived in recent times by M. Reybard. When a sufficient quantity of pus has been permitted to flow, the wound is to be closed by means of a portion of linen cloth attached to a thread. Daily a similar quantity of pus is to be evacuated. On the tenth day, when the whole of the collection has been allowed to escape, a mixture of tepid oil and wine is to be injected through the opening, for the purpose of cleansing the lung. This part of the operation is to be practised twice daily; the injection of the morning being withdrawn and replaced by a fresh quantity in the evening, and so on. At length, when the purulent fluid has become clear and thin, a metallic sound is to be introduced, the size of which is to be gradually lessened as the fluid itself diminishes; thus, the wound is permitted to cicatrise.

The interest attached to the description now quoted is heightened by a consideration of certain shrewd observations bearing on the same subject, and which occur not in the same treatise alone, but in other of the Hippocratic works, notably in the book of "Aphorisms." An empyema on the left side, the author remarks, is less dangerous than on the right. When the pus was clear, and studded more or less with sanguinolent threads, that appearance indicated the probability of a satisfactory recovery; but, on the other hand, if, on the first day of its removal, the fluid possessed a colour like the yolk of egg, while on the succeeding day it was thick, having a pale green hue, and emitting a fetid odour, it was likely that the sufferer would not recover, but shortly die. Again, the sufferers from empyema and dropsies treated by incision or by the cautery certainly perish if the pus or water be suddenly evacuated. Everyone acquainted with the history of paracentesis thoracis knows that it dates from the period of the Father of Medicine. The dogmatic statements which are to be found in the Hippocratic writings may not all be accepted without question in the present day, but it is remarkable how much truth there is in several of these. One of the highest living authorities on diseases of the chest, Dr. Walshe, commends the precept of Hippocrates, that paracentesis should not be performed before the fifteenth day of effusion, unless the accumulation of fluid be so great as *per se* to threaten life; while he questions the accuracy of the observation made in the ancient time, and adhered to pretty closely in subsequent ages, that success is less likely to follow operations where the fluid has been from the first purulent in character than where sero-albuminous.(f)

The modern history of thoracentesis is very interesting. Since the writings of Trousseau in its recommendation, and the still more powerful example of our Transatlantic brethren, chiefly Dr. Bowditch, the remedy has become one commonly resorted to. In the article pleurisy, contributed to the third volume of Dr. Reynolds's "System of Medicine" by a physician whose premature death the profession had recently occasion to deplore, will be found an interesting account of what Dr. Anstie called a new era in the treatment of pleurisy. The new era is, however, signalised rather by the discovery and introduction of such new instruments as the suction-instrument of Dr. Wyman, so efficient in the hands of Dr. Bowditch, and the aspirator of Dieulafoy, than by any novel suggestion regarding the treatment of the disease. If, as is not unlikely, we have recently attained to something like perfection in the diagnosis and treatment of pleurisy, a dispassionate review of the history of the disease in ancient and modern times will justify the application of the dictum of Seneca, "Multum egerunt qui ante nos fuerunt sed non peregerunt."

It would be very easy to multiply references to important and suggestive passages in the Hippocratic writings tending to establish yet more fully the truth of the statement that the Father of Medicine was enabled, by the exercise chiefly of his most remarkable powers of observation, to acquire a really wonderful amount of accurate information regarding the causes and progress of diseases as well as the influence exerted by various remedies over them. Enough has, however, been stated to justify Sir William Hamilton in exalting the reputation and praise of Hippocrates. Was Sir William entitled to depreciate the medical practitioners of his own time, which he surely did when exclaiming, "Has the practice of medicine made a single step since Hippocrates?" For centuries after the Hippocratic epoch, it may truly be said that little or no advance in medicine was effected. Many learned and ingenious men no doubt did appear in the ranks of the profession, and by them the position which had been achieved for medicine by Hippocrates was, at all events, maintained. In ancient times,

(e) "De l'Auscultation Médiate," première partie, chapitre iii.

(f) "Diseases of the Lungs," fourth edition, page 281.

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by far the most renowned of these was Galen, who, embracing warmly the views of Hippocrates, was the first formally to expound and then systematically to formulate the doctrine of humoralism or humorism. It might be a sufficient answer to the query of Sir William Hamilton to signalise the discovery in modern days of vaccination and the introduction of sulphuric ether and chloroform as anæsthetics; the last mentioned, as the author of "Rab and his Friends" says, "one of God's best gifts to his suffering children." These were unknown to Hippocrates, and surely our possession of them indicates at least one step in advance. But we are able to point to the abandonment of many remedies altogether worthless which were used in ancient times, and to the introduction, as well as much more satisfactory employment, of others; while, owing to the remarkable and altogether indisputable progress which has been made in the prosecution, first of all, of the study of anatomy, then of physiology, and subsequently of pathology, we are justly entitled to conclude that, the more advanced our knowledge of the minute structure of the body becomes, the more extensive our acquaintance with the function and uses of its several parts, and the more refined our understanding of the various morbid processes by which these are altered and destroyed, so much the more thorough and reliable will be our application and adaptation of the means of cure to the treatment of diseases. Any scientific practice of medicine before the physician had been able to acquaint himself with human anatomy was not to be expected; and it is truly marvellous that Hippocrates, Aretæus, Galen, and the Arabian physicians, notably Rhazes, were able to achieve so much, and to hand down to posterity a body of well-observed facts and careful deductions from these facts, wearing so much the aspect of science.

Medicine can, however, be said to have started on a scientific basis when Mundinus, early in the fourteenth century, applied himself with diligence to the dissection of the human body, and published a treatise on anatomy, "Anatomi Omnium Humani Corporis Interiorum Membrorum," which, till the middle of the sixteenth century, was the recognised text-book of the schools. The statutes of the University of Padua prescribed that all anatomical lecturers were to adhere to the literal text of the Bologna professor. Mundinus died in 1326(g) universally respected; and no advances in anatomical knowledge were made after his time till Berenger, of Carpi, published, in 1521, a commentary upon Mundinus. There succeeded Berenger, Vido Vidius, Jacob Sylvius, and the renowned Flemish anatomist Andreas Vesalius. Of the last named, Hallam remarks that, "if he was not quite to anatomy what Copernicus was to astronomy, he has yet been said, a little hyperbolically, to have discovered a new world.(h) He was the first anatomist who ventured to emancipate himself, and that thoroughly, from the trammels of Galen, who, up to that time, had been regarded with an altogether blind veneration. Fallopius and Eustachius—two well-known names, names not to be forgotten by anyone at all acquainted with anatomy, were the contemporaries, although younger, of Vesalius; and of the same period, or shortly subsequent, were Realdus Columbus, Arantius, and Fabricius ab Aquapendente, the discoverer of the valves in the veins and the instructor of our own immortal Harvey. The splendid discovery of the circulation of the blood was followed by that of the absorbent system, in which Asellius (a professor at Pavia), Rudbeck (a professor at Upsala), and Bartholini (a Dane) were chiefly concerned; while to Pecquet (a professor at Montpelier) belongs the credit of describing the thoracic duct and its uses. Other important anatomical discoveries, and discoveries also in physiology, were being made simultaneously, or shortly thereafter, in connexion with which the names of Malpighi, Glisson, Wharton, Highmore, Richard Lower, Leuwenhœck, Ruysch, Valsalva, and many others start up. The most eminent of the pupils of Valsalva was the distinguished Morgagni, who, following the plan pursued by Bonnet in his "Sepulchretum Anatomicum," first published at Geneva, the place of his birth, in 1679, described by Haller as "immortale opus," became himself professor in the University of Padua, and was the founder of pathological anatomy.(i) His works, "Adversaria Anatomica," and still more his celebrated treatise "De Sedibus et Causis Morborum per Anatomiam Indagatis," immensely advanced his favourite science.

While chemistry, about the same time, was advancing towards the dignity of a science, chiefly through the genius of our distinguished countryman the Honourable Robert Boyle, there arose the sect of the so-called chemical physicians. Of this sect, the earliest was François Deleboe Sylvius,(k) who was born at Hanau, in Flanders, in 1614, and, after a time, became professor of the practice of medicine at Leyden. The chemical theory of medicine, had however, passed from Paracelsus, who was born towards the close of the fifteenth century, through Van Helmont, by more than eighty years his junior, to Sylvius. The leading principles of the chemiatric physicians was that diseases owed their origin to derangement in a process of fermentation, which was constantly at work in the human body. While most of the maladies which were produced in this way arose from excess of acid, some were regarded as of alkaline origin. One eminent English physician embraced the doctrine of Sylvius. Thomas Willis was born in 1621, and in 1659 published his celebrated treatise entitled "Diatribæ duæ Medico-Philosophicæ; quarum prior agit de Fermentatione, altera de Febribus." The object of this work was to prove that, in every organ of the body, there existed its own special fermentation, and that disease of every kind resulted from the disturbance of these fermentative processes. Willis was one of the earliest members of the Royal Society, and left behind him the character of an orthodox, pious, and charitable physician.(l) It is recorded of Dr. Willis that, being consulted regarding the delicate condition of the children of the Duke of York, afterwards James II., he spoke his mind freely, and thereby gave great offence. Bishop Burnet has related that "Willis, the great physician, being called to consult for one of his (the Duke of York's) sons, gave his opinion in the words, 'mala stamina vitæ,' which gave such offence that he was never called for afterwards." The reputation of Willis, unquestionably a very able man, has been obscured by that of another English physician, his junior by only three years. The physician in question was Thomas Sydenham, "whose character," as Dr. John Brown felicitously remarks in that delightful essay of his, "Locke and Sydenham," "is as beautiful and as genuinely English as his name." He was born in Winford Eagle, in Dorsetshire, in 1624. A parallel has been drawn between Hippocrates and Sydenham by more than one modern writer. "Wiederherstellung des Hippokratismus durch Thomas Sydenham," is the title of a chapter by Haeser, the erudite German historian of medicine—and a very instructive one it is,—on the life and writings of the English physician. He has frequently been called the English Hippocrates, and, in truth, the appellation is deserved; for, like the illustrious Greek physician, the great aim he set before him was the cure of disease, and, although possessing a mind which delighted in speculative inquiry, he never permitted the theories he formed and ably defended to interfere with his treatment. That was based on a rational empiricism, such as we have seen in the instance of Hippocrates; he carefully watched the operation of the remedies he employed, and from these he drew the indications for further guidance. Sydenham was humoral in his pathology, and he further agreed with Hippocrates in the doctrine of crisis and the subsidiary view as to action and crasis. We find him frequently referring to the Father of Medicine, as, for example when he inquires What is gout? It is a provision of Nature to purify the blood of old men, and to purge the deep parts of the body; such, at least, is the language of Hippocrates. The same may be said of all other diseases, fully formed, and "That practice, and that alone, will do good which elicits the indications of cure out of the phenomena of the disease itself. This made Hippocrates divine." It was from Sydenham that the school of empirical physicians in England sprung—a term to be used, as Hallam has expressed it, "in a good sense," as denoting the regard its disciples had to observation and experience or to the Baconian principles of philosophy.

Another school of medicine had arisen in Italy through the instrumentality of Giovanni Alfonso Borelli, a profound mathematician, who endeavoured to explain the operation of the various functions of the body on mechanical principles.

(g) Mundinus, sagt John Adelphus in der von ihm besorgten Strassburger Ausgabe vom Jahre 1513, "quem omnis studentium universitas colit ac veneratur ut deum."—Haeser, "Lehrbuch der Geschichte der Medicin."

(h) "Literary History," vol. i., page 467.

(i) "Der Begrunder der Neurer Pathologischen Anatomie," Haeser, seite 654.

(k) "Der berühmteste Vertreter der Iatrochemischen Schule." Haeser, seite 571.

(l) "The Roll of the Royal College of Physicians of London," by William Munk, M.D., vol. i., page 524.

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His views and principles were, through the excessive zeal of his pupils, carried beyond their legitimate length. Of these, Lorenzo Bellini, of Florence and Pisa, was the chief. There were other eminent adherents of the iatro-mathematical school in Italy; while Pitcairne, Friend, and Mead, in their time, were in this country attached to it; and it secured the sympathies of the illustrious nosologist François Boissier de Sauvages in France, in the eighteenth century.

To the chemiatric and iatro-mathematical schools there succeeded a third, of which Van Helmont was the founder. Embracing the views of the former to a certain extent, he made this important addition—that all the changes occurring in the body, whether arising spontaneously or produced by remedies, are determined by a specific agent inherent in the living system, to which he gave the name of Archeus. This "archeus" explained, in Van Helmont's opinion, all physiological actions, and accounted for the maintenance of health as well as the occurrence of disease. Founding on the views promulgated by Van Helmont, although widely differing from him, came the earliest of the three distinguished men to whom a brief reference was made at the commencement of this address. Rejecting the doctrines of the chemical and mathematical physicians, Stahl concentrated attention on what he denominated vital actions. He, too, referred these actions to a dominating principle; and the Anima of Stahl—so he named it—resembles, in some measure at least, the Archeus of Van Helmont. To Stahl belongs the great merit of having pointed out that, contrary to the prevalent opinions of the schools, the operations of the animal economy cannot be explained by either chemical or mechanical laws; that there exists something over and above these; and that something is of the nature of vital action. The "anima" of Stahl, however, was a hypothetical principle, and he signally failed to gain for his theory any general support. Hoffmann, his distinguished colleague in the University of Halle, and his rival, conferred a lasting benefit on science by pointing out that the actions which were ascribed by Stahl to the government of his "anima" were, in reality, determined by nervous influence. "It was reserved for Hoffmann," says Dr. John Thomson, "to take a comprehensive view of the nervous system—not only as the organ of sense and motion, but also as the common centre by which all the different parts of the animal economy are connected together, and through which they mutually influence each other." Facts—and many of these most important in their nature—regarding the nervous system had been recorded before the time of Hoffmann. The renowned professors in the early Alexandrian school, Herophilus, and Erasistratus, and Galen, with others among the ancients, Willis, Vieussens, Mayow, Baglivi, and Pacchioni, much nearer his own day, had laid the foundation for the reasoning of Hoffmann; but, as Cullen has observed, "he was the first who gave any tolerably simple and clear system on the subject, or pointed out any extensive application of it to the explanation of diseases." There is little need for reminding you of the triumphant discoveries in the nervous system which have been made since the time of Hoffmann—such discoveries as have rendered the names of Charles Bell and Marshall Hall in particular, but many others in lesser degree, famous. In no department of pathological inquiry is there at the present time exhibited a greater amount of zeal, or are important facts being more frequently brought to light, than in that pertaining to the nervous system. How signal our advance in treatment also, as determined by that which can alone with any certainty determine treatment: a sound diagnosis! We can distinguish between functional and organic diseases of the brain, spinal cord, and nerves; and use our remedies in a way of which not only the ancient physicians, but many among the moderns, could not have dreamt.

The names of Stahl and Hoffmann, the German professors in Halle, of whom a few words have been said, are inseparably linked with that of the illustrious Dutch professor in the University of Leyden, Hermann Boerhaave. The aim of Boerhaave was essentially eclectic; he culled from the writings of his predecessors all that was valuable, and with these and the results of his own extended observation endeavoured to erect a system of medicine. His system was faulty in ascribing too little importance to the influence exerted by the brain and nervous system generally over the animal functions. The pathology of Boerhaave was as defective as his physiology: his explanations of morbid phenomena were more applicable to the body considered as an inert hydraulic machine, than as an organised living and sentient system. Intellectually and morally distinguished, few greater men than Boerhaave have adorned our profession in any age or country. After his decease, his reputation, which as a living teacher had been of the most exalted description, rather increased than declined. This result was due in great measure to the publication of commentaries on his works by two of his most distinguished pupils, Haller and Van Swieten. The former of these is justly considered as the father of modern physiology. The magnificent researches of Haller regarding development, growth of bone, and the circulation, deserve the praise and gratitude of posterity not more than the impulse of his ardent spirit and example in laborious inquiry, by which the zeal of his associates and successors was kindled. Of Haller's powerful opponent in the controversy regarding irritability and sensibility—Dr. Whytt—I can only make mention. Contemporaneously with Haller, and conferring benefits on the practice of medicine resembling those which Haller rendered to physiology, was William Cullen. A very erroneous impression of this great Scotch teacher has been entertained by many; more particularly, however, by foreigners. By such, Cullen has been called a purely speculative physician. The condemnation of this opinion is readily supplied by his own words. "There is nothing," he observes, "I desire so much as that every disease we treat here should be a matter of experience to you; so that you must not be surprised that I use only one remedy when I might employ two or three; for in using a multiplicity of remedies, when a cure does succeed, it is not easy to perceive which is the most effectual. But I wish that you may always have some opportunity of judging with regard to their proper effects." Again, he says, "Every wise physician is a dogmatist; but a dogmatical physician is one of the most absurd animals that lives. We say he is a dogmatist in physic who employs his reason, and, from some acquaintance with the nature of the human body, thinks he can throw some light upon diseases, and ascertain the proper methods of cure; and I have known none who were not dogmatists, except those who seemed to be incapable of reasoning, or who were too lazy for it. On the other hand, I call him a dogmatical physician who is very ready to assume opinions, to be prejudiced in favour of them, and to retain and assert very tenaciously, and with too much confidence, the opinions or prejudices which he has already taken up in common life, as in the study of the sciences. Now, I profess to be a dogmatist, but I should be sorry if any person thought me dogmatical; for there are but few theoretical opinions which I have received or offered to communicate with regard to disease, concerning which I am not ready to doubt, and to admit grounds for doubting, as soon as they are offered to me. I know there are no universal rules in the practice of physic; but there are general rules, which all admit of, with more or fewer exceptions, in theory and practice." The foundation of the practice of physic was expressly stated by Cullen to lie in fact and experience. "All our knowledge of Nature consists," he says, "in experience."

To Cullen we are largely indebted for the introduction into general use by medical men in this country of such remedies as the acid tartrate of potash, tartar emetic, hyoscyamus, and James's powder, or the pulvis antimonialis. Tartar emetic Cullen largely employed as an antiphlogistic, sometimes after bloodletting, and sometimes in place of that remedy. He had noticed something of the contrastimulant action of antimony in the form of tartar emetic, described by Dr. Marryatt of Bristol in 1790, and afterwards so strongly insisted upon by Rasori, a professor in Pavia, and by others. A successor of Cullen, one of the most distinguished physicians in recent times, as he certainly was also one of the most benevolent of men, the revered Dr. Alison, who occupied the chair which you, sir, now so worthily fill, when this Association held its former meeting in Edinburgh, he whom Dr. Stokes has recently described as "the best man I ever knew," and in so alluding to Dr. Alison may be said to have turned many hearts towards himself—for what student who knew Dr. Alison did not venerate him? and who can ever cease to cherish his memory?—when indicating the way by which, in his opinion, the further improvement in the art of medicine was likely to be effected, signalised the two following lines of inquiry: first, in the discovery of specifics which may counteract the different diseased actions of which the body is susceptible, as effectually as the cinchona counteracts the intermittent fever, citric acid the scurvy, or vaccination the small-pox; and, second, in the investigation of causes of disease, whether external or internal—*i.e.*, of the conditions under which either the vital action of the solids or

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the vital properties of the fluids of the body may become liable to deviation from their natural state. It will be readily admitted by all candid inquirers that, under the latter head, very signal advances have been made during the last half-century. Look, for example, at the etiological investigations regarding continued fevers, and the bearing of these upon treatment, with which the names of Jenner, Stewart, Bartlett, Murchison, and Buchanan are so intimately connected. Again, consider the great advances in knowledge of parasitic diseases—the entozoa more particularly—and their appropriate treatment, for which we are largely indebted to Küchenmeister, Von Siebold, Davaine, and Cobbold. Nothing more interesting or more remarkable in the line of therapeutics has recently appeared than the wonderfully successful treatment of hydatids of the lung by the internal administration of turpentine in the hands of Dr. Bird, of Melbourne, Australia.(m) This is a medicine, in estimation of which, were time at my disposal, I could say much, having had occasion to watch its influence very closely when administered in cases of pulmonary gangrene and bronchial affections attended by copious expectoration of fetid pus. In these diseases I regard turpentine as an invaluable remedy.

Of specifics we still possess but few, while the desire to increase their number is not only legitimate, but is likely sooner or later to be gratified. Of the class of specifics, no remedy better deserves the name than quinine. The potent action of quinine in intermittent fevers thoroughly justifies the application to it of the term specific; and it is to be noted that the curative action in question is to be seen, not only in febrile disorders of the intermittent type, but in neuralgias which manifest a similar character. Many ingenious theories regarding the *modus operandi* of cinchona or quinine in these diseases have been advanced; but, up to the present time, we are compelled to admit that we are entirely ignorant respecting the method of action of a medicine in whose power we justly place the very highest confidence. The remarkable effects of quinine in reducing the temperature in pyrexiæ, and the still more remarkable influence of cold in the same way in hyperpyrexiæ, of which Dr. Wilson Fox has given some happy illustrations, are noteworthy facts in the recent history of therapeutics.

A remedy of marvellous power and usefulness, the virtues of which we are still only learning, is the iodide of potassium. This medicine was prepared soon after the discovery of iodine by Courtois, in 1812, and has been chiefly employed as a deobstruent, alterative, and diuretic. I am satisfied that the diuretic properties of iodide of potassium deserve to be more widely recognised than is generally the case. Its specific action is seen in syphilitic periostitis; for truly the rapidity and completeness with which pain and swelling decline and disappear in instances of enlargements over the tibiæ and other bones in cases of secondary syphilis are not less remarkable than the readiness with which an attack of intermittent fever or neuralgia yields to quinine. The late Dr. Todd, of London, remarked: "If there is anything in addition to quinine which deserves the name of a specific, it is the iodide of potassium in syphilitic periostitis." Another remarkable action of this medicine is in aortic aneurism. Iodide of potassium, administered for the most part in tolerably large doses, in this terrible disease exerts a wonderful influence, not only in relieving the neuralgic pains, which are frequently so harassing, but in subduing the local pressure occasioned by encroachments of the aneurism, and in leading, apparently, to firm coagulation within the sac.

It is in the treatment of thoracic aneurism by iodide of potassium that physicians have learned the very remarkable tolerance of the drug manifested by sufferers from that disease. No reasonable suggestion has hitherto been offered regarding the *modus operandi* of iodide of potassium in aneurism. The influence it exerts on the progress of aneurism appears to have been discovered not only empirically, but by the merest hazard; writes Dr. Walshe, "in this point of view, the story of all our really valuable medicines is simply repeated."(n) The names of Bouillaud, Nélaton, and Chuckerbutty are specially connected with the early employment of the iodide of potassium in the treatment of aneurism; while the profession is largely indebted to Dr. G. W. Balfour, of Edinburgh, for his patient investigation into the subject.(o)

Twenty years ago, little was known regarding the virtues of bromide of potassium. If any standard work on the materia medica of that date be consulted, it will merely be found recorded of this salt that it is diuretic and cathartic, and, like the preparations of iodine, a powerful deobstruent and alterative. Its dose, moreover, is stated in such works at from three to twelve grains thrice daily. Since then, and more particularly within the last few years, bromide of potassium has rapidly advanced in professional estimation; and at the present time it may with confidence be affirmed that there are very few medicines which are more largely employed, and the use of which is attended by more signal benefits. As a calmative and hypnotic, bromide of potassium is largely confided in; but its specific operation in epilepsy is of the most striking description. "It is to be demonstrated, in my opinion," writes Dr. Russell Reynolds, "that there is something specific in the action of bromide of potassium in epilepsy." And the same author observes: "Bromide of potassium is the one medicine which has, so far as I know, proved of real service in the treatment of epilepsy." My own experience of the use of bromide of potassium in epilepsy has been of the most encouraging description. I have repeatedly witnessed cures in the strictest sense result from its employment. Let me briefly refer to one such.

S. A., a bookbinder, aged fifty, had for twenty years been subject to severe fits, occurring irregularly by night and by day, often attended by biting of the tongue. The usual interval between the fits had been a fortnight, and on no occasion had a longer period than six weeks elapsed. In January, 1870, this patient, whose mental capacity had at that time become considerably enfeebled, so much so as to make it necessary for him to give up his business, began the bromide of potassium, and continued it for eighteen months without any pause. The dose never exceeded twenty grains thrice daily. The result of this treatment was an entire cessation of the epilepsy; there has been no recurrence of the disease. His mental vigour has returned. He long ago resumed his occupation, and has since been busily engaged in it without any interruption.

I could multiply instances of this kind; and so, I believe, could many practitioners who, in the treatment of epilepsy with bromide of potassium, have been mindful to adhere to the rule upon which Dr. Reynolds insists, that the remedy "should not be discontinued in the treatment of a case of epilepsy because of its apparent failure; but that the dose should be gradually increased, and the exhibition of the drug most patiently carried on for a period of many months, or even years." Epilepsy is a disease which specially attracted the attention of the ancient physicians. It was termed *νόσος ἱερός*, the sacred disease, by the Greeks; and Aretæus expressly mentions why the appellation "sacred" was given to epilepsy "for more reasons than one," he remarks, "from the greatness of the evil, for the word *ἱερός* also means great, or because the cure of it is not human, but divine; or from the notion that the disease occurred from the entrance of a demon into the man." Plato, in the "Timæus," ascribes the use of the term sacred to the circumstance of the head or brain being the part of the body affected in epilepsy. "When the phlegm is mingled," he says, "with black bile, and dispersed about the courses of the head, which are the divinest parts of us, and disturbs them in sleep, the attack is not so severe; but when assailing those who are awake, it is hard to be got rid of; and being an affection of a sacred part, is most justly called sacred." Hippocrates combated the notion entertained by his countrymen that epilepsy was peculiarly a sacred disease, one specially inflicted by the gods. In the treatise *Περὶ Ἱέρου Νούσου*, he emphatically points out that the incomprehensible nature of the malady is no reason for concluding it to be divine; inasmuch as many other diseases, and notably the paroxysms of intermittent fevers, are just as much above the reach of the human understanding. He believes that epilepsy, like other diseases, results from natural causes. The reader of the remarks on epilepsy in the pages of Hippocrates and Aretæus cannot fail to have his opinion of these great men enhanced; but he also cannot fail to reach the conclusion that the moderns, understanding the nature of convulsive diseases, their connexion with altered conditions of the blood, with, for example, anæmia and uræmia, their dependence at one time on central, at another on peripheral, irritation of the nervous

(m) Dr. Bird had formerly used bromide of potassium, twenty grains, with one fluid drachm of tincture of kamela in infusion of serpentary, three times a day regularly. ("On Hydatids of the Lung." Melbourne: 1874.) I am, however, assured by a recovered patient that, in the treatment of pulmonary hydatids, Dr. Bird now places great reliance on turpentine administered internally.

(n) "Diseases of the Heart," fourth edition, page 512.

(o) *Edinburgh Medical Journal*, 1868.

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system, are infinitely better prepared for their treatment than they were; and this unquestionably holds true of epilepsy.

The use of the remedies we have been briefly reviewing has, in the first instance, been adopted either by mere accident or empirically; nor have we, on this account, any cause for feeling regret. We do not know in what the preservative power of vaccination consists; and yet millions of lives have already been saved by this precaution (Œsterlen). A recent and very interesting example of the way in which therapeutical knowledge may be advanced is afforded by what has occurred in the Andaman Islands. Dr. Dougall, a distinguished graduate of the University of Edinburgh, has apparently discovered that leprosy sores and other ailments attendant upon that disease can be cured by the aid of the Gurjun tree, which is very common in these islands. Take another disease known to the ancients, although its pathology, still to a considerable extent obscure, has been carefully investigated only in recent times. I mean diabetes; and regarding it, we may compare the treatment pursued by Aretæus, for example, and that which we now employ, with the result of feeling thoroughly assured that many steps have been taken in the right direction, and with signal advantage to suffering humanity, since the writings of the distinguished Cappadocian physician. I do not think the opinion unfounded that, owing to the recent advances in the knowledge of tubercular diseases, etiologically and pathologically, we may look forward with confidence to a decided gain in their efficient treatment; but even now may we not be said to possess in cod-liver oil a very potent means of modifying the progress of pulmonary tuberculosis? In the treatment of this disease and of other allied constitutional disorders, cod-liver oil was first employed in the Manchester Infirmary, chiefly by the elder Bardsley, after the commencement of the present century. Previously to that time, however, an oil obtained by ebullition with water from the fresh livers of several fishes—the ling and skate, as well as the cod—had long been a domestic panacea in strumous affections and chronic rheumatism. Subsequently to its use in the Manchester Hospital, cod-liver oil was largely used in Germany; but, falling into disuse in this country, its restoration to professional and public favour has followed the publication of Dr. Hughes Bennett's recommendation of its virtues, in his excellent treatise on that subject. Sir Thomas Watson has very happily expressed the characteristic effect of the remedy in phthisis, when he says: "It is antagonistic to a much greater extent than any other drug of the consuming power of the disease." There are probably few medical men who have seen much of this sad malady who would hesitate to concur in the opinion of a very high authority—Dr. Williams—that cod-liver oil is more beneficial in the treatment of pulmonary consumption than any other agent, medicinal, dietetic, or regimenal, that has yet been employed. We may justly congratulate ourselves on the possession of cod-liver oil; but it becomes us to remember that the ancient physicians used oil inunction in phthisis. This is expressly stated by Aretæus; and he, as well as Hippocrates, laud the use of milk in the same disease, preferring it to all other kinds of food. "For," says the former, "milk is pleasant to take, is easy to drink, gives solid nourishment, and is more familiar than any other food from childhood. In colour it is pleasant to see; as a medicine, it seems to lubricate the windpipe, to clean as with a feather the bronchi, and to bring off phlegm, improve the breathing, and facilitate the discharges downwards. To ulcers, it is a sweet medicine, and milder than anything else. If one will, then, only drink plenty of milk, he will not require anything else. For it is a great thing that, in a disease, milk should serve both for medicine and nourishment." In fevers, Hippocrates did not allow milk, more particularly in such fevers as were attended by bilious discharges from the bowels. The modern practice is not, in this very important particular, in agreement with the ancient; the highest authorities, as, for example, Gairdner, Murchison, and Parkes, the last mentioned on weighty theoretical grounds, considering milk the best food in fevers.

We have been alluding to the manner in which the practice of medicine has been advanced, and may doubtless be still further advanced, by the simple method of observation and experience. It is true that we cannot entirely depend upon empirical laws. We cannot, for example, feel assured that quinine will certainly cure an attack of intermittent fever, mercury syphilis; or, for that matter, that a dose or doses of any given medicine will exert their thoroughly ascertained physiological or therapeutic action; still, such laws are of the highest value, and we cannot help employing them.

The recent progress of chemistry, physiology, and pathology, has naturally led to the establishment of an advanced school of therapeutics, from whose labours signal benefits may not only be anticipated for medicine, but have already been conferred upon it. To Dr. Lauder Brunton, for example, belongs the great merit of conceiving accurately the therapeutic action of the nitrite of amyl from its physiological properties, and thereby of adding a useful remedy to our armamentarium. And so, also, to Dr. Fraser we are indebted for the elaborate investigations regarding the Calabar bean, which have resulted in a demonstration of its therapeutic value. Care must, however, be taken that the results of scientific inquiry, and those of patient, oftentimes laborious, observation in the field of practical medicine, running counter, do not interfere with the ultimate grand object of our profession—the healing of the sick.

We are not entitled to withhold remedies because we do not understand their exact nature, nor the minute changes they produce in the animal economy. Œsterlen has well expressed the attitude which, as practitioners of medicine, we are called upon to assume. "The patient requires our aid, and we must decide for or against the employment of a particular medicine, and upon the manner in which to employ it. If we possess sufficient experience, knowledge of the subject, and practical tact, we shall no doubt be able to do all for that patient which circumstances permit."

Let each one of us be fully persuaded in his own mind. While deeply interested in, and much instructed by, the experiments performed by a committee of this Association, regarding the use of mercury, for example, I remain as thoroughly convinced as ever that the much abused drug in question exerts a powerful action on the function of the liver, and is to be trusted as a most efficient remedy in controlling not a few of its disorders.

I regard cold as a powerful antiphlogistic, and its external application, already briefly referred to, as a remedy of unquestionable value in the treatment of hyperpyrexia; but my own observation, and the fullest attention I have been able to give to the recorded observations of others, have convinced me that the real reason for the present abandonment of a remedy of superior power—to wit, bloodletting—does not lie alone in the advance of scientific pathology. "The thinking man," writes one of the most philosophical of living physicians, Dr. Stokes, "finds it hard to believe that the fathers of British medicine were always in error, or that they were bad observers and mistaken practitioners. They, indeed, have rested from their labours, but their works remain; and he who reads the writings of Sydenham, of Haygarth, and of Fothergill; of Heberden and Fordyce, of Gregory, Cullen, Alison, Cheyne, or Graves, must have a very inapprehensive mind if he fail to discover that there were giants in those days, and that the advocacy of such ideas only indicates a state of mind not consonant with the modesty of science."

Professor Henke, of Prague, has accepted the chair of Anatomy at Tübingen, vacant by the lamented death of Professor Luschka.

Valerianate of Caffein in Nervous Vomiting.—Prof. Gubler has found this substance of great value in the incoercible vomiting of hysteria, which has resisted all other means. He gives from four to eight lozenges (each containing one grain and a half) per diem. In the vomiting of phthisis he has found it of no use whatever, and recommends its employment only in cases of nervous vomiting.—*Union Méd.*, July 27.

Examinations.—The following were the questions on the principles and practice of medicine submitted to the candidates for the diploma of membership of the Royal College of Surgeons at the last meeting of the Court, viz.:—1. A patient is labouring under general dropsy. What are the different conditions on which it may depend? and what will be the probable state of the organs chiefly affected on examination after death? How would you distinguish and treat such cases? 2. What are the diseases characterised by the presence of pustular or vesicular eruptions in the skin? On what do such eruptions generally depend? 3. Mention the chief formulæ in the British Pharmacopœia into which opium enters; state the proportions of the drug, the doses in which the formulæ are to be used, and the purposes for which they are specially adapted. Write a prescription for a draught to procure sleep.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

OBSERVATIONS ON MENIÈRE'S DISEASE.

Brown-Sequard on Auditory Vertigo—On Chronic Reeling with Disease of the Ear—Regulation of Locomotor Movements by Eye and Ear—Lockhart Clarke on the Deep Origins of the Auditory Nerves—Estimation of Time by aid of Movements associated with Hearing.

In an article on "Auditory Vertigo," or "Menière's Disease," in this journal (August 17, 1872), Dr. Hughlings-Jackson quotes from Tröltsch and Knapp on the main symptoms and conditions of this important affection. In that paper, reference should, Dr. Hughlings-Jackson says, have been made to Brown-Séquard's researches, which seem to have anticipated the conclusions of Menière (see Lectures, "Physiology and Pathology of Central Nervous System," 1860, p. 195, and also "Experimental and Clinical Researches, etc.," 1853). We first speak not of paroxysms of Menière's disease, but of an interparoxysmal condition.

The interparoxysmal condition we speak of is—Reeling. It is attended by Vertigo, but we shall speak chiefly of reeling. Strictly speaking, Vertigo is itself, physiologically considered, incipient or rudimentary disorder of co-ordination of movements of locomotion—*i.e.*, is itself incipient reeling. Hence, to speak of irregularity of gait, or, using technical terms, of disorder of co-ordination of locomotor movements, as being "attended by" or "caused by" vertigo, is to speak erroneously. It must be carefully noted that the reel is not the stagger of ataxy, neither is it the shuffle of partial paraplegia. *It is like the walk of a man slightly drunk.* There have recently been three patients in the London Hospital with ear disease who reel in their gait; each of them has had *attacks* of vertigo with deafness, but slight reeling exists in the intervals. In these cases, however, there is only reeling when the patients walk with closed eyes; the patients are, it is true, unsteady in their gait at other times, but by effort and with their eyes open they walk well; in brief, at clinical examinations it is only possible to demonstrate the reeling when their eyes are closed. It must be stated again that their disorderly walk is a true reel, and is not at all like the ataxic stagger. There was recently (March 15) in the Hospital, under Mr. Rivington's care, a man who was deaf of both ears after an injury to the head, no doubt fracturing the base, as there was hæmorrhage from both ears and from the nose. He had fallen down when carrying a large piece of wood, and the wood had struck him, as he expressed it, on the right side of the head and ear, and knocked him down on the knees. He was not deaf before the accident, but was very deaf immediately after, and soon absolutely so. There was slight weakness of muscles supplied by the right portio dura. He was soon well again, and vigorous, except for the deafness, for varying noises in the ears, and for reeling. He only reeled, he said, when the noise in his ear was bad. He had no distinct attacks, but had bad days of noise, giddiness, and reeling. It was found, however, that at any time when made to walk with closed eyes he reeled considerably. Bad as absolute deafness is, yet to a working-man the giddiness and reeling are worse, for they will prevent his working. What time will do in such a case, Dr. Hughlings-Jackson does not know, as he has not observed such a case before. Traumatic cases of course come more often under the care of surgeons.

A patient may, as a rule, walk well, by care and effort; but that he is liable to reel may be suspected if he walks with his legs too much apart. Dr. Hughlings-Jackson was consulted by a patient who, for six months, had reeled slightly, walking with his legs apart. He was totally deaf of the left ear, and had been so since a fall from his horse. He was unconscious after the fall. But it was impossible to be certain whether he fell in consequence of being taken suddenly ill, or by accident. At any rate, he was deaf of one ear, and also reeled ever after.

In the two last-mentioned cases, the difficulty is to tell whether there may not have been laceration of the cerebellum; and if so, if this lesion were not the cause of the reeling. Let us now consider this point.

The gait in all the cases alluded to is a drunken walk, and exactly like that of patients who walk badly from disease of the cerebellum. It is now well known that much of the auditory nerve goes to the cerebellum (Lockhart Clarke). Possibly the part which goes to the cerebellum is that which comes from the three semicircular canals. As the reel with ear-disease and the reel from disease of the cerebellum are indistinguishable, it may be asserted that in the traumatic case we have mentioned there is lesion of the cerebellum. A lesion of the cerebellum would not, however, account for the deafness; for, notwithstanding that a large part of the auditory nerve goes to the cerebellum, disease of this centre does not, so far as Dr. Hughlings-Jackson has observed, produce deafness. Probably, as has been suggested, the part of the auditory nerve which goes to the cerebellum is not from the cochlea—not, therefore, for hearing,—but from the semicircular canals for the regulation of movements of locomotion—directly for the regulation of the leading movements of locomotion, *i.e.*, those of the neck and upper part of trunk. To the objection that there may be a lesion of the cerebellum as well as one of the ear, in these traumatic cases it is difficult to make a direct reply.

Dr. Hughlings-Jackson thinks that the tripartite semicircular canal division serves to regulate certain locomotor movements *in relation to one another*, while the eyes serve to regulate movements of the body as a whole in relation to some outward object. The particular movements of locomotion regulated by the canal division of the auditory nerve, according to Goltz, are those of the head and upper part of trunk. These are the *leading* movements of locomotion. The part of the auditory nerve which supplies the canals, Dr. Hughlings-Jackson believes, regulates the rhythm of movements, and thus it serves with the cochlear division in dancing to music.

As there is an ocular vertigo as well as an auditory one, we may remark on the representation of ocular movements in the cerebellum. Vertigo is a marked symptom in paralysis of the third or sixth nerve; it is not owing to diplopia. With regard to what may, for brevity, be called the locomotor movements of the eyes—those which are symbolic of the locomotor movements which estimate distance,—we may quote from Dr. Hughlings-Jackson's article "On the Localisation of Movements in the Brain" in the *Lancet*, February 15, 1873. After speaking of lateral as one of the parallel movements, represented in the cerebrum, which he believes are for the estimation of extension, he says:—"There are other conjugate deviations of the eyes besides lateral. Thus, in lesions of the right middle peduncle of the cerebellum the right eye is turned upwards and outwards, the left downwards and inwards. Just as there is an association of lateral movements of the eyes with movements of our tactual organs for ideas of objects, so we may suppose that there *will be associations of ocular movements of convergence and divergence (the former especially downwards, the latter especially upwards) with those movements of the spine, legs, and arms in locomotion, represented in the cerebellum, for ideas of distance;* hence the importance of studying particular ocular deviations in association with accompanying disorder of movement."

This speculation as to the representation of ocular movements in the cerebellum was put forward before Ferrier began his brilliant researches. It will be seen that the speculation is in general accordance with one of Ferrier's conclusions. The patient who, from disease of the right middle peduncle, suffers the "skew deviation" of the eyes spoken of, has, Dr. Hughlings-Jackson considers, lost *half of the movement for the estimation of distances.* The movements of the two eyes for the estimation of distances are not so simple as they are commonly supposed to be. There is more than convergence and divergence. During convergence the eyes are directed slightly downwards, in divergence slightly upwards.

The other symptoms of Menière's disease (deep pallor, clammy perspiration, sense of faintness, and vomiting) may doubtless be explained by the relations of the deep origin of the auditory nerve to the vagus nucleus. The "inner auditory nucleus" is, indeed, partly formed out of the "nucleus of the vagus," and "the nucleus of the vagus forms one continuous column with the nucleus of the spinal accessory" (Lockhart Clarke). The bulbar part of the spinal accessory nerve not only empowers the inferior laryngeal branch of the vagus, and supplies, at least in part, the palate, but it is believed to furnish to the vagus inhibitory fibres for the heart. Thus Lockhart Clarke's researches give us a clue to the methodical explanation of what we may call the "vital" as well as

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locomotor symptoms of Menière's disease. The relations of the auditory nerve to the pneumogastric are very significant, for it is a relation to a great visceral nerve. Just as we suppose the tripartite division of the auditory nerve for the semicircular canals to be afferent to locomotor centres in the cerebellum, so we suppose the cochlear division of the auditory nerve to be afferent to centres for the movements of the heart (vascular system generally). These relations show how it is that hearing is the more emotional, and also the more subjective, of the two important special senses. It explains the cheering effect of music, as well as accounts for the general disturbance which sudden harsh noises produce. The auditory is a sense closely akin to the systemic sensations, to the *Gemeingefühl*. It is significant that experimental lesion near the auditory nucleus produces glycosuria by disordering the functions of the liver. Shylock's remarks on the effects of bagpipes on some people will occur to most in this connexion. There is the practice grooms have of whistling to horses to make them pass water.

So far we have spoken separately of the two divisions of the auditory nerve as if one were an auditory and the other a sensory-locomotor nerve. We now consider their possible relations to one another. If it be, as above suggested, that the cochlear and the canal divisions of the auditory nerves are afferent respectively to the heart and to the movements of the head and neck (and thus indirectly to locomotor movements), we see that the compound nerve which is called "auditory" has, saying nothing of the tensor tympani and stapedius muscles, much muscularity in dependence on it. Yet it differs notably from the eye, for the movements of the eyes are comparatively independent of those of the rest of the body at large—require translation into them, —while the movements which we are supposing to be associated with the ear are those constantly serving the organism as a whole. That is to say, the movements of the head and neck are the first and most important of locomotor movements; the heart is the most central of all organs. It is exceedingly important to note the double associations of movement. For the fact of association of the ear and circulation bears on the anatomico-physiological process which goes on whilst we acquire ideas of Time. That the ear has to do with time as the eye has to do with space, is, of course, a truism; but we wish to point out the importance of rhythmical *movements* in the estimation of time by the ear. Let us first consider the analogous case of the eye and space. We could have no notion of extension by mere impressions on the retina; there must be movements of the eyeballs. To suppose that we know the shape of an object by the merely sensory process of an object, as it were, imprinting itself on the retina, is to suppose that the position of the several retinal elements in relation to one another is known already. These can only be learned by movements. Similarly, to say that, since the ear receives sounds in succession, this kind of reception gives one an idea of their time-relation, assumes that particular intervals are already known. Dr. Hughlings-Jackson believes that intervals are learned by movements of the heart; that our ideas of time have final, although unconscious, reference to the rhythm of the heart, as our ideas of space have to movements of our locomotor organs.

If this hypothesis be true, its bearing on the process for the estimation of distance is important and obvious. The auditory is a nerve which is partly afferent to a rhythmical, time-dividing organ, and partly afferent to locomotor movements of the whole body. To those *born* blind, Platner says, time serves instead of space; those who can see, as it were, sum up by the eye large space travelled over by *successive* movements of locomotion. Those born blind estimate distance by the time it takes to pass from place to place; and the time will, the hypothesis is, be measured by the duration, number, and intervals of locomotor movements, estimated by movements of the heart, associated with the division of the auditory nerve for the semicircular canals.

The above speculation seems to Dr. Hughlings-Jackson to harmonise with what Spencer has written as to the estimation of time by organic rhythms. The following quotation may be read in connexion with the foregoing; it is from the first volume of "Spencer's Psychology," page 217:—"A stationary creature without eyes, receiving distinct sensations from external objects only by contacts which happen at long and irregular intervals, cannot have in its consciousness any compound relations of sequence, *save those arising from the slow rhythm of its functions*. Even in ourselves the respiratory intervals, joined sometimes with the intervals between the heart's pulses, furnish part of the materials from which our consciousness of duration is derived; and had we no continuous perception of external changes, and consequently no ideas of them, these rhythmical organic actions would obviously yield important data for our consciousness of time—indeed, in the absence of locomotive rhythms, our sole data."

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, JULY 31, 1875.

JOHN CHURCHILL, ESQ.

We deeply regret to announce the decease, at Tunbridge Wells, on August 2, of John Churchill, the eminent medical publisher. Space fails us this week for more than this brief announcement. He lived to within a few hours of the completion of his seventy-fourth year. As with other men of long-continued eminence in his own walk, it was generally thought he must be older.

THE PRESIDENTIAL ADDRESS TO THE BRITISH MEDICAL ASSOCIATION.

So soon as it was known where the British Medical Association would this year hold its annual meeting, under whose presidency, and who had consented to deliver the chief addresses, it was felt that the meeting could not fail to be one of unusual interest and importance; that addresses from such men, given in such a place as the modern Athens, would most surely be of exceptional weight and importance. We have given the strongest possible proof of our recognition of the justness of this feeling by the large space we have devoted this week to the publication in full of the Address from the President, and the Address in Medicine, and we trust that as we have thus given our readers the opportunity of studying these addresses themselves at leisure, we may stand excused if we seem to have made but brief and imperfect comment on

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them. Sir Robert Christison's most able and instructive address, indeed, came to hand so late that it is not possible for us to treat of it editorially in a manner or to an extent that at all satisfies our opinion of its merit and importance. But we cannot let it go forth to our readers without some few remarks, which may perhaps help to induce them to give it their most careful study and consideration.

The President observed that, after much hesitation, he had finally decided on addressing the Association upon a subject which had for some years occupied the minds of many of the most thoughtful men in the profession—namely, "Whether any, and what, change is desirable in the present system of education and of examination in the medical schools of our country?" He had been led to choose this subject, among other reasons, because he thought that in the public prints only one side of the question had hitherto been shown, while there was unquestionably another side, and a good one. And, further, he took up the subject because his views on it did not coincide with those understood to be popular in the Association, or at least powerfully advocated in its *Journal*. We are sure that there is no one who, whatever his own opinions may be on the subject treated of by Sir Robert Christison, will not feel that the views of such a highly honoured and esteemed veteran in teaching are entitled to the deepest respect and the most careful examination; and we confess that for us they have a special interest and value, inasmuch as they coincide very closely with the opinions we have repeatedly, to the best of our ability, expressed and maintained.

The first part of his address Sir Robert devoted to a history of the working-life of the great medical school of Edinburgh, taking that school as the one with the history, constitution, and work of which he was best acquainted; and in the hope that in its history there might be found "some safe guidance in the present somewhat wild struggles of our profession to improve itself, to redress what seems faulty, and to frame, if possible, a masterpiece of medical examination and precursory study." And he affirmed, with effective reason and justice, that it must surely be worth while to inquire "into the causes which had led the medical department of the University of Edinburgh, situated in an outlying quarter of the kingdom, to become for well-nigh a century, with little interruption, the most populous medical school in the British Islands." He then gave a clear and succinct account of the origin and progress, and of the present condition and constitution of the medical school; pointed out all the changing phases passed through before the present system of education and examination had been arrived at; and commented on the degree and manner in which each change had been an improvement. He enlarged especially, and at length, on the respective value and importance of systematic, and of practical instruction, commenting on what he holds to be the exaggerated tendency in the present day to depreciate the former, and exalt the latter. In reading this part of the address we had marked many passages as worthy of quotation and comment, but time and space will only allow us to note here the conclusion arrived at on the whole question of medical training—viz., that "the most efficient system consists of full systematic lectures, and auxiliary practical instruction carefully chosen and limited." Such had been the system pursued in the University of Edinburgh, and hitherto the University of Edinburgh had been eminently successful.

Of the necessity for efficient clinical study as the most important of all practical training, Sir Robert Christison is, as would be expected, an earnest advocate. Clinical teaching ought to comprise, he says, lectures, demonstrations of actual cases, and examination on them; and every student ought also to acquire such experience as is gained in the office of clinical clerk in a hospital. But it will be noted that he thinks that under the present system four years of study are rather too short a period, and that it would be advantageous to arrange that professional study should begin with a summer instead of a winter course, so as to admit of time for efficient clinical work; or that this should be taken after graduation or licence. And he states that in Edinburgh many students now begin their course of professional study thus earlier, or take the advantage of some such practical study as a clinical clerkship affords, "immediately after graduation or licence, and before settling in practice for themselves." It might, he suggests, follow graduation or licence, but precede registration.

The last subject dealt with is the most important one of the Conjoint Board Scheme, or the "one-portal" idea. It is well known that Sir Robert Christison is, and has always been, a determined opponent of it, but we are very glad to see once more set forth so clearly and powerfully, and in such fulness, the argument against it. It is pointed out that from the warnings that have been raised against it, "or more probably through the influence of calm reflection which time has allowed to all public bodies concerned, the result has been that every licensing board in Scotland is now opposed to the change; and in the two other divisions of the kingdom, where all boards seemed about to rush into one another's arms for the purpose of being conglomerated and individually extinguished, zeal has of late been greatly cooled in this direction, and there has arisen a prudent hesitation in coming to closer quarters"; and it is shown that the action of the Medical Council in controlling the existing examining boards has been productive of great good, so that various examinations are pronounced, by the visitors from the Council, to be now nearly faultless, while defects in those of even the most powerful bodies are unhesitatingly pointed out. Why, then, should not this course be continued till all the examinations are made all that can be desired; or, if necessary, stronger measures be taken by the Medical Council to that end? The difficulties and dangers attendant on the new scheme are stated and examined into: the expense; the delay many candidates must almost necessarily be exposed to before they can be admitted to examination; the long-continued and almost intolerable strain on the examiners; the risk that the new board, conducting a minor, if not a minimum, examination, without rivalry, may become "the fountain of mediocrity in all things medical, in education, in professional qualifications, and in scientific advancement"; and the almost certainty that the old corporations will gradually become mere clubs. The whole argument may be here summed up in Sir Robert's own words:—

"Why, then, venture on a complex plan of examination difficult to carry out, far from sure to attain its object, fraught with hidden dangers, and opposed by some of the chief professional bodies concerned? Why not rather take advantage of the present system, itself, indeed, complex enough, but nevertheless the gradual product of the wants and wishes of a free people, not, therefore, to be lightly set aside? Why not correct it, and improve it through means which the Legislature has not long ago put into the hands of our profession for the very purpose? The present entrance-door to the medical profession is not really, though nominally, a University, a Royal College, an Apothecaries' Hall, a Faculty of Physicians and Surgeons; it is an examination. There is no reason I can discover why the examinations of all these bodies, numerous though they be, may not be brought up to a reasonable standard of equivalence, now that the Medical Council have put forth their strength towards that end. Let their endeavours have a fair trial. Should the result prove unsatisfactory owing to insufficient control, support them in obtaining more direct powers; and allow time for further trial. This, surely, is a wiser course than to rush upon untried, treacherous ground, and daring measures entirely novel, which, though on the surface they promise reform, at bottom threaten revolution."

We certainly have no objection to offer to Sir Robert Christison's arguments, for the policy which he so ably

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advocates is that which for years we have ourselves advocated with regard to medical education, on the subject of lectures and their relation to practice, and as regards the conjoint schemes. As we have not long ago said, it seems to us that the plan has been pressed so far in England that we can hardly escape the experiment being made; but the cogent and lucid argument of Sir Robert Christison may well make the corporations concerned still pause before old things are swept away.

THE ADDRESS IN MEDICINE.

Dr. Warburton Begbie gives, as the heading or theme of the Address in Medicine which he delivered to the British Medical Association, "Ancient and Modern Practice of Medicine," and he takes as his "motive" a question put by the late Sir William Hamilton, the distinguished Professor of Logic and Metaphysics in the University of Edinburgh: "Has the *practice* of medicine made a single step since Hippocrates?" Sir William Hamilton was reviewing Dr. John Thomson's "Account of the Life, Lectures, and Writings of William Cullen, M.D., the famous Professor of the Practice of Medicine in the University of Edinburgh from 1769 to 1790," and took the opportunity of indulging in a philippic against modern practitioners of the art of healing; quoted Hoffmann's saying, "Fuge medicos et medicamenta si vis esse salvus," and that of Celsus, "Optima medicina est non uti medicinâ"; and asked the question above mentioned, answering it himself in the negative. Dr. Begbie, pointing out that Hamilton evidently grounded his melancholy conclusion on his belief in the decay of learning—*i.e.*, of general culture and classical learning—in physicians, vindicates the profession against the charge that it is ceasing, or will cease, "to be regarded as either a learned or liberal profession," but admits that the question whether practical medicine has made any real progress may be held to be worthy of consideration. For this purpose he then gives a brief account of the practice of medicine in the time of Hippocrates. He shows how the very foundation of the practice of Hippocrates was experience, but an experience which was rational in character, "not a mere blind or misguided empiricism," and which taught him to recognise in all the actions of the system the regulation and superintendence of "Nature"; and to consider that the chief duty of the physician consisted in watching the operations of Nature, "endeavouring, as might be the case, to promote or restrain these, possibly in some, but these very rare instances, to counteract them." Thus he came to be resolute to have in view two special objects with regard to disease—namely, "to do good, or to do no harm." At the same time he was not either a teacher or a practitioner of merely "expectant" medicine; in fit cases he freely used powerful remedies, purgatives, emetics, diuretics, and sudorifics; and bleeding, general and local—and with respect to the employment of this remedial means he lays down the following admirable rule: "Bleed in the acute affections, if the disease appear strong and the patients be in the vigour of life, and if they have strength." Dr. Begbie further points out to what excellent skill the Father of Medicine had attained in the employment of different rules of diet, "full, ordinary, and low"; to the attention and acuteness with which he had studied the doctrines of crisis in disease, and the subject of prognosis; and to the wonderful sagacity with which he treated of the operation of the atmosphere, of particular seasons, situation and dwellings of the people, in the production of health, and of diseases of different kinds, so that Dr. Begbie is induced to affirm "that the most enlightened inquirer concerning public health, be he legislator or physician, will find much to instruct him" on these subjects in the pages of Hippocrates.

Dr. Begbie then proceeds to comment on the acuteness and accuracy of the clinical observations of Hippocrates, who was, indeed, "the originator of the clinical study of medicine." We are given, side by side, two cases of disease, one recorded by Hippocrates and one by Dr. Laycock; and Dr. Begbie, in his most interesting commentary, points out how Hippocrates was especially struck by the character of the breathing in his patient. He described it as "rare and large," and Galen interpreted this as meaning "like a person who forgot for a time the need of breathing, and then suddenly remembered,"—a kind of breathing which has lately attracted much attention under the name of "ascending and descending inspiration." Further, it is noted that Laennec states that Hippocrates practised immediate auscultation, and that to him, indeed, and to Aretæus, among the ancients, he was alone indebted for any information on the subject; though when reading what Hippocrates wrote on it he had looked upon it as erroneous, and had forgotten it till he himself commenced his researches. That Hippocrates resorted to succussion as a means of physical exploration of the chest is generally known; but not so well known, perhaps, are his careful, and precise, and shrewd directions on the treatment of empyema by paracentesis thoracis.

Having shown that Sir William Hamilton was right in exalting the skill and reputation of the Father of Medicine, Dr. Begbie then proceeds to prove that he was not justified in questioning whether practical medicine had made a single step in advance since the time of Hippocrates. It would be answer enough, he remarks, to Hamilton, to mention the discovery of vaccination and of anæsthetics; but, further, we may "point to the abandonment of many remedies altogether worthless which were used in ancient times, and to the introduction, as well as the much more satisfactory employment, of others"; and to the remarkable and indisputable progress which has been made in the prosecution of the study of anatomy, physiology, and pathology,—studies which are the foundation of all really scientific medicine. The advance of anatomical knowledge, from the labours of Mundinus early in the fourteenth century, is briefly outlined, and the progress of modern medicine and the different schools or sects that arose sketched in with a firm and rapid hand. Homage is of course paid to Sydenham as the "English Hippocrates," and the founder of "the school of empirical physicians in England"—the term "empirical" being used in its highest and best sense,—while Cullen, the great Scotch teacher, is defended against a charge of having been "a purely speculative physician," and it is shown that he also taught that the foundation of the practice of physic lies in fact and experience. All the most modern gains in medical science and in therapeutical art are spoken of, and due credit is given to the labourers in the school of scientific therapeutics; but it is also well observed that "care must be taken that the results of scientific inquiry and those of patient, often laborious, observation in the field of practical medicine running counter, do not interfere with the ultimate grand object of our profession—the healing of the sick." We are not entitled, Dr. Begbie further remarks, "to withhold remedies because we do not understand their exact nature nor the minute changes they produce in the animal economy"; and he confesses that, while deeply interested in, and indeed instructed by, the experiments performed by the Committee of the Association on the use of mercury, yet he remained "as thoroughly convinced as ever that the much abused drug in question exerts a powerful action on the function of the liver, and is to be trusted as a most efficient remedy in controlling not a few of its disorders."

Dr. Warburton Beghie's able and learned address will be gladly received by all as a full, and at the same time generous-minded, answer to such doubts and questions as that of Sir William Hamilton.

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THE WEEK.

TOPICS OF THE DAY.

ALTHOUGH it is, of course, evident that Parliament can only get through a certain amount of business in each session, it is mortifying to see so many useful measures, one after another, withdrawn for want of time to discuss them, and to remember the number of evenings wasted over the convict Orton. It now appears that the Bill for the prevention of the pollution of rivers is to be withdrawn for this session. It is true that, in reply to Mr. Tennant's question as to whether the Government would give an assurance that they would re-introduce the measure as soon as possible on re-assembling, the President of the Local Government Board intimated that a subject of so much importance should have the serious attention of his colleagues and himself during the recess. But this was a question which, from a sanitary point of view, brooked of no delay; and Mr. Disraeli's Government will sadly fail in its duty to the public if this Bill be not one of the first discussed in 1876.

The remains of the late Sir Charles Locock, Bart., F.R.S., were interred at Kensal-green Cemetery on the 28th ult. The chief mourners were the four sons of the deceased baronet, and amongst others who followed were Dr. Cape, the Right Honourable Stephen Cave, M.P., Mr. Lyell, the Rev. W. Locock, Mr. Angerstein, and Lieutenant-General Sir Francis Seymour, Groom-in-Waiting to the Queen, and specially appointed to represent her Majesty upon this occasion. The Queen's private carriage also followed.

From the general abstract of the number of marriages, births, and deaths registered in Ireland in the year 1874, it appears that there were 141,411 births, 92,352 deaths, and 25,201 marriages. In the same period, according to the returns obtained, 73,184 persons emigrated; a decrease of 24,125 must, therefore, have taken place in the population. In Scotland during the same year, 1874, there were 123,795 births, 80,676 deaths, and 26,247 marriages, giving a ratio of 35·7 births, 23·3 deaths, and 7·6 marriages to every 1000 persons of the estimated population. These figures show that the death-rate was considerably above the ten years' mean, and was only slightly exceeded by that of the year 1864.

An inquest held last week at King's College Hospital affords an additional proof, were any wanted, how deep-rooted are the prejudices entertained against these institutions by the working-classes. A cooper, aged twenty, suffering from phthisis, had been an in-patient for two months. On the 21st ult. he complained to his father that he was being poisoned by the beef-tea given to him; the father tasted it, and afterwards felt a burning sensation in the throat. Complaint was made to the house-physician, who, somewhat injudiciously perhaps, laughed at the idea of anything being wrong. In evidence it was subsequently elicited that, as the patient was in a very low state, and required stimulants, a small portion of compound spirits of ammonia was added to the beef-tea; after the deceased complained of its burning his throat the ammonia was diluted with water. The post-mortem examination showed that death had resulted from consumption; and the jury, in returning a verdict of "Natural death," exonerated the hospital officials from all blame.

An outbreak of typhoid fever is reported to have taken place at Bristol, in Mr. Müller's celebrated Orphan Houses, at Ashley Down, where about 2000 orphan children are located. Several deaths have already occurred, and large numbers are still suffering with the fever, which is stated to have been prevalent in the asylum for nearly six weeks. Dr. Davies, the Medical Officer of Health for Bristol, who has taken active and efficient measures for checking the outbreak, with the view, if possible, of preventing the disease being carried into the city, is having the whole of the main drains leading into it saturated with sulphate of iron. Some of the ejects in the Asylum were found to be defective; a neighbouring open ditch, containing the sewage of Ashley Down, and the suspected well-water of the Asylum itself, are believed to have been the cause of the mischief. In addition to some defective sanitary arrangements, it is generally imagined that in the present case there was a great want of those preventive measures which are now so generally carried out in all hospitals and large public buildings. The disease was being communicated from one child to another by the most palpable means; but at the present time, under the personal direction of Dr. Davies, a large quantity of disinfectants are in daily use, and stringent measures are being adopted to prevent contamination; masons are engaged in repairing the defective ejects, and the suspected water has been sent to the city analyst for his report.

The Select Committee appointed to inquire into the action of the Metropolitan Asylums Board, in respect to the establishment of a fever and small-pox hospital at Hampstead, have now issued their report, and substantially it must be taken to be in favour of the present site at Hampstead. Although the evidence produced at the inquiry has been somewhat conflicting, the opinion of the Committee is briefly as follows:—That the action of the Asylums Board has been strictly in accordance with their duties, powers, and responsibilities, as derived from the Metropolitan Poor-law Act of 1867, and from the sanction and control of the Local Government Board, so far as it was incumbent on them to be guided by that department. Also, that whilst not disputing the fact that some alarm was experienced and some risk encountered in the immediate neighbourhood of the Asylum during the small-pox epidemic the rumours relating to it were much exaggerated, and that the risk is not of necessity incidental to the existence of the hospital, but is chiefly due to the carelessness of persons entering or leaving the building, and to the imperfect control which follows overcrowding. Finally, that no reason exists why this particular district should claim the interference of Parliament for the removal from it of an inconvenience to which it has become subject by reason of the due execution of the provisions of a wise and beneficent law; and that the alternative site is on the extreme verge of the metropolitan district, is one mile and a half more distant than the present hospital from the dense population of St. Pancras, etc., and the suggested use of it would also excite powerful opposition. The result of this final appeal should, therefore, settle the whole matter, more especially when it is considered that the medical evidence adduced on both sides of the question abundantly shows that infectious hospitals are not of themselves necessarily a source of danger to the surrounding district; and that the ambulances in which patients are conveyed may be so regulated as to be free from objection.

It is announced that Mr. Brudenell Carter, late Surgeon of the Royal South London Ophthalmic Hospital, and Ophthalmic Surgeon to St. George's Hospital, has been elected by the Council of the Royal College of Surgeons of England to the Hunterian Professorship of Surgery and Pathology in that institution.

At the Lincoln Assizes, which have just been held, Mr. Wm. J. H. Wood, surgeon, of Boston, was acquitted of the charge of manslaughter which had been brought against him. It will be remembered that this gentleman attended a Mrs. White in her confinement, and by her friends her death was attributed to his unskilful treatment. After the evidence of Dr. G. M. Lowe, the counsel for the prosecution said he could not proceed with the case, as it was quite evident that no medical skill or care could have saved the deceased. Mr. Justice Field

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directed the jury to return a verdict of "Not guilty," but observed that the case was a very proper one to be inquired into, both for the sake of the public and of Mr. Wood. But the learned judge remarked that it would perhaps be better if medical men gave a little more time, and did not leave their patients immediately after their confinement.

Although the statement has been more than once contradicted, it would seem that an epidemic of fever is prevalent at Sevenoaks. A special meeting of the Local Board was held there on Saturday last to consider a report from Dr. Baylis, the sanitary inspector, as to the condition of the town. Dr. Baylis stated that forty cases of fever had come under his notice, and two others had just been reported to him. The fever was attributable to the existence of cesspools, and the bad construction and filthy condition of certain buildings, and it would be necessary to adopt a system of drainage, upon which he would further report. The character of the fever had become more virulent, and he feared it would assume a more severe form. He recommended the extensive use of disinfectants, which the Board immediately ordered to be supplied.

A panic is reported to have prevailed at Kensington with regard to the alleged prevalence of scarlet fever in that parish. The Vestry, therefore, directed their medical officer of health, Dr. Dudfield, to make an inquiry on the subject. He has prepared a very comprehensive report, which shows that the disease was not generally prevalent, but that it had prevailed, so to speak, in patches; also that it had not, at present, shown any tendency to spread widely, and that where it had proved severe and fatal, the causes of its severity and fatality were due solely to the state of the dwellings, and the circumstances of the sufferers.

LUNATIC OR SANE?

The Islington Board of Guardians recently appointed a special committee to visit and report on the state of the various public and private asylums which contain pauper lunatics belonging to the Islington Poor-law District. The committee presented their report last week, and their spokesman, Mr. Cufflin, embraced the opportunity to make some serious charges against those who have had the administration of the lunacy laws in Islington. He said that the committee had been confirmed in the opinion that there were some persons in the asylums who ought not to be there, and some who ought never to have been sent there. One private asylum (name not mentioned) was in such an improper state that he hoped no more patients would be sent there, and another at Camberwell was altogether so excellent that he hoped every opportunity would be seized of sending their patients there. At Colney Hatch they found a young man who had been there five years, and who was subject to epilepsy, but quite harmless and sane; another was quite well, and could be discharged; and another was perfectly sane. These, as well as three female patients, the committee recommended to be discharged. At Hanwell they found one man so well that he might be let out on trial, and they recommended the discharge of another man, who was simply a confirmed grumbler, who constantly found fault with his food. In the same asylum they found a woman who appeared to have nothing the matter with her; she said that she believed the only reason why she was kept in the asylum was that "she was very useful in the kitchen." At Leaveeden they found the same desire to keep those patients that were useful. Here they found a man who was always useful as an assistant to the smith. They recommended his return to the workhouse. They also recommended the return of a man who had been a detective, and who was sent to the asylum on account of a severe blow on the forehead. On examining this man they found him perfectly sane. Formerly he was at the Bethnal House Asylum, where he was employed as messenger and gatekeeper. At Hoxton House they found four women who were simply imbeciles, and should be sent to imbecile asylums. One of the female patients was only an inebriate, and as she protested that she would reform, the committee advised that she be let out on trial. In concluding his remarks on the report, Mr. Cufflin said that great advantage would arise from a more frequent inspection of the asylums, as not only was it important that people who were sane should not be imprisoned in asylums, but visitations stirred the officials up to their duty.

ALCOHOLIC PHTHISIS.

In his Cantor Lectures on Alcohol, at the Society of Arts, last winter, Dr. Benjamin Richardson laid considerable stress on the occurrence of a form of consumption due to the abuse of alcohol, and summarised the characters of the disease as follows:—Those who suffer from it are not young. They are usually over twenty-eight, and under fifty-five; the average age may be taken as forty-eight. They are generally males of robust build and naturally healthy constitution—the last persons likely, at first sight, to die of phthisis. They sleep well, eat pretty well, and drink very well; and they enjoy life and are often active in body and mind. Their failing is, that they partake freely of any alcoholic drink which comes in their way, and they bear alcohol with a tolerance that is remarkable to observers. As a rule, they cannot live in what they consider comfort without a daily excess of alcohol, which excess must be renewed on emergencies if there be a greater amount of work to be done, less sleep to be secured, or more life to be lived. Such men seldom have any serious illness, but some of those examined by Dr. Richardson had suffered from gout, others from rheumatism or neuralgia, and were easily depressed by slight causes—*e.g.*, a cold. The alcoholic consumptive has none of the usual facial characteristics either of ordinary phthisis or of habitual drunkenness, so that his friends are apt to be deceived and to believe that there must be hope for his recovery even when he is beyond hope. The symptoms of phthisis do not always begin when the patient is indulging most freely in alcohol; he may have for some time become abstemious. The first indication of disease is usually an attack of pain in the side, like that of acute pleurisy, which is sharp stabbing at the onset, but later on continuous; and when it subsides, suppressed breathing or difficult inspiration, owing to adherent pleura, is left behind. Then follows, in two-thirds of the cases, hæmoptysis, and examination of the chest reveals extensive and irreparable mischief, and the fatal end is not far off. "There is no form of consumption," says Dr. Richardson, "so fatal as that from alcohol. Medicines affect the disease very little, the most judicious diet fails, and change of air accomplishes but slight real good. In plain terms, there is no remedy whatever for alcoholic phthisis; it may be delayed in its course, but it is never cured."

"IRRESISTIBLE IMPULSE," AND "SUDDEN OUTBREAK OF WICKEDNESS."

Colonel Baker, who, after a most merciful summing up by the judge, has been convicted of a cowardly indecent assault upon a young lady, has been sentenced to twelve months' imprisonment, but "without physical degradation." This, it is supposed, implies that he will be spared anything like hard labour, such as the treadmill, or oakum-picking, or even the menial duty of cleaning out his cell; he will not be compelled to take exercise or to associate with other prisoners, and will be allowed to provide himself with food, and to enjoy to a certain degree the society of such military heroes as may think fit to visit and sympathise with him. In fact, he will suffer restraint of liberty, but, as the judge expressed it, without "physical degradation." If we compare the moral and mental and physical degradation thus mercifully measured

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out to the criminal, in the form of punishment, with that inflicted on his victim, we must say that he has by far the best of it. We will not attempt to estimate the feelings of torture and mental exhaustion which the sudden outrage, the determination to lose life rather than honour, and the subsequent legal proceedings must have entailed on an innocent young lady; but in discussing the case we may call attention to Mr. Justice Brett's explanation of the prisoner's misconduct. "This must have been," said the learned judge, "from the character you have received, a sudden outbreak of wickedness on your part." We would respectfully ask why, if a "sudden outbreak of wickedness," and determination to gratify passion at all risk, can overpower every feeling of right and wrong in a sane man, is it absurd to suppose that an equally sudden outbreak may overcome the sense of right and wrong in an insane man? The next time Mr. Justice Brett criticises the doctrine of "uncontrolled impulse" in the case of an insane prisoner, we hope he will bear in mind his own expression of the effects of a "sudden outbreak of wickedness" in a man assumed to be able to control himself.

INJECTION OF IODINE IN POST-PARTUM HÆMORRHAGE.

In a paper read before the New York Obstetrical Society, Dr. James B. Trask recommends the use of injections of tincture of iodine into the cavity of the uterus in post-partum hæmorrhage. He does not claim positively for iodine a superiority over iron, as sufficient facts are not yet available for forming a definite opinion; but he believes that it possesses certain advantages, which he sums up as follows:—"In comparison with iron, tincture of iodine has the advantage, so far as we know, of being perfectly safe; at any rate, it is free from the evils incident to the employment of iron. Besides this, we have the direct antiseptic influence of the iodine upon the uterine and vaginal mucous membrane. The application of iodine to the lining membrane of the uterus is probably of all things the surest means of counteracting a tendency to absorption of septic matter into the system after delivery. . . . As contrasted with the salts of iron in this respect, it would seem as if there could be no room for hesitation in the choice. From the local action of iodine not only is nothing to be feared, but even advantage to be anticipated, while from the local action of iron much may be apprehended. As an excito-motor agent, iodine is probably equally good, while incapable of causing the formation of thrombi in the uterine vessels. In view of these facts, one would feel justified in resorting to the iodine earlier than to the iron; and in this respect, also, an advantage may be gained for the patient, since the use of iron is expressly limited to cases deemed hopeless under ordinary management." The tincture of iodine may be used undiluted, or diluted with from one to two parts of water.

VACCINATION IN ISLINGTON.

We are glad to see that the Vaccination Act is carried out very effectively in Islington, and that the Board of Guardians support their vaccination officer in prosecuting those who persistently refuse to have their children vaccinated after having been cautioned. Recently, a man named Wheeler was summoned for refusing to have his child vaccinated. The magistrate made an order for the child to be vaccinated within seven days, the defendant to pay all costs. The order has been complied with. In another case a man was fined for neglecting to take the child to the public vaccinator for inspection on the eighth day after vaccination.

PARLIAMENTARY.—VIVISECTION REGULATION—LUNATIC ASYLUMS (IRELAND)—PUBLIC HEALTH—SALE OF FOOD AND DRUGS—MEDICAL DEPARTMENT OF THE NAVY.

In the House of Lords, on Tuesday, August 3,

Lord Henniker, in withdrawing the Vivisection Regulation Bill, expressed a hope that the Royal Commission would report in time to enable legislation to take place next session. He should certainly himself, if the subject was not dealt with by the Government, either introduce a Bill or call attention to the subject next year.

The Lunatic Asylums (Ireland) Bill passed through committee.

The Commons' amendments to Lords' amendments on the Public Health Bill were agreed to; and their lordships resolved not to insist on one of their amendments disagreed to by the Commons.

On the motion of the Duke of Richmond, their lordships disagreed to an amendment made by the Commons on the Lords' amendment on the sixth clause of the Sale of Food and Drugs Bill, and a committee was appointed to draw up reasons for this disagreement.

In the House of Commons,

Mr. Hunt, in replying to Mr. Forsyth, said that the Director-General of the Medical Department of the Navy had been appointed for a fixed term, which would expire on April 5, 1879.

FROM ABROAD.

ARTIFICIAL FEEDING OF INFANTS.

PROF. BUCKINGHAM, in a lecture delivered at the Harvard Medical School (*Boston Journal*, June 3), upon the above subject, after remarking that a child, like an adult, should eat only when it is hungry, and that different grown-up people vary much as regards the number of times at which they require food, goes on to say—

"It is precisely the same with new-born children. One of them needs food every two hours, and another will go six hours without it. If you oblige the first to go four hours, he is hungry and cross; and if you force the second one to eat every two hours, the discharges become bad-looking, and the mother wonders that soothing syrup and paregoric will not stop his pain. You are simply giving the baby a dyspepsia. Let him alone, and do not try to feed him because the breast is full, or because the hands of the clock point to a particular hour. If he is asleep, let him sleep.

"But of what is the food to be prepared? Remember, I am speaking only of the child who is artificially fed. It is to be as nearly an imitation of the natural food as possible, and milk fulfils that condition. The milk of the woman resembles that of the cow in some degree. How does it differ? It has in its composition more water, more sugar, more alkali, less butter, and less cheese, and that cheese, in consequence of the alkali, is a much less firm cheese. Try the experiment for yourselves, by taking woman's milk and cow's milk in different tubes, and adding a trifle of rennet to each. At the end of twenty-four hours the difference of the curds will surprise you. The proportion of milk and water must vary with the character of the milk. It is not necessary that it should be all 'one cow's milk.' If it were, you could not get it in our cities; and if you could, you know nothing of the cow; and if you did, one cow's milk differs from another's as much as the milk of two women differs. A safe way is to begin with a very weak mixture, taking the upper part of the milk, because it contains more cream and less cheese than the lower parts. If it be followed by discharges of undigested curd, add from half a grain to a grain of bicarbonate of potash to each fluid ounce of milk; and if the discharges still continue, water the milk more. Do not be afraid of starving the child by doing this. Milk that does not digest will not nourish; on the contrary, it irritates, and, as is the case with any other undigested food, one can starve with a stomach filled with it. I give you, now, the safe rule for the proportions of milk and water. There are, of course, variations to be made according to the peculiarities of different children. Before the first month, eight parts of milk to twenty or twenty-one parts of water; first month, eight parts to eighteen parts; second month, to fifteen parts; third month, to twelve parts; fourth month, to ten parts; fifth month, to eight parts; sixth month, to seven parts; seventh month, to six parts; ninth month, sixteen parts of milk to eleven parts of water; eleventh month, eight parts to five parts; fourteenth month, sixteen parts of milk to nine of water; and eighteenth month, eighteen parts of milk to eight of water. It would be well to mix at one time the amount required for the day. What is left in the bottle after

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feeding should be thrown away, the bottle being scalded before using again."

When teething is commencing, whatever the age may be, the strength of the food, so far from being increased, should be more diluted if curds are seen in the discharges, and especially if vomiting follows feeding; the addition of water being far more effectual in checking diarrhœa than the use of paregoric or astringents. So, too, when the infant has been deprived of fluid because it is thrown up as soon as taken, if, in place of medicine, the stomach be allowed to be filled with cool water, this will come up with little retching, and will be followed by a long respite from the straining which is sure to follow a teaspoonful or two. However well some exceptional children may seem to thrive on condensed milk, Dr. Buckingham regards it as improper food for children in general, as he does arrowroot and the various preparations of corn and wheat so abundantly advertised. "They are not natural food, and those are the peculiar stomachs only which can manage them." He believes, also, that most of the deaths that occur from choleraic infection, dysentery, and convulsions might be prevented if children were kept upon breast-milk, or properly diluted cow's milk, until dentition is completed. And, as a rule, extra dilution of milk would prove of far more service to those attacked than the use of astringents and opiates.

As a feeding apparatus, Dr. Buckingham says—"A common four- or six-ounce phial, which can be easily washed or rinsed, is the best. For a mouthpiece, a bit of linen wound about a quill and put in place of a cork is good. It can be thrown away after being used once. The next best mouthpiece is a black rubber nipple stretched over the mouth of the phial. The white rubber makes some mouths sore. The long rubber tube, with glass attachment at the inner end and a nipple at the other, is the worst of all. You cannot keep it clean, and it only serves lazy nurses who wish to feed the child without taking it from bed."

Case of Sudden Death after Paracentesis Thoracis.

Dr. Besnier, under the impression that it is a strict duty to make known any unfortunate occurrences that may convey useful information, related to the Hospital Medical Society (*Union Méd.*, June 29 and July 3) the case of a lady, forty-three years of age, who died suddenly after the performance of thoracentesis. She was seized early in June with intense pain at the base of the right side of the thorax. There was fever, and her physiognomy and general condition at once excited alarm. When Dr. Besnier was called in on the 19th there were all the signs of an acute and abundant pleuritic effusion (unaccompanied by cardiac lesion), which had commenced forming sixteen or seventeen days before. There was no cardiac lesion, and the dyspnœa was not excessive. The pulse was 100 and feeble, and although her general appearance was bad, yet there was nothing about her to lead to a doubt that she would experience the relief usually attendant upon operation for very abundant effusion. Still, the violent pain at the commencement, and the rapid exhaustion of strength which soon ensued, indicated that this was no case of ordinary pleurisy, and the patient was watched a while longer. On the 21st, however, no amendment having taken place, and the dyspnœa being on the increase, paracentesis was resorted to. It was performed with a very small trocar, the patient being propped up almost in a sitting posture. Although acutely sensible to the pressure of the finger in search of the intercostal space, she did not complain at the time of penetration. About 300 or 400 grammes of horribly fetid pus had been discharged in the course of a few minutes, when the quiet and immovable state of the patient attracted attention; and although her eyes were open, her face was of a ghastly pallor, and her respiration and pulse had ceased. Notwithstanding all efforts at revival, to the consternation of all concerned, she was dead.

M. Besnier does not regard this truly sudden death as a mere coincidence of the puncture and syncope, as there are facts, derived from experimental physiology, which show that the pain excited by the puncture may produce an arrest of the heart's action, which, under circumstances of extreme debility, may prove definitive. So, also, all practitioners are aware that in some affections attended with great debility or serious depression of the nervous system, a very slight cause, physical or moral, may give rise to sudden death, which, as regards the stage of the affection, is quite premature. The practical conclusion to be drawn from this unfortunate case is, that while performing even the slightest operation upon subjects whose powers are notably depressed, the occurrence of syncope must be as carefully guarded against and watched for as if such persons had been submitted to the action of chloroform. And although the operation in this case was not delayed longer than is customary, it is to be believed that in persons in whom the strength has been so markedly and so rapidly reduced, it would have a much better probability of success if performed as soon as the physical signs rendered the presence of the liquid certain.

Although no autopsy was permitted in this case, Dr. Bernier feels certain, from the gangrenous fetidity of the fluid discharged, the early change in the general condition of the patient, and the destruction of all nervous vitality, that this was an example of primary gangrenous pleurisy, *i.e.*, not gangrenous pleurisy consecutive to a pulmonary lesion. He makes some interesting practical and bibliographical comments on the affection, for which we have not space.

Mr. Teale's Case of High Temperature.

This remarkable case has excited naturally much attention on the Continent, and has sometimes been sought to be explained by the use of defective instruments, trickery, etc. In the *Berliner Wochenschrift* for July 12, Dr. Schliep, of Baden-Baden, mentions a case which he had at the London German Hospital, and which at first puzzled him greatly. A hysterical married woman, twenty-one years of age, admitted on account of ischuria, exhibited most remarkable alterations of temperature, without her general condition affording any explanation of these. Thus, while the pulse was only between 70 and 80, the temperature rose on various occasions from the normal condition (to which it again subsided), to from 38° Cent. (101° Fahr.) to 42° Cent. (107·6° Fahr.). This went on at irregular intervals for some time, and was discovered to be a cheat by the fact that whenever the reporter himself took the observation the temperature was always found to be regular, the elevation only being observed when the patient herself had access to the thermometer. She denied any manipulation with the instrument, but Dr. Schliep can only suppose that while she held it in the axilla for a quarter of an hour with the one hand, she had performed friction on the bulb of the instrument, and thus generated the heat which raised the temperature. Casella's thermometer, which was the one used, allows of strong friction of this kind without breaking. Dr. Schliep offers this case for Mr. Teale's consideration; but we think he does so without being aware of the multiplied observations by different persons and in different regions which were made in his celebrated case putting quite out of the question any idea of possible deception.

GENERAL CORRESPONDENCE.

CERTIFICATION OF LUNATICS.

[To the Editor of the Medical Times and Gazette.]

Sir,—On reading your article on the consignment of patients to lunatic asylums, a question seems immediately to suggest itself to our minds as to how many of those patients who are sent to asylums with such indefinite histories and uncertain accounts of symptoms, are returned as not really insane in the opinions of the medical officers of such institutions.

If there are many, then the wonder is that we do not hear of more actions for damages against those under whose certificates they are sent, than is the case. If there are not many, then it would appear that the certifiers generally, though not very skilful in putting their meaning into words, are yet not quite so ridiculous in reality as you would have us suppose. They appear to recognise readily enough such a departure from reason as would render restraint necessary, although they may not possess the power of describing it so graphically as one who wields the pen of a ready writer.

One excuse for the uncertainty of expression is, that in a large number of cases (and particularly, no doubt, of those which have come under your notice) the patient is either a pauper, or of a class so near to this that he is sent to the asylum in the mode of a pauper—a very common thing in this neighbourhood. The union officer is called upon to see him, probably, for the first time, by an order of the relieving officer specifying his supposed condition; and, under these circumstances, he is necessarily obliged to certify in as short a time as possible, as the patient is scarcely ever under sufficient control, and not amongst those who are accustomed to the

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charge of such cases. The law, I believe, says it must be within three days. If, then, a little haste is manifest (which would not have been the case had there been more time for observation), and a little incoherence in descriptions and even in certificates, let us rather praise the instinct, as it were, of the framer, than hold him up to ridicule for his inexactitude of diction.

Let it not be supposed, either, that the position in life of the patient, even among paupers, is such as to render it a matter of indifference whether he be really mad or not. When he is returned as sane, if he turns out to be so, no very long time ever elapses before the certifier is called upon to answer for his mistake, and generally at a pretty high figure.

I am, &c., APOLOGIST.

OBITUARY.

PETER MERE LATHAM, M.D, ETC., PHYSICIAN-EXTRAORDINARY TO THE QUEEN.

THE distinguished physician died at Inglewood, Torquay, on July 20, in his eighty-sixth year. He was the second son of Dr. John Latham, F.R.S.—an eminent physician, who practised at Manchester and Oxford before coming to London; was Physician successively to the Middlesex and to St. Bartholomew's Hospitals; delivered the Harveian Oration in 1794; published works on rheumatism and gout and diabetes; was President of the Royal College of Physicians, and died, in 1843, at the age of eighty-one. He was of a Cheshire family, and died at his seat, Bradwall Hall, Cheshire.

Peter Mere Latham was born in Fenchurch-street-buildings, London, on July 6, 1789. He was educated at the Grammar School of Macclesfield, and, like his father, proceeded to Brasenose College, Oxford, where he obtained the prize for Latin verse and his degree. He was M.D. in 1816, Inceptor Candidate of the College of Physicians in 1815, and Fellow in 1818. Like his father, he was Physician successively to the Middlesex and to St. Bartholomew's Hospitals. He married at Budleigh Salterton, Devonshire, in 1824, Diana Clarissa, daughter of Major-General the Hon. Granville Anson Chetwynd Stapylton, who died without issue in 1825; and, secondly, at St. George's, Hanover-square, in 1833, Grace Mary, daughter of Captain David Chambers, R.N.

He resigned his appointment at St. Bartholomew's Hospital in 1841, and was appointed Physician-Extraordinary to the Queen.

In December, 1863, Dr. Latham presented to the library of St. Bartholomew's Hospital between fifty and sixty volumes of MS. notes of cases which were under his charge during the seventeen years in which he occupied the post of Physician to the Hospital. These notes were taken by his clinical pupils, amongst whom were Drs. Roupell, Baly, and Paget, Sir James Paget (we believe), Mr. Gay, and other well-known men. Each volume was enriched with an analytical index in Dr. Latham's own hand, and the whole constitute a vast mass of clinical and pathological observations.

In 1865 he retired to Torquay, where he resided till the day of his death.

Soon after the establishment of the General Penitentiary at Millbank, the prisoners were found to be affected with maladies of a low order: diarrhœa, scurvy, and dysentery were the prominent symptoms, sometimes separately and sporadically, sometimes combined with fever and disorder of the nervous system; sometimes a true typhoid fever, which raged like an epidemic pestilence. Cold, marsh miasm, and insufficient food were doubtless at the bottom of this state of things, which excited much public attention, and was the subject of investigation by Parliamentary Committees. Dr. P. M. Latham, in conjunction with Dr. Roget, was employed to investigate and report, and the results of many months of anxious labour and acute thought were published in his "Account of the Disease lately prevalent at the General Penitentiary,"—London, 1825.

In 1836 there appeared his admirable "Lectures on Subjects connected with Clinical Medicine"—an unpretending 12mo, matchless in style and clearness; and in 1845 he published two more volumes of clinical lectures, chiefly on diseases of the heart. We will just say, in passing, that it would be difficult for any impartial person to explain away what Dr. P. M. Latham says of the beneficial effects of mercury in the Penitentiary disease, and in pericarditis.

We have hitherto spoken only of dry dates and facts—the milestones on the road of life. For a picture of the man, drawn with a hand at once skilful and loving, we refer to the following letter:—

IN MEMORIAM.—P. M. LATHAM.

Letter from Dr. West.

"Sir,—It is only when one tries to call up the image of those whom one has known in former years that one finds how indistinct one's recollection is, and how shadowy the outline which the memory is able to trace. I must beg you, then, to pardon the imperfections of these few jottings, drawn up at a moment's notice, of my remembrances of the late Dr. P. M. Latham.

"My first recollection of Dr. Latham goes back to the year 1833, when he was Junior Physician to St. Bartholomew's Hospital; but neither then, nor in my early student years, did I really know him. In the summer he made his visits to the hospital at eight o'clock in the morning, for he always preferred 'fit audience, though few'; and the class that accompanied him on his visits then seldom exceeded half a dozen, among whom, and those his favourite pupils, were Dr. A. Farre, and the late lamented Drs. Jeaffreson and Baly.

"It was scarcely before the autumn of 1837 that I came much in contact with him, or began to appreciate how much there was to learn, and how much Dr. Latham had to teach. He had already given those lectures, which, afterwards collected in one small volume, under the title of 'Lectures on Subjects connected with Clinical Medicine' (now long since out of print), formed an era in the history of medical teaching, not at St. Bartholomew's only, but in London.

"These lectures were given in the large theatre of St. Bartholomew's Hospital at irregular intervals, for Latham had little taste, perhaps no great aptitude, for the systematic teaching which a course of lectures on the practice of medicine would have implied; while the dull details of books, in which the whole science of observation was reduced to almost mechanical rules, were utterly repugnant to his habits of mind.

"He likened himself, in his first lecture, to one who, having climbed a height, stood there to explain to others who had just ascended it the marvels of the landscape. 'See here and see there!' said he, and roused the dull, and fixed the frivolous to realise the fact that it was only by the active and persevering exercise of their own intelligence that they could ever hope to acquire a knowledge of their profession. 'With brains, sir,' as Opie said he mixed his colours, was made by Latham the one condition of all acquirement of medical as of all other knowledge. He took infinite pains with his lectures, as in his bedside teaching. The lectures were never given extempore, but written and rewritten, and at last read off from a copy in which was no blot nor erasure, and read in a way more telling far than most extempore lectures would have been.

"He was a very small, spare man, considerably below the middle height. His spine slightly curved, so that one shoulder was a little higher than the other—a defect which one rarely noticed, for it was rendered less obvious by the scrupulous neatness of his dress (a dark brown coat, and a yellow waistcoat with upright collar, which he wore in his best days of health and vigour); while there was a something in his walk which implied his own general satisfaction with the result, or rather, I should say, it seemed (as did some of his peculiarities of manner) as though they were assumed to conceal little deficiencies of exterior, of which he was but too conscious. I do not know if this was so, but so it seemed to me; for no one could be more above all foolish vanity of dress or all airs of the *petit maître*. His head was very remarkable, and he carried it well: a forehead high rather than broad; the head slightly bald when first I knew him; thin light-brown hair, with a little wave in it behind, till time thinned it more, and turned it grey, then white; an aquiline nose, almost like the great Duke's; and eyes hazel, or grey, full of intelligence and fire. And then his voice, very sweet in its lower notes, caressing and sympathetic to any suffering patient, always kindly; with a tone in it, however, which seemed as if it had been at first acquired, though it had long become a second nature. See him where or hear him when you might, you would have turned to look at and to listen to him, for you would have felt that he was a personage—a man of mark, some one to be remembered; and, listening, you would have never heard a foolish remark, or a sentence not worth remembering.

"In his lectures he emphasised somewhat too strongly words or sentences of minor importance; and this mannerism sometimes impaired the effect of his otherwise beautiful reading.

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In the wards he was fond of collecting the students round the fireplace, and commenting on any case in familiar talk, often ending a sentence in which he seemed to have made a positive statement with a tone of interrogation, as if he still were loth to assert too absolutely, or as if—which indeed was the case—he kept his mind always ready to receive fresh knowledge; to change one opinion for another, if it were but better founded. He would remark upon the clinical clerk's notes, but always kindlily; though nothing in them disturbed him more than when their style or tone betrayed a want of education. This annoyance was sometimes comical, as, when looking at a note, he found, one day, that an unlucky student had put a second *s* to pus.

"His ear, as may well be believed, was acute; and that gift, which the late Dr. Baly possessed to a singular degree, had not a little to do with making him one of Latham's favourite pupils. But though he attached great value to the stethoscope, and though in those comparatively early days of auscultation the new facts which it had just brought or was even then bringing to our knowledge were of necessity larger and more momentous than those with which later observation has made us acquainted, he never for a moment lost sight of the general symptomatology of disease, or sought to discredit the value of old experience for the sake of enhancing the importance of the new discovery. He had a great contempt for all sciolists, but no one was ever more ready than he to avail himself of every advance in scientific knowledge which seemed likely to contribute to the progress of medicine, though I do not think that he himself cultivated purely scientific pursuits. He taught and practised in the days when the microscope and the laboratory had scarcely begun to be recognised in all the importance of their bearing on pathological inquiry.

"He was a gentleman and a scholar,—elegant, if not profound. He lived in the atmosphere of letters, but was no pedant. Not much versed in modern literature, he belonged to the bygone classic age of our physicians, when men read Greek for their amusement, and wrote Latin to perfect their style,—an age now past; and which it would be as idle as it would be impossible to seek to recall, though the genial manners and the graceful talk of men such as Latham make one look back on it with regret. But he was much more than high-bred gentleman or than elegant scholar, or than ablest clinical teacher. He was the Christian physician. Side by side with the Pharmacopœia on his consulting-room table in the little book-stand stood, hidden in the plainest binding, his Greek Testament and Bishop Andrews' 'Devotions'; and he lived them both. '*Nunquam ad vana aut sordida deflectendum*' was an engagement kept all his life by Dr. Latham, and kept all the more readily because he was incapable of understanding anything mean or selfish. To his patients he was most gentle, kind, and sympathising, but with an instinctive shrinking from remediless suffering which, I remember hearing, led him sometimes to fail in keeping appointments for consultation in cases that were beyond hope. And this was perhaps an indication of one of the few defects in his character—a reluctance to encounter pain, or to engage in struggle, even when his convictions would have led him to do so. He loved peace, which is always good; but he loved quiet, which is not always so good. When the President of the College of Physicians was always chosen from the now extinct body of the Elects, he never would consent to be one of their number, for fear, as he himself told me, that he should ever be made President; and none of us who remember all that was done for the usefulness and honour of our profession during the time that Sir T. Watson was President of the College but must regret that want of robustness of character deprived that body of such a President as Dr. Latham might have been if he had willed it.

"No true portrait can be drawn in which there are no shadows, and of few persons could one be painted in which so few appear. At a time when, to a great degree, *Religio medici* is but another term for scepticism, when *Le moyen de parvenir* seems likely as a rule of life to take the place of the Bible, it is something to be able to point the younger members of the profession to one who was at once the accomplished scholar, the skilful physician, the eloquent writer, the very model of a teacher; who was, above all, the high-toned gentleman and the devout Christian; and concerning whom the sternest judgment can give no harsher verdict than this—In troublous times he would have been a confessor; he might have lacked the courage to become a martyr.

"I am, &c., CHARLES WEST."

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are lists of candidates who have passed the recent examinations:—

PRELIMINARY SCIENTIFIC (M.B.) EXAMINATION.

First Division.—Barker, Frederick Rowland, St. Thomas's Hospital; Baylis, Frederick, Epsom College; Best, John Henry, University College; Bredin, Richard, Royal Infirmary School, Liverpool, and private study; Brooke, Henry Ambrose Grundy, B.A., Owens College; Brown, George, Owens College; Cantin, Louis Alfred, St. Bartholomew's Hospital; Chuckerbutty, William Goodeve, University College; Clark, Charles Alfred Dagnall, St. Bartholomew's Hospital; Clarke, Thomas Furze, King's College; Colborne, William Wriothesley, University College; Collier, Mark Percell Mayo, St. Thomas's Hospital; Crisp, Thomas, St. Thomas's Hospital; Cuffe, Edward Meade, Epsom College; Cunnington, Cecil William, private study; Davies, David Samuel, St. Thomas's Hospital; Dismorr, Alfred, St. Bartholomew's Hospital; Dixon, Alexander Campbell, private study; Edwardes, William Whitfield, St. Mary's Hospital; Elsden, James Vincent, private study; Faulkner, John Thomas, Manchester Medical School; Fenton, Herbert Alfred Hill, University College; Fuller, Thomas Warburton, Guy's Hospital; Graham, Albert William, St. Bartholomew's Hospital; Greenwood, Major, London Hospital; Harries, Arthur John, University College; Harrison, Cecil Reeves, University College; Harvey, Alfred, Queen's College, Birmingham; Hayle, Thomas Hahnemann, Owens College; Herschell, George Arieh, St. Thomas's Hospital; Hewitt, William, Royal School of Mines; Hine, John Edward, University College; Hinton, William Bartlett, Guy's Hospital; Hodgson, John, Owens College Medical School; Horsley, Victor Alexander Haden, University College; Hoskin, Theophilus, University College; Hughes, Richard, private study; Humpidge, Thomas Samuel, Royal School of Mines; Jones, William Wansbrough, Magdalen College, Oxford; Ledward, Archibald Prentice, Owens College; Lichtenstein, Maurice, private study; Lory, William Manley, University College; McAlpine, Archibald, Royal College of Science, Dublin; McDonald, Greville Matheson, King's College; Meeson, Alfred, Royal Infirmary, Liverpool; Michael, Henry James, St. Thomas's Hospital; Mott, Frederick Walker, University College; Murray, Hubert Montague, Camdn. Scs. Brighton and Sussex County Hospital; Nankivell, John Howard, King's College; Neale, William Henry, private study; Noble, William James, Keble College, Oxford; Nourse, William John Chichely, St. Mary's Hospital; Palmer, Arthur Maurice, University College; Pasteur, William, University College; Pearce, Walter, St. Mary's Hospital; Penny, Edward, Guy's Hospital; Ponsford, Leicester Cuthbertson, University College; Pughe, Tisellisin Wilini Owen, Royal Infirmary, Liverpool; Quelch, John Joseph, New College, Eastbourne; Ray, Nanda Kumar, University of Edinburgh; Robinson, Frederick, Leeds School of Medicine; Ross, David, B.A., private study; Rushworth, Frank, St. Bartholomew's Hospital; Russell, George Hannah, Guy's Hospital; Savill, Thomas Dixon, St. Thomas's Hospital; Shearman, Percy Edward, University College; Sheldon, Thomas Steele, Guy's Hospital; Silk, John Frederick William, King's College; Smith, Ernest Sutton, University College; Smith, Robert Percy, St Thomas's Hospital; Squire, John Edward, University College; Suckling, Cornelius William, private study; Turner, Alfred Moxon, Guy's Hospital; Wainwright, Edward Harley, University College; White, William Hale, Guy's Hospital; Willis, Ambrose Robinson, Royal School of Mines; Wooldridge, Leonard Charles, Guy's Hospital.

Second Division.—Allen, Dennett George, St. George's Hospital; Barton, William Edwin, University College; Bassett, Henry Thurstan, Queen's College, Birmingham; Chillingworth, Andrew, St. Bartholomew's Hospital; Cranstone, William Lefevre, University College; Deane, Arthur Dorman, Guy's Hospital; Eady, George John, private study; Enright, James, private study; Finlay, Thomas, University College; Hagyard, Robert, Leeds School of Medicine; Hayward, John Davey, University, Bonn, and private study; Hine, Harry, Guy's Hospital; Hooker, Charles Paget, St. Bartholomew's Hospital; Hurst, George, B.A. Sydney, University of Edinburgh; Jones, Charles Montague Handfield, St. Mary's Hospital; Kendall, Peter Slade, University College; Money, Angel, University College; Nettlefold, Edward, University College; Outhwaite, William, private study; Price, Edward Morris, University College; Rich, Arthur Creswell, Royal Infirmary, Liverpool; Routh, Amand Jules McConnel, University College; Smith, Ernest Frederic, St. George's Hospital; Swale, Harold, University College; Sweeting, Richard Deane Roker, London Hospital; Symons, George Francis, Guy's Hospital; Tait, Edward Sabine, St. Bartholomew's Hospital; Thomas, Walter Duncan, Epsom College; Williams, William Potts Rees, St. George's Hospital; Yate, Henry Wright, Epsom College.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, July 29:—

Bernays, Sydney Adolphus, Acre House, Brixton.
Leigh, Reginald Heber, Aberdare, South Wales.

The following gentlemen also on the same day passed their primary professional examination:—

Atkinson, Henry Seymour, King's College.
Bouton, George Charles, St. Mary's Hospital.
Chant, Thomas, London Hospital.
Feltham, Wm. Parsons, St. Bartholomew's Hospital.
Gaze, Wm. Henry, St. Bartholomew's Hospital.
Messum, John Alex. G. B., St. Bartholomew's Hospital.
Smith, Thos. Fredk. Hugh, King's College.
Stelfox, John Bridwall, Owens College, Manchester.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DOBIE, W. M., M.D. Edin., M.R.C.S.E.—Physician to the Chester Infirmary.

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BIRTHS.

FERRIER.—On August 3, at 16, Upper Berkeley-street, Portman-square, the wife of David Ferrier, M.D., of a daughter.

LEAKE.—On July 31, at Blythe-road, Brook-green, W., the wife of Jonas R. Leake, L.R.C.P., Surgeon, &c., H.P., H.M. Army, late 80th Regiment, of a daughter.

WRIGHT.—On July 31, at Old Brathay, Ambleside, the wife of Strethill H. Wright, M.D. Edin., M.R.C.P. Eng., of a daughter.

MARRIAGES.

HAINING—ROBERTS.—On July 27, at St. Thomas's Church, Chester, William Haining, M.D., to Mary Ellen, eldest daughter of Robert Roberts, Esq., The Firs, Chester.

MCDONALD—PYE.—On August 4, at St. Nicholas, Rochester, Alexander McDonald, M.D., Surgeon to H.M.S. *Britannia*, to Emma, only daughter of the late John Pye, of Abbot's Court, Bredhurst, Kent.

SANGSTER—HATFIELD.—On July 28, at St. George's Church, Tufnell-park, Holloway, Alfred Sangster, M.B. Cantab., youngest son of William Sangster, Esq., of Burlington Villa, Streatham-hill, to Ann, third daughter of the late John Hatfield, Esq., of Hilldrop-crescent, Holloway.

STOCKER—GOODMAN.—On August 4, at St. Paul's, Camden-square, N.W., by the Rev. R. Gordon Cumming, A.M., Alonzo Henry Stocker, M.D., of Peckham House, Peckham, S.E., to Ada Mary Goodman, of The Terrace, Camden-square, N.W., elder daughter of the late Thomas Goodman.

TURNER—DIAPER.—On July 29, at St. Luke's Church, Paddington, the Rev. George Passaud Turner, curate of Eastnor, Herefordshire, to Ella Hudson, second daughter of the late Herbert Diaper, M.D., Surgeon-Major Bengal Army.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ATCHAM UNION.—Medical Officer for St. Chad's District. Applications, endorsed "Application for Medical Officer," to John Everest, Clerk, Union Offices, St. John's Hill, Shrewsbury, on or before August 12.

BOROUGH OF ROCHDALE.—Medical Officer of Health. Candidates must be duly qualified and registered. Applications, with testimonials, to Z. Mellor, Esq., Town Clerk, Town Hall, Rochdale, on or before August 7.

BOURNEMOUTH GENERAL DISPENSARY.—Resident Medical Officer and Secretary. Applications, with testimonials, to the President, on or before August 31.

CARLOW UNION.—Medical Officer for the Tullow Dispensary District. Applications, with testimonials, to B. Furney, Esq., Honorary Secretary, Butler's Grange, Tullow, before August 11.

CARLOW UNION.—Medical Officer for the Tullow Fever Hospital. Candidates must be duly qualified. Applications, with testimonials, to Mr. E. L. Jameson, Clerk of the Union, Board-room, Carlow, before August 12.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Board of Guardians, Christchurch, before August 16.

CROYDON GENERAL HOSPITAL.—House-Surgeon. Candidates must possess both a medical and surgical qualification. Applications, with testimonials, to the Secretary, on or before August 18.

HOSPITAL FOR DISEASES OF THE SKIN, STAMFORD-STREET, S.E.—Assistant-Surgeon. Applications, with testimonials, to the Committee, on or before August 11.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

ROYAL SEA-BATHING INFIRMARY, MARGATE.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 14.

ROYSTON UNION.—Medical Officer for No. 5 District. Applications on or before September 6.

TIVERTON UNION.—Medical Officer and Public Vaccinator for the Western District. Applications on or before August 9.

TOWNSHIP OF MANCHESTER.—Assistant Medical Officer at the Workhouse Hospital. Applications on or before August 12.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Second Assistant Medical Officer. Candidates must possess both a medical and a surgical degree, and be unmarried. Applications, with testimonials, to Dr. Parsey, at the Asylum, Hatton, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Carnarvon Union.—Mr. John Williams has resigned the Llandwrog District; area 30,727; population 10,995; salary £60.

Dore Union.—Mr. James Lane has resigned the Kentchurch District; area 23,383; population 3270; salary £50. Also the Workhouse; salary £30 per annum.

Pembroke Union.—Dr. D. A. Reid has resigned the First District; area 24,296; population 5903; salary £60 per annum.

APPOINTMENTS.

Bedwellty Union.—John Davies, M.D. King's Coll. Aber., M.R.C.S. Eng., L.S.A. Lond., to the Ebbw Vale District.

Chapel-en-le-Frith Union.—Frederick Stedman, M.R.C.S. Eng., L.S.A. Lond., to the Castleton District.

Chertsey Union.—John Hope, M.D. Edin., L.R.C.S. Edin., to the Third District.

Falmouth Union.—Thomas S. Guppy, M.D. Aber., M.R.C.S. Eng., L.S.A., to the Constantine District.

Lexden and Winstree Union.—James Hair, L.F.P., M.D., to the Eighth District.

Newcastle-in-Emlyn Union.—Henry H. Davies, M.R.C.S. Eng., L.S.A., to the Llandyssul District.

Wellingborough Union.—William Wake Clark, M.R.C.S. Eng., L.M. Edin., L.S.A., to the Workhouse and the Wellingborough District.

THE grand jury at the Haverfordwest Assizes have found a true bill for wilful murder in the case of Surgeon-Major Alder, of the Medical Department, who was recently committed for the manslaughter of Lieutenant Walker, at Fort Hubberston, South Wales.

REACHING THE MAXIMUM.—The Hackney Board of Guardians recently decided to increase their Dispenser's salary from £120 to £140 per annum, but the Local Government Board refused to sanction the arrangement, on the ground that £120 per annum is a sufficient remuneration for officers of this class.

THE FORTY-EIGHTH CONGRESS OF THE GERMAN NATURALISTS AND PHYSICIANS.—This is to be held this year at Gratz, in Styria, from September 18 to 24. Thirty years have elapsed since the former meeting of the Society was held there. Ample preparations have been made for the hospitable entertainment of the visitors. Drs. A. Rollet and L. von Pebal, both of Gratz, are the secretaries.

GOSSIP, IF NOT NEWS.—Those members of the profession who knew Dr. Baxter Langley as a medical agent twenty-eight years ago will be greatly amused, if not enlightened, by the following extract from the letter of the London correspondent of the *Western Morning News*, which appeared in that journal last week:—"Dr. Baxter Langley, who was, together with Mr. Gladstone, a candidate for the representation of Greenwich at the last election, has turned medical agent. He was brought up to the medical profession, and is a member of the Royal College of Surgeons, as well as a Doctor of Laws. He was educated at King's College, and wrote a book called 'Via Medica.' He now negotiates the purchase and the sale of medical practices and partnerships, and has established in Lincoln's-inn-fields, not far from the Royal College of Surgeons."

NOTES, QUERIES, AND REPLIES.

"He that questioneth much shall learn much."—*Bacon.*

J. T.—The last edition of "Tanner's Practice of Medicine," (the seventh), is published by Henry Renshaw, 356, Strand; price £1 11s. 6d.

Mr. Hancock.—The College of Surgeons has lost a most efficient member of the Court of Examiners by the resignation of this gentleman. As an examiner he was firm, but most just and generous. He "has helped many a lame dog over the stile," without at all compromising the important duties of his office. He is most deservedly popular in the College, as he is at his hospital and elsewhere. We believe the Council will retain the benefit of his great and varied experience in all collegiate matters for some little time longer.

B. Smith.—The capsula communis, or vagina portæ, was discovered by Francis Glisson, M.D., who was born in 1597.

L.S.A.—In 1767 it was enacted that no person should be appointed physician to any county infirmary unless examined and certified by the King and Queen's College of Physicians in Ireland.

H.F.S.—In 1606 a statute was framed, prohibiting Roman Catholics "from practising physic or exercising the *trade* of apothecaries in England." It was O'Connell who said he was "a Roman Catholic, but not a Papist."

J. Douglas.—From an old "return" it appears that from 1828 to 1832 inclusive, 2143 gentlemen received their diplomas from the Royal College of Surgeons, and during the same time 141 were rejected.

Royal Westminster Dispensary.—Mr. Alban Doran, who is Fellow of the College by examination, is a son of the celebrated and voluminous writer Dr. Doran.

L.S.A., Edinburgh.—There was an ancient guild in London called the "Grocers" or the "Poticaries." By a charter of James I., the latter were separated from the former, and constituted a distinct company by the more dignified name of the "Pharmacopolites," and certain privileges of exclusive business were granted to the new corporation.

M.D. St. Andrews.—Doctors of medicine take precedence of barristers and even Queen's counsel, according to Dod, "on the ground of ancient usage,"—Oxford first, Cambridge second, and St. Andrews third.

L.R.C.P.—The Archbishop of Canterbury has no longer the power of conferring medical degrees.

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Dr. Simpson, Manchester.—The College of Surgeons formerly claimed and obtained the bodies of all criminals executed for murder. The last was that of a tradesman in Oxford-street, one Smithers, executed about thirty years ago.

Mr. Jackson.—A gentleman of your name wrote a treatise some time ago on the use of the spleen, which was considered by the ancients as the seat of mirth, and the liver the organ of love,—"Splen ridere facit, cogit amare jecur."

A Collector.—The portrait of Matthias Lobel is scarce. His name is familiar to all botanists. From it a genus of plants received the appellation of "lobelia." There is a statue of Sir James McGrigor, by Noble, in the grounds of Chelsea Hospital.

COMMUNICATIONS have been received from—

Dr. J. M. Minor, New York; Mr. F. C. Haden, London; Mr. R. W. Ceely, London; Mr. W. Wynter Blyth, Barnstaple; J. T.; Mr. W. M. Latham, Sheffield; Mr. G. Street, London; Dr. Squires, Nelson, New Zealand; Dr. Hogg, Meerut; Dr. Gavin Milroy, Richmond; Dr. Eustace Smith, London; Dr. J. Hughlings-Jackson, London; Professor Huxley, Craigside, Rothbury, Northumberland; Mr. J. Chatto, London; Mr. J. J. Brazier, Aberdeen.

BOOKS AND PAMPHLETS RECEIVED—

Haden's Earth to Earth—Henry's Posological and Therapeutic Tables—Twenty-ninth Report of the Commissioners in Lunacy to the Lord Chancellor—Report of the Health of the Borough of Birmingham—Street's Indian and Colonial Mercantile Directory—Erichsen's Concussion of the Spine.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Obstetrical Journal—Journal des Etrangers—Archives Générales—Daily Picayune—Daily Bristol Times—New Orleans Times—San Francisco News-Letter—Edinburgh Medical Journal—Extrait des Comptes-Rendus—Weekly Independent—Indian Medical Gazette—Chelsea News—Sydney Morning Herald—Pacific Medical and Surgical Journal—Journal of the Scottish Meteorological Society—Sanitary Review—Students' Journal—Monthly Homœopathic Review.

APPOINTMENTS FOR THE WEEK.

August 7. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

9. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

10. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

11. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

12. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

13. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, July 31.

BIRTHS.

Births of Boys, 1203; Girls, 1159; Total, 2362.
Average of 10 corresponding years 1865-74, 2103·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	778	644	1422
Average of the ten years 1865-74	867·2	824·3	1691·5
Average corrected to increased population	...	...	1810
Deaths of people aged 80 and upwards	...	...	40

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	16	...	7	...	2	1	28
North	751729	...	9	14	3	14	...	3	1	27
Central ...	334969	1	5	6	...	3	...	1	...	14
East	639111	...	6	17	1	18	1	3	1	25
South	967692	...	18	34	2	21	1	5	4	43
Total	3254260	1	44	87	6	63	2	14	7	137

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·045 in.
Mean temperature	60·8°
Highest point of thermometer	77·5°
Lowest point of thermometer	44·4°
Mean dew-point temperature	51 0°
General direction of wind	Variable.
Whole amount of rain in the week	0 04 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, July 31, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending July 31.	Deaths Registered during the week ending July 31.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2362	1422	77·5	44·4	60·8	16·01	0·04	0·10
Portsmouth ...	122632	27·3	74	32	...	...	...	...	...	...
Norwich	82842	11·1	58	29	75·0	45·5	58·4	14·66	0·10	0·25
Bristol	196186	44·1	128	106	77·0	42·4	57·0	13·89	0·00	0·00
Wolverhampton ...	71718	21·1	55	29	77·6	43·8	57·4	14·11	0·17	0·43
Birmingham ...	366325	43·6	284	139	76·3	45·5	57·7	14·28	0·07	0·18
Leicester	109830	34·3	86	68	...	...	...	...	...	...
Nottingham ...	92251	46·2	58	46	83·9	43·8	58·2	14·55	0·07	0·18
Liverpool	516063	99·1	381	258	75·7	48·3	57·5	14·17	0·08	0·20
Manchester ...	356626	83·1	289	174	82·0	44·0	59·4	15·22	0·11	0·28
Salford	135720	26·3	131	80	78·9	40·5	56·1	13·39	0·14	0·36
Oldham	87437	18·7	56	40	...	...	...	...	...	...
Bradford	168305	23·3	127	79	75·0	46·0	58·3	14·61	0·02	0·05
Leeds	285118	13·2	255	132	78·0	44·0	57·6	14·23	0·01	0·03
Sheffield	267881	13·6	201	127	76·5	44·5	57·2	14·00	0·04	0·10
Hull	133932	36·8	115	61	69·0	42·0	54·6	12·56	0·02	0·05
Sunderland ...	106342	32·2	84	35	81·0	45·0	58·4	14·66	0·10	0·25
Newcastle-on-Tyne	137665	25·6	129	85	69·0	50·0	57·2	14·00	0·10	0·25
Edinburgh	211626	50·5	142	85	...	...	...	...	...	...
Glasgow	534564	88·6	378	254	74·0	43·3	56·7	13·72	0·40	1·02
Dublin	314666	31·3	191	135	77·2	39·5	56·7	13·72	0·07	0·18
Total of 21 Towns in United Kingdm	7742889	37·0	5584	3417	83·9	39·5	57·6	14·23	0·09	0·23

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·05 in. The lowest was 29·63 in. at the beginning of the week, and the highest 30·21 in. on Tuesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 142.)

The Echinidea.—An ordinary Sea-urchin is comparable to a Holothurid, with the body distended so as to be globular, and with a skeleton in the form of regular plates arranged in meridional series; those plates which correspond with the ambulacral vessels being superficial to the latter, and consequently perforated by the canals which pass from the ambulacral vessels to the feet. The ambulacral nerve lies between the skeletal plates and the vessels, and terminates in an eye-spot, situated at the aboral end of each ambulacrum. In all existing *Echinidea* there are two series of plates in each ambulacrum, and two in each inter-ambulacral space, whence, as there are five ambulacra, twenty meridional series of plates make up the main part of the shell, or so-called *corona*. These plates are usually firmly united by sutures. At the aboral end of each ambulacral series is a single *ocular plate*, and at the aboral end of each inter-ambulacral series a *genital plate*. The latter are perforated by the ducts of the reproductive organs.

In the regular Sea-urchins, the anus, which is always present, is situated within the circle formed by the genital and ocular plates, but in the others it occupies an interradial space on the aboral or oral face. The madreporic tubercle is united with one of the genital plates.

Most *Echinidea* are provided with a complex buccal armature, which, in the regular Sea-urchins, is known as Aristotle's Lantern. Movable spines are articulated with the plates of the corona. Pedicellariæ are abundant, and generally three-jawed. The embryonic development of the *Echinidea* differs from that of the preceding forms, in that the Echinopædium (termed a *Pluteus*) has a skeleton formed of calcareous rods, which support the processes into which the body, in the region of the ciliated bands and elsewhere, is prolonged.

The origin of the ambulacral system, before it has the form of a tube with a dorsal pore, has not been made out. The blind end of this tube lies on the left side of the alimentary canal, and is connected with a discoidal mass which lies on the left side of the stomach; a similar mass appears on the right side.

The blind end of the tube enlarges, and gives rise to a rosette, whence the ambulacral vessels proceed; and a depression of the integument of the larva, forming the so-called *umbo*, extends inwards to this. At the bottom of the umbo, a new mouth opens through the centre of the rosette into the gastric cavity of the larva, the first œsophagus being abolished. The larval skeleton undergoes resorption, but the rest of the Echinopædium passes into the Echinoderm.

The Ophiuridea.—The Brittle-stars are stellate and five-rayed, like the majority of the Star-fishes, and, like them, have the ambulacra confined to the oral face of the body and rays. But they differ from both *Echinidea* and *Asteridea* in the composition of the skeleton.

The centre of each ray is, in fact, occupied by a series of "vertebral ossicles," which lie on the deep side of the ambulacral vessel and nerve, while a series of median flattened plates covers the superficial aspect of the same structure.

The alimentary canal is a simple sac, without intestine, anus, or lateral diverticula.

In some *Ophiuridea* the embryo does not become an Echinopædium, but passes directly into the Ophiurid condition. Where an Echinopædium exists, it is a *Pluteus*, with a skeleton like that of the *Echinidea*. Metschnikoff (*loc. cit.*) has made the interesting observation that in an Ophiurid (probably *Ophiothrix fragilis*) the whole system of perivisceral and ambulacral cavities arises from two bodies, one situated on each side of the gullet, which are solid, though it is possible that they may have primitively been diverticula. Two cellular masses become detached from these bodies, apply themselves to the sides of the stomach, and are converted into discs, from which the perivisceral cavity and its parietal and visceral walls take their origin. The rest of the solid body on the left side of the gullet acquires a vesicular character, opens by a dorsal pore, and grows round the gullet, to give rise to the circular ambulacral vessel. The other solid body disappears. The mouth of the Echinopædium becomes that of the Ophiurid.

It cannot be doubted that these solid bodies take their origin, in the same way as in other Echinopædia, from the endoderm; and thus the question arises, How far does the mesoblast thus formed differ from that which arises by separation of cells of the hypoblast, as in the Dog-fish, and how far does this case tend to render it probable that a schizocœle is only a modification of an enterocœle?

The Crinoidea.—The only living representatives of this group are the *Comatulidæ* and *Pentacrinidæ*. They possess a cup-shaped body, provided with five usually branched arms, and either perched upon the extremity of a jointed and fixed stalk, or adherent by appendages attached to one face of the cup. The mouth is situated in the centre of the unattached face of the cup, and five series of tentacular filaments radiate from it to the ends of the oral faces of the arms. Between two of these is a prominent conical elevation, open at its summit. The alimentary canal leading from the mouth is twisted spirally upon itself, so as to inclose a central columella, and then ends in the cavity of the interior of this anal cone.

The radiating series of tentacular filaments are commonly regarded as *ambulacra*—and the Crinoid is interpreted as if it were a sort of aberrant Star-fish. But it appears to me that the arms of the Crinoid are rather comparable to the tentacula of a Holothurid, and that the Crinoids are devoid of ambulacra in the proper sense of the word. A Crinoid appears to me to be best comparable to a Rhopalodiniform *Synapta*—with enormously enlarged oral tentacula, and with skeletal plates developed on the whole aboral body-wall, as the ossicles of the Crinoid calyx, arms, and pinnules.

In this way it is possible to understand why no ambulacral vessels or nerves have yet been definitely made out in the *Crinoidea*.

The position of the generative organs in the pinnulæ attached to the sides of the arms still remains as a character of distinction between the existing Crinoids and all others.

Little is known of the development of the Crinoids, but in *Antedon* (*Comatula*), Wyville Thomson has shown that the Echinopædium becomes surrounded by ciliated hoops. The origin of the perivisceral cavity has not been made out, but the skeleton of the Echinoderm appears in the body of the larva as a pedunculate Crinoid, and finally attaches itself by the end of its peduncle. It increases in size in this pentacrinoid state, but eventually the calyx and arms are detached from the stalk, and take on the Comatuloid condition.

The development of such Holothurids as *Psolinus* (Kowalewsky, *Mém. de l'Acad. de S. Petersbourg*, 1868), and of the probably *Psolus*-like form described by Krohn (*Müller's Archiv*, 1851), appear to me to furnish the best terms for comparison with the Crinoids. In the latter there is a striking resemblance in the skeletal plates, and in the tentacula, to an embryonic *Antedon*; while the median suckers, which are first alone developed, indicate a possible interpretation of the Crinoid stem.

The extinct *Cystidea* are evidently close allies of the *Crinoidea*, with smaller oral arms, and the anus less closely approximated to the mouth. Probably the genitalia were contained within the calyx.

The *Edrioasterida* and the *Blastoidea*, on the other hand, evidently possessed true ambulacra, and the former must have been closely allied to the *Asteridea*. The ambulacra of the *Blastoidea* are very difficult of interpretation.

All recent investigations into the development of the *Echinodermata* have, to my mind, furnished cumulative and convincing proof of the suggestion which the study of Müller's investigations led me to make, some twenty years ago,—that those animals are modified Worms, and have no special affinity with the *Cœlenterata*.

The beautiful discovery by Alexander Agassiz, of the mode of origin of the ambulacral system, while it raises a question as to the homology of that system with the water-vascular system of the Worms (though it does not at once disprove that homology), affords no argument for the Cœlenterate affinities of the Echinoderms; inasmuch as we now know that the perivisceral cavity of *Sagitta* and of the *Brachiopods*, which certainly have not much to do with the *Cœlenterata*, is developed in the same way.

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Haeckel, admitting the essentially Annuloid character of the *Echinodermata*, has thrown out the idea that these animals are compound Worms, each ambulacrum, as I understand him, representing a virtual worm-body. But it is precisely the ambulacral system to which there is nothing comparable in an ordinary Worm; and the proposition that a Holothurian is a compound organism appears to be justifiable by nothing short of demonstration of the fact.

The resemblance of the Echinoderm larvæ to the larvæ of *Enteropneusta*, *Annelida*, and *Turbellaria*, and their unlikeness to those of the *Cœlenterata*, is undeniable. The development of the perivisceral cavity, and of the ambulacral vessels, in the Echinoderms is unquestionably like that of the gastro-vascular canals in the *Ctenophora*; but it is even more like that of the perivisceral cavity in *Chætognatha* and *Brachiopoda*. While, if the hint given by the development of *Ophiothrix* may be trusted, it has still more widely spread analogues among the higher animals.

The pseudhæmal vessels, so largely developed in most Echinoderms, are absent in the *Cœlenterata*, and reach their maximum in the Worms. It seems to me that Semper's view that the *Holothuridea* and the *Gephyrea* have sprung from a common stock, and that the *Asteridea*, *Echinidea*, and *Ophiuridea* are extreme modifications of the Holothurid prototype, is highly probable. But I conceive that, while the Echinoderms just mentioned are essentially *Holothuridea* with diminished, or absent, oral tentacula, and large bodies, with well-developed ambulacra; the Crinoids are essentially *Holothuridea*, with the oral tentacula enlarged, the body relatively small, and undeveloped ambulacra.

(*To be continued.*)

THE LUMLEIAN LECTURES:
ON LIFE AND ON VITAL ACTION IN HEALTH AND DISEASE.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

By LIONEL S. BEALE, M.B., F.R.S.,
Physician to King's College Hospital.

LECTURE III.

(*Continued from page 91.*)

IF the bioplasm of any tissue be supplied with more nutrient material than it receives in the normal condition, it will grow more rapidly than usual. This increased growth, owing to an increased access of nutrient pabulum, is the *first change that occurs in inflammation, and it is essential to the inflammatory process.*

The more ready access of nutriment may be due to an opening in the formed material and exposure of the bioplasm at one point, as may occur in mechanical injury; or lastly, it may depend upon a softened state of the formed material, which is thereby rendered more permeable to the fluids, or the character of the nutrient fluid may be so altered as to permeate the formed material much more readily than the nutrient fluid which transudes through the walls of the vessels from healthy blood,—a condition which is met with in some forms of inflammation, and in all the more severe forms of fever. In the latter state, changes in the blood often proceed to such an extent as to materially modify its chemical composition.(a)

If we are to ascertain the true cause of the enlargement of masses of bioplasm in inflammation and fever, it is clear we must carry our inquiry beyond the fact of the increased access of pabulum, for it is obvious that the access of pabulum could not determine increased growth unless there was an active tendency on the part of the bioplasm itself to appropriate the pabulum and to grow—in fact, a tendency on the part of the bioplasm to move towards the pabulum, take it into itself, and convert it into living matter. Bioplasm *always tends to grow*. It *must*, in fact, grow, if it be supplied with nutriment.

Bioplasm has within itself no power of regulating or controlling the rate of its growth. As already stated, the conditions under which it grows exert an important influence in the results of growth and development of bioplasm, and these "conditions" vary as regards every kind of bioplasm; and not only so, but different forms of bioplasm differ greatly in their power of bearing a change in the conditions without suffering deterioration. Some forms will live under external circumstances of the most varied kind, and are, therefore, found over a very wide area. Others suffer or are destroyed if the external conditions are altered only so slightly as to be imperceptible to many living creatures; and in this case the distribution of the life-forms, resulting from the development of the bioplasm, will be confined to a very limited area. The same observations may be made with respect to the several different forms of bioplasm in one living organism—some, like that of epithelium, bearing very great changes in temperature, etc., without being much affected; while other forms, like those of some glands, and those of some parts of the nervous system, suffer under comparatively slight alterations of the ordinary conditions under which they live.(b) There is no cogent reason for supposing that all forms of bioplasm might be made to bear, without suffering, similar great alterations in external conditions, than for believing that we might domesticate the wolf and the lion, as we have domesticated the dog and the cat, or make the swallow flourish in our little home-prisons like the canary bird.

As it were between the two extremes, are forms of bioplasm that grow and deteriorate, but still live for years under adverse circumstances, the structures formed never attaining a state of vigour, but still being formed and acting in an imperfect way, and perhaps for a long period of time. The weak, succulent, too quickly developed vegetation of our fern-cases is an example; and the soft, rickety tissues of some of our weak, flabby, over-fed, town-bred, highly precocious children, supply a very painful instance of too quick formation and growth. In such cases the bioplasm has grown too fast, and tissue has been formed too quickly. Time has not been allowed for its condensation and strength, and for the acquisition of resisting and lasting properties. But is it not a mistake to point to such cases as examples of diminished *vital action?* It seems to me that life has been carried on too fast, and not too slowly. Too much pabulum has been taken up, not too little. Too much heat, too much food, favour a quick, rank, succulent, spongy sort of development, inducing the formation of soft bones and weak, imperfectly acting tissues which are likely soon to deteriorate.

In connexion with the question of the nature of *vital* actions, the loss of formative power, as the rate of growth and multiplication of the bioplasm increases, must be regarded as a fact of great interest. Bioplasm may form tissue and give origin to multitudes of bioplasts, from which tissue may also be developed. But the very particle of bioplasm which might have taken part in tissue-formation will, if it grows and multiplies too fast, not only lose its power of forming tissue, but the particles that may be produced from it by descent will never regain the wonderful capacity that has been lost. No pus-corpuscle or any of its descendants, then, ever take part in tissue-formation. It has deteriorated, and the deterioration in formative power remains a characteristic of all its descendants. But although formative power is lost, new powers or properties may be nevertheless acquired. These are, however, remarkable for destruction—for pulling down and destroying that which has been formed,—never for construction. Some forms of pus acquire during their production the most wonderful capacity for rapidly growing and multiplying, as well as for living, and resisting the influence of external conditions. The little offsets or particles that are detached from them may rise in the air, live for a time in water or milk, or other fluids containing organic matter, adhere to a sponge or a probe or other substance, or be carried in a living state on the foot of a fly or some other insect, and thus transported to an organism at a distance from the one which was the seat of their production. The minute germs being in contact with material adapted for their nourishment, rapidly grow and multiply in their new situation. As we know but too well, such forms of *virus* have been produced *ab initio*, fostered, and propagated to the destruction of hundreds of human beings.

In some cases we are almost able to watch the series of phenomena which result in the development of a contagious animal poison. I have shown that the active agent is a minute particle of living bioplasm, which I have good reason to believe may have been produced by descent from the

(a) "Disease Germs," p. 340.

(b) The "conditions" under which bioplasm grows in the higher animals are, it must be borne in mind, very complex, and are determined partly by the results of growth of pre-existing bioplasm and in part only by external conditions. The same remark applies to the "environment" of any cell or elementary part of the body.

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normal bioplasm of the body. This particle of deteriorated bioplasm, which in some cases may be *seen*, is a "disease-germ," and of these "contagium" consists. The word *contagion* was used by Hippocrates, by whom, as well as by Harvey, and indeed by authors who lived since Harvey's day, it was employed to signify something immaterial—something intangible, that was supposed to emanate somehow from the affected organism. Now, however, we use this word in a very different sense, for by it we mean actual matter of some kind. This matter, as far as I have been able to ascertain, is composed of minute particles of bioplasm, which resemble in their general characters bioplasm which exists in some situations in the healthy body. The contagious bioplasm results from normal bioplasm, the life of which has been carried on for some time under unusual conditions. It has been already shown that an ordinary form of morbid bioplasm—pus—often originates in the bioplasm of epithelium and in that of connective tissue, and that certain forms of pus have specific virulent properties, and are in fact animal poisons, which may be inoculated.

I do not, however, entertain the opinion that all contagious disease-germs spring from the bioplasm of epithelium or connective tissue. Some may come from white blood-corpuscles, or from lymph-corpuscles. But I do consider that many facts favour the doctrine that the contagious particles concerned in propagating many of our most serious specific fevers have been derived from the living matter of man's body, and that they are not germs of fungi, or bacteria of any kind whatever. Indeed, in certain instances, they may be seen in far greater multitudes in the tissues of the diseased organism than bacteria, which latter, as is well known, are found often enough in countless multitudes in cases in which there is no specific disease of any kind.

When I was studying the changes in the tissues of animals destroyed by cattle plague (1865), I found a quantity of rapidly growing bioplasm in almost all the tissues, but in the skin the manner in which the contagious particles grew and spread could be very satisfactorily demonstrated. The minute particles having gained access to the interstices between the bundles of fibrous tissues of the corium, divided and sub-divided, spreading amongst the bundles and separating them from one another. In some places the particles had made their way into the interstices of the epithelial cells of the cuticle, where they formed little collections, and had invaded the tissue itself of the cuticle cell. Similar bioplasm particles were found in the obstructed capillary vessels, and in not a few instances could the course pursued by these be traced from the interior of the capillary to the surrounding tissue by a narrow line of well-defined bioplasm particles. Although it is true bacteria were to be seen in some situations, no difficulty was experienced in finding collections of the bioplasm quite free from bactercid bodies or their germs—a fact which, I think, conclusively proves that there is no necessary connexion between the specific bioplasm particles and bacteria.

I have for years past—in fact, ever since 1861—directed attention to what I cannot but characterise as the many insuperable objections to the acceptance of the bacterium and fungus germ hypothesis of contagious fevers. In these days there is nothing more striking than the pertinacity displayed in forcing upon our attention extravagant conjectures which seem to be almost unsupported by facts. One great scientific authority tries to persuade us to go along with Lucretius; another seems to think that it is our bounden duty to believe and confess that we are machines. We are expected to acknowledge that there are forms of life the physical actions of which are not far removed from those of an oil globule; that between a piece of lifeless white of egg and living bioplasm there is only a slight difference; and that omnipresent bacteria, which it is gravely asserted may be made out of non-living matter in a glass flask, or allied forms, are the active agents, or at least the essential concomitants, of almost every form of contagious disease which can be imparted by an infected to an uninfected organism. Indeed, there is no end to the suggestions advanced to gratify our love of the improbable, which are made to appear plausible by the selection and ingenious application of a few arguments, while the numerous facts opposed to them are altogether ignored.

Some writers have committed themselves to the fungus germ theory of disease, and have so clearly stated their views that it is scarcely possible to misinterpret their meaning. Others have expressed themselves against this doctrine with equal clearness and equal force. But there is a third class of persons, who seem to think that fungi may or may not be the active *materies morbi*. If, say they, contagium does not consist of actual bacteria, it is caused by bacteria, or bacteria constitute an essential condition of propagation, or they prepare the body for the reception of the contagium, or they make the pabulum upon which the contagium lives, or they are a stage in the development of contagium, or they are constant and necessary accompaniments of contagious particles. All this in spite of the broad fact staring us in the face that, at the time when certain contagious matter is most virulent, no bacteria, or few or doubtful bacteria, are to be discerned, while, as the bacteria multiply, the specific properties of the poison become weaker, and when the bacteria are growing rapidly and freely multiplying, its specific properties have disappeared! Again, it is assumed that there is a necessary connexion between the development of bacteria and the formation of pus, although anyone can satisfy himself by observation that the living, moving pus-corpuscle is destitute of bacteria germs, while the dead, inactive pus-corpuscle, or, more strictly, the matter resulting from the death of the pus-corpuscle, is being devoured by them.

The very last conclusion, it seems to me, that would be adopted by anyone who thoroughly thought over the matter would be, that these low organisms were the *causes* of the changes in the fluids by which their growth was favoured, much less that they were the cause of the diseases which had existed for some time before they began to multiply. One might, I think, with as much show of reason, advocate the doctrine that bacteria were invariably the cause of death, since after every form of death they grow and multiply in the tissues and fluids of the human body.

We have now examined a somewhat extensive range of vital phenomena, and nowhere have we discovered a change or an action peculiar to living matter that could be adequately accounted for by any known facts and laws. The formation of every tissue or organ seems to have been anticipated and prepared for, as it were, beforehand; and, in many cases, changes occur which it is difficult to persuade oneself were not in some sense foreseen, because provision is made for their occurrence long before the changes happen, and the preparation is such that it could only be accounted for upon such an assumption. But, in fact, this is characteristic of every kind of vital action, although it is much more apparent in some instances than in others. It need scarcely be said that physicists have failed to adduce any explanation of the phenomenon, which, like many other facts to which I have adverted, is peculiar to life.

I must apologise for troubling you with so many remarks against any form of physical doctrine of life, but I shall trespass very little more upon your patience. If by physics and chemistry, the phenomena common to all living—even in the case of the very lowest, simplest living—cannot be adequately accounted for, it seems to me it would be an idle waste of time to recount the numberless facts and arguments against the acceptance of a physical doctrine as applied to thought. Nor shall I be greatly moved by the hardest words that may be used, or the intensity of the scorn that may be displayed, by those who regard the brain as a machine, and thought as a result of chemical change. They may be well supported in their views, but until they can give a rational account of the changes which occur in a simple living organism, no one who uses his reason aright will believe that they really discern the nature of the difference in the state of the nervous matter of man's brain when the organ is active and when it is in a state of rest.

Have the supporters of physical doctrines been able to tell us what goes on when a nerve grows, what occurs when it acts, or the difference between the nerve matter of the nerves centres and nerve fibres when they are in a state of the highest activity and most complete rest? Have they shown us how a single nerve fibre is formed in its position, much less accounted for the manner in which that inextricable interlacement of fibres characteristic of all nerve texture is brought about? Have they proved how an odorous or a sapid particle influences the nerve, or the differences between the vibrations of the molecules of the nerves concerned in sight and hearing, or what happens when a nerve centre receives an impression from the periphery, or transmits an impulse outwards?—nay, have they advanced a plausible theory to explain how we are able to bring about a definite degree of shortening in muscular fibres, maintain it for a time, and vary it as we will? And yet we are expected to accept the dicta concerning the nature of the highest and

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most complex actions of man's organism, of authorities who are professedly unable to enlighten us as to the changes which occur when an amœba or a bacterium moves, or takes up nutrient matter, grows, or divides and multiplies!

(*To be continued.*)

FORTY-THIRD MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

HELD IN EDINBURGH ON AUGUST 3, 4, 5, AND 6, 1875.

ADDRESS IN PHYSIOLOGY.

By WILLIAM RUTHERFORD, M.D., F.R.S.E.,
Professor of the Institutes of Medicine in the University of Edinburgh.

MR. PRESIDENT AND GENTLEMEN,—In the medical schools of Scotland, physiology is still designated the Institutes of Medicine. This somewhat ancient title has the advantage of continually keeping before the minds of our students the fact that physiology lies at the very foundation of scientific medicine. Much, indeed, has been done in Germany and elsewhere to detach physiology from medicine, and to develope it as a branch of purely natural science. Such a development, however, gives to physiology an aspect somewhat different from that which it wears when we regard it as the Institutes of Medicine; and, therefore, this title is useful to the teacher, inasmuch as it constantly reminds him that he is more especially to dwell on those facts of physiology which are of value to the practitioner of medicine.

Physiology is, I need scarcely remind you, an experimental science. Apart from those which are the result of artifice, experiments of great physiological significance are being continually wrought for us by accident and by disease. Physiology owes much in the past to those who, like you, are engaged in the daily study of these pathological experiments; for, was not the function of the spleen an enigma until the effect of one of its diseased conditions was observed? Has not psychology been revolutionised by a study of brain disease? Did not Hughlings-Jackson, with singular sagacity, apprehend from a study of brain-disease that convulsive movements may spring from the cortex of the brain,—a fact which, as you know, has since been demonstrated by laboratory experiment? Was not the crossed action of the cerebro-spinal axis revealed by the study of disease? and, indeed, was not the very foundation of nerve physiology to a large extent based upon a study of nervous disease by Charles Bell? Assuredly we cannot afford to detach physiology from medicine, for, without a doubt, in the future as in the past, the study of those bodily conditions that are abnormal will throw much light on those that are normal.

But, on the other hand, need I remind you of the difficulties you encounter in the analysis of these experiments of diseases, as you endeavour, for example, to determine the nature and the seat of some malady—say of the brain; the cause of a dropsy; the indication of some change in temperature, in the state of the pulse, the respiration, or some secretion? And need I aver that, in this difficult task of pathological analysis, your labours grow less as physiology advances? And, if you look around you, is it not evident that those whose knowledge of physiology is the most profound, are precisely those who are most able to conduct this analysis with skill and with success?

At the present time there is reason for some feeling of anxiety with regard to the manner in which this much-needed knowledge of the Institutes of Medicine is to be attained by our students. In recent years, the teaching of physiology has made a great stride in this country. Laboratories duly appointed have been, and are being, organised. The method of physiological instruction has, in most instances, passed from the mere prelection, illustrated by diagrams, to an experimental exposition of the subject. Very many of those whom I now address had doubtless an experience of physiological tuition similar to my own. I remember well how much we were told about the action of the bodily organs, but how little we were shown of such actions. We were lectured about the action of the heart and its valves, but the motions of the heart we never saw, the operations of its valves were never shown to us. We heard about the manner in which the blood-pressure might be measured, and we were duly apprised of the number of pounds and ounces of pressure on the square inch, but this fundamental experiment we never saw, nor did we even see the instrument that was used for the purpose. We heard about the chemical transformation which the food undergoes when affected by the saliva and the gastric juice; but of the manner in which it might be demonstrated that these changes really do occur, we knew nothing. The bile was said to contain certain acids and pigments; the urine had urea, uric acid, etc.; but all demonstration of these great facts was neglected. In alluding to these defects in the tuition of physiology from which some of us have suffered, I would not have it supposed that I desire to cast reflections upon the teachers; such is far from my intention, for I know the difficulties against which they had to contend, and I know the success with which they finally overcame them. But I merely desire to remind some of you how much you, like myself, were crippled in the study of practical medicine, by the sadly imperfect manner in which we learned the cardinal facts of physiology.

At this moment there is a distinct danger of a return to something like this miserable mode of instruction, in consequence of the fanatical clamour of a number of persons, excited, it must be admitted, by one or two members of our profession.

I cannot suppose that any member of this Association entertains the idea that experiments on the lower animals are not justifiable for the discovery of new truth, but I am aware that there are some who entertain the idea that vivisection is not necessary when it has for its object the mere demonstration, for educational purposes, of facts already known. Those who hold this doctrine appear to me to forget that physiology is an experimental science, and that no right conception of the subject can be obtained unless the student be shown the experiments that are necessary for the demonstration of certain facts. No language, however clear, can depict the movements of the heart or the circulation of the blood, so as to call forth a picture so vivid and true as that which, without an effort, springs forth the moment these things produce an impression through the organ of sight. The manner in which the blood-pressure is affected by retarding the heart's action, by dilating the arterioles, or by muscular contraction, the changes which follow division of the sympathetic nerve in the neck, the action of the chorda tympani on the submaxillary gland, the result of stimulating the cortex of the cerebrum, the reflex power of the spinal cord, the tetanus from strychnia, the paralysis from curara,—these and other equally great fundamental facts in physiology give rise to nothing more than vague and feeble conceptions unless they are witnessed. Has not every teacher repeatedly observed the altogether different mental attitude which the student assumes the moment you pass from a mere description to a demonstration of phenomena? You far more forcibly arrest his attention, and far more deeply imprint upon his mind the facts which you would bring home to him. He is apt to forget that which he has merely been told, but the impression of that which he has seen is with difficulty effaced.

There is, however, a great deal more than this. It is not enough that the student of medicine should be crammed with so many facts about the bodily machinery—it is of infinitely greater importance that he should be really *educated* in a knowledge thereof. He cannot be educated unless you assume that he has a right to question your statements, and to demand from you a demonstration of the truth of what you say. It is not enough that you merely state to him, in an *ex cathedrâ* manner, that this or that is so; you ought on all possible occasions to *prove* to him that it is so. You ought to appeal to him as an individual, who can and who ought to think for himself, and, therefore, as an individual who is not merely to be crammed, but to be convinced.

Every examiner in physiology must have repeatedly observed how glibly the student may repeat to you a statement of fact, but how sorely puzzled he often appears when you ask him for the evidence upon which his statements are founded. Moreover, everyone must have noticed how often the student lacks knowledge that is definite; he mingles together things that are certain and things that are uncertain, because he has not been sufficiently trained to examine experimental evidence. Of how little avail is this unreasoning and indefinite knowledge when the student comes to thread his way through the difficult analysis of disease. He either believes or he doubts too much. He oscillates from one extreme to the other,

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because he is wanting in definite knowledge, and because his critical power has not been sufficiently developed.

Now, sir, I maintain that this definite and critical knowledge regarding the bodily mechanism cannot be attained unless our students be shown experiments on living animals; and I hold that those authorities who seem to be of opinion that this method of tuition may be dispensed with, are entirely overlooking the vast importance—not only to the student himself, but to our whole race—of an experimental manner of laying the foundation of a knowledge of the institutes of medicine.

It is, I believe, too much to assume that those who advocate a flimsy and superficial method of teaching physiology are altogether actuated by feelings that are termed humane. I fear that there is lurking behind this disposition a feeling of indifference to what are the true principles of medical education, or, what is more likely, there is an incorrect appreciation of these principles. It must, however, be admitted that, notwithstanding the vast importance of physiological experimentation in the teaching of medicine, the circumstances under which it is possible demand serious consideration.

No one can deny that animals daily suffer pain in order that they may be eaten by man, and also in order that man may not be eaten by them. If it be thought necessary to put countless animals to a painful death for the purpose of keeping the human race alive, may not the physiologist inflict pain, not only for the discovery of new truth, but also for the right education of those who have to spend their lives in preventing and in healing disease? Is the one object less important than the other? Indeed, is not the object in both cases precisely the same? Why, then, this clamour against physiologists? The pain produced in all the physiological experiments performed in this country in the course of a year is, I believe, as nothing when compared with that inflicted upon animals by the members of her Majesty's Lords and Commons on an autumn holiday.

I would not, however, for a single moment speak lightly of the production of pain, for it is the function of those who pursue medicine to alleviate pain and suffering. Our students would, indeed, be badly trained for the pursuit of a calling so humane as that of medicine if they did not find us on all occasions carefully avoiding the giving of pain that is not absolutely necessary. Therefore it is our duty, for this as well as for other and obvious reasons, to use narcotics in our experiments upon animals whenever it is possible. It is not necessary for a sound physiological education that our students be shown *all* the experiments that are needed to demonstrate physiological truths. We probably do enough if we show them experiments on the cardinal points of physiology; and I aver that all the experiments on the higher animals that are really required for the purposes of education can be performed with the aid of narcotics.

Seeing that this is so, why should it be that some have become convinced that, in consequence of the present inflamed state of the popular mind on the subject of vivisection, the right education of medical students must be abandoned? The popular mind has been abused by inaccurate and misleading statements regarding both our motives and our actions. I maintain that a great and deplorable error was committed when the unreasonable clamour of the antivivisectionists was met in the spirit of compromise, instead of the spirit of stern resistance. I believe that the unfortunate Vivisection Bill that was laid on the table of the House of Commons conferred a dignity upon the policy of the antivivisectionists which, but for that Bill, it would probably never have possessed. It is true that there has been a withdrawal of that singular Bill, according to which we were to have been fined fifty pounds, or to have been sent to prison for two months, if we had dared to show our students any experiment even upon a narcotised animal; but the effect of the Bill is not effaced. The increased boldness which it has given to the pretensions of the antivivisectionists is only too evident. All that we can now hope for is, that the good sense of our legislators will in the end prevail, and that they will do nothing to hamper the education of our medical men.

I have felt, sir, that in an address on physiology I could not pass over in silence this, the leading topic of the day. I have alluded to it but briefly; for, although it is of the deepest importance, there is another subject to which I would ask your attention.

Nine months ago, in an introductory address given in this University, I had occasion to review the present aspects of physiology (*Lancet*, Nov., 1874). Having nothing further of a general character to say thereon, I have selected a special subject in physiological pharmacology which will, I trust, prove interesting to the practitioner of medicine.

The remainder of the address was devoted to a report of a large number of experiments on the biliary secretion of the dog, by Professor Rutherford and Monsieur Vignal. As this part of the address was illustrated by a large number of graphic representations of the results of the experiments, and as the expenses of the research have been defrayed by the Scientific Grants Committee of the Association, a full account of the experiments, with woodcuts of the curves shown in the lecture, will be published in the *Journal*. The following is a brief *résumé* of this part of the address.

It has been shown by Professor Hughes Bennett's Committee appointed by the British Medical Association, that in dogs with permanent biliary fistulæ, and living upon a fixed diet, "spontaneous diarrhœa, dysentery, and purgation produced by blue pill, calomel, corrosive sublimate, and podophylline, always diminished the solid constituents of the bile, and, with one exception, the fluid portion of the bile also."

More recently, Röhrig performed experiments on the action of cholagogues in fasting curarised animals with temporary fistulæ, and found that large doses of croton oil greatly increased the secretion of bile; and that a similar effect, though to a less extent, was produced by colocynth, jalap, aloes, rhubarb, senna, and sulphate of magnesia, the potency of these agents as hepatic stimulants being in the order mentioned. He found also that castor oil had little effect, and that calomel, while it seldom recalled the biliary secretion, nevertheless somewhat augmented it when it was taking place slowly.

In Dr. Rutherford and M. Vignal's experiments a modification of Röhrig's method was adopted. Dogs which had fasted for eighteen hours were curarised, and artificial respiration maintained. A canula was tied in the common bile-duct; the cystic duct was clamped. The bile flowed from the canula into a finely graduated cubic centimetre measure, and the quantity secreted was recorded every fifteen minutes. It was shown that this method of continuous observation yielded results far more reliable and instructive than that adopted by Röhrig.

Two experiments on the secretion of bile in dogs that had fasted for eighteen hours, and which received nothing more than the doses of curara used in all the experiments for the purpose of keeping the animals at rest, showed that the biliary secretion was not affected by the doses of curara given; that the biliary secretion, on the whole, somewhat diminishes in the course of an experiment lasting from six to eight hours, but that the chemical composition of the bile remains almost exactly the same.

The curara was always injected into a vein. The various substances hereafter mentioned were injected directly into the duodenum; for this purpose, the wound in the abdominal wall was opened, and the substances injected through the wall of the viscus.

Three experiments with croton oil showed that, although it produced violent irritation in the alimentary mucous membrane in all cases, it increased the biliary secretion in only one instance. A high place is, therefore, not assigned to this substance as a stimulant for the liver.

Six experiments with podophylline proved that this substance greatly increases biliary secretion. A definite statement regarding the composition of the bile before and after podophylline will be given in the report.

Röhrig's statement that aloes deserve a high place as a hepatic stimulant was confirmed by three experiments, in which the extract of socotrine aloes was employed. The analysis of the bile (not hitherto given), however, showed that after aloes the bile is more watery; nevertheless, the velocity of secretion is so much increased that it certainly causes the liver to excrete more biliary matter.

Three experiments with rhubarb proved that it is a far more important hepatic stimulant than Röhrig has stated it to be. Doses of rhubarb were given nine times in the course of the experiments, and they never failed to excite the liver within half an hour after they were given.

Analysis of the bile before and after rhubarb in all the three experiments proved the remarkable fact that, notwithstanding the greatly increased velocity of secretion after rhubarb, the bile-solids secreted by the hepatic cells are not diminished. The rhubarb apparently calls forth an increased secretion of normal bile.

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Three experiments with senna proved that its power as a cholagogue is far below that of rhubarb. The bile is rendered more watery.

Four experiments with the aqueous extract of colchicum proved that it is a very decided cholagogue. The bile was rendered more watery, but the increase in the velocity of secretion was such that the amount of biliary matter excreted by the liver was certainly increased.

Two experiments with the solid extract of taraxacum proved it to be a cholagogue, though not a powerful one.

Two experiments with scammony proved that it has a slight cholagogue action.

Of four experiments with calomel, the secretion of bile was slightly increased in one, but there was nothing but diminution of the secretion in the other three. Purgative action was produced in all. The bile was rendered more watery.

Two experiments with gamboge gave no evidence that this substance is a cholagogue.

One experiment with castor oil confirmed Röhrig's statement that this substance has scarcely any cholagogue power.

Two experiments with dilute alcohol injected into the stomach showed that after the alcohol was given the secretion of bile slightly diminished.

In the report a full account will be given of the post-mortem examination of the state of the alimentary canal (hitherto entirely omitted in such experiments), so that the effect upon the biliary secretion and that upon the intestinal mucous membrane can be compared.

It was shown that the increased biliary flow from podophylline, rhubarb, etc., in these experiments could not be ascribed to reflex contraction of the gall-bladder; for this had been previously well-nigh emptied by digital compression, and the cystic duct had been clamped; nor could it be ascribed to reflex spasm of the larger bile-ducts, for the exaggeration of the biliary flow was far too great and far too prolonged to be explained in this way. Reasons were adduced for regarding it as probable that the agents are absorbed, and act on the liver directly. It was not professed, however, that their *mode of action* was definitely settled, the experiments having had for their primary object a determination of the facts of the case.

The opinion was expressed that powerful purgative action tends to diminish the biliary secretion.

The diminished secretion of bile in *non-fasting* animals after podophylline, observed in the experiments of Dr. Bennett's Committee, probably resulted from a diminished absorption of food from the alimentary canal, in consequence of the purgative action.

When a hepatic and intestinal stimulant, such as podophylline, is administered to an animal that is not fasting, it is probable that (1) the liver is excited to secrete more bile; (2) the absorption of bile and food from the small intestine is diminished on account of the purgative effect.

In conclusion, it was pointed out that this research proposed to be simply a contribution to comparative physiological pharmacology; and that it was left to the clinical investigator to compare these results with those observed in human pathological conditions.

AN ADDRESS DELIVERED AT THE OPENING OF THE SECTION OF PUBLIC MEDICINE.

By the Right Hon. LYON PLAYFAIR, M.P., C.B., F.R.S.,
President of the Section.

I HAVE recently delivered so many speeches and addresses on public health that you will not expect me to do more than give some practical remarks on the recent efforts of the Legislature to improve the health of the people. The present session of Parliament has had under consideration several important sanitary measures. Modern sanitary legislation dates from the year 1846, when Parliament carried out many of the recommendations of the Health of Towns Commissions by a large and comprehensive Act to promote the health of communities. Since that year, Act after Act has been supplemented on the main one, as the necessities for the increased powers arose. And, at last, sanitary laws became so cumbrous and complicated that neither experts in law, nor experts in hygiene, could master the accumulated legislation on public health. A Royal Commission sat a few years ago, under the presidency of Sir Charles Adderley, and recommended a consolidation of sanitary law. The president of that commission prepared, not without much labour, a consolidating Bill, upon which the present Government have considerably improved by judicious condensation; and now an Act has been passed which repeals the numerous Acts of previous years, and consolidates them into one statute. It is rarely wise to attempt such consolidation while law is in flux. Bacon long ago described the danger of such a proceeding, when he pointed out that the conversion into method of changing subjects results in fixing and stereotyping them into a form which resists further change, and therefore arrests their progress. Now, sanitary law is eminently in a state of flux. We have been groping our way very much in the dark as to the means of attaining the ends which we desire to reach. Organisation is altogether deficient. Medical officers of health, who more and more are being made the motive powers of sanitary administration, are appointed at haphazard, without being required to prove their knowledge of, or qualifications for, their important duties. Some of them have a single parish in charge, for which they receive a nominal fee, and probably give nominal work. Others have a thousand square miles, with a substantial salary, but with an area too large for efficient management, unless they are aided by assistant medical officers of health. Again, the sanitary law in regard to the prevention of disease is yet in its infancy. Our knowledge on this subject grows from day to day, and requires continued formulation into accreting law. If, then, the consolidation of law which has been accomplished this session meant, as it usually means, the stereotyping of law for a long period of time, you would join with me in deploring the result. But the responsible minister who introduced it, Mr. Sclater-Booth, gave the most distinct pledges that it was not to be considered in this sense. And with this assurance, we may well congratulate ourselves that a consolidated statute gives a firmer foundation than the old shifting patches of law, upon which our permanent sanitary edifice may be built. It is this view alone that all sanitarians will gladly recognise the consolidating Act of this session as an important contribution to sanitary law. As an amending Act, it is altogether trivial; as a consolidating Act, it is distinctly useful.

Another sanitary measure to improve the dwellings in large towns has also become law. Its objects are excellent, and it has received much attention from Parliament. Will it be productive of much good? In towns animated with the spirit of Edinburgh, Liverpool, and Glasgow, it certainly will. They have already shown by local Acts how much may be done to improve the unwholesome dwellings of crowded populations. Let us hope that there are other towns which will follow their example. I am not confident that as yet many will do so; but the necessity for action will in time force itself upon local authorities. London will certainly use the Act, and root out some of its nests of disease and crime. But it takes a long period to remedy well recognised evils. Recollect how Queen Elizabeth, in her vigorous language, spoke and legislated against overcrowding of cities; and observe how little progress we have made to arrest ills which monarchs and legislators, several centuries ago, recognised as clearly as we do at the present day. The new statute is only permissive, and is limited to towns of twenty-five thousand inhabitants. It must be followed by an Act applicable to smaller towns and country districts, if it is to exert any marked effect on the general evil of overcrowding, which is common to all gatherings of people in civilised communities. In strictly rural districts, as in the Highlands of Scotland, you may have wretched houses, filthy outside and in, crowded and unventilated except by defects in the building; and yet the people have not a high death-rate. In the day they are out in the uncontaminated air of the mountains, and are isolated from epidemic influences. But the more that a community becomes congregated, the more marked becomes the influences of unsanitary homes. You see this especially in savage life. The American Indians on the war-track, daily changing their position, have remarkably small mortality; for the bullets of the whites strike them less surely than diseases do in their permanent wigwams. These Indians in peace die rapidly, not only from that introduction to fire-water which they owe to civilised man, but also from the unsanitary conditions of their dwellings. When things grow too bad, however, they change their encampments, and the mortality lessens. But when the Christian missionary comes among them they are doomed; for they become fixed in villages, with all the traditions of their

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modes of uncivilised life still clinging to them; and, unable to change their locality, the fatal effects of overcrowding and filth tell upon them with far more severity than the bullets of their enemies in their life of savage warfare. You see all this in a less degree among the inhabitants of country districts who flock into our towns. For this congregation into towns is the characteristic of the age. Hamlets rapidly become villages; villages concrete into towns; and towns become great cities. And with every increase of density of population, there is an increase of the rate of mortality, not as a necessity, but as a consequence of sanitary organisation being defective in the provisions for removing filth and giving an abundant supply of air to accumulating inhabitants. These are the evils which the new statute for improving the dwellings of towns hopes to remove. But a permissive law depends upon a ready formed intelligence for its application, and I confess my misgivings as to the immediate or general utility of the measure.

The law relating to Adulteration of Food and Drugs has been remodelled this session. Its chief changes have been in relaxing its provisions in the interest of traders, and in diminishing the securities which the former law gave to the public. However, the main effects produced by the last law will be continued in the present one, so that the poor will still have the benefit of unadulterated bread and milk. These two staple articles of food are now scarcely adulterated, since detection became easy and certain. There is one kind of vitiation of food and drink at present altogether outside legislative prevention, but which must before long be brought under the dominion of the law. I allude to common articles of food being made the vehicles for the transmission of contagious diseases by containing within them particular contagia. Our evidence as to various articles of food is still inconclusive, but that in relation to water and milk is thoroughly convincing. Our knowledge as to the propagation of contagion is like all other knowledge, passing from occult to simple causation. The human mind seems incapable of accepting the most obvious and simple explanations of natural phenomena, till it has exhausted the most recondite and complex interpretations. So in olden times, and in part at the present day, men looked for sources of contagion above and beneath them, as in celestial conjunctions and in emanations from the bowels of the earth, but not in their own surroundings. When we enter any new field of inquiry, we grope with our eyes bandaged, and traverse it in every direction, from one side to the other, though when the bandage is removed, we are surprised to see how limited the field is in extent, and how easy it is to take a short cut across. We have reached this stage in regard to food and drink. We begin to see that in any case of common epidemic, such as scarlet fever and measles, we are not only to investigate epidemic waves propelled by some unknown law, but we must examine whether the food of the population may not be infected by some diseased person. Take the case of the epidemic of scarlet fever in St. Andrew's, investigated a few years ago with so much ability by the late Professor Bell. In that small town, the epidemic, though apparently general, was more frequent among a better class of houses. Then the able physician noticed that all the houses attacked were supplied with milk from one dairy. The dairy, on being visited, had scarlet fever on the premises, and the people who milked the cows were convalescents from the disease. A very instructive case of this kind occurred only a few weeks since in London. A member of the present Government had a dinner party, and an evening reception afterwards. None of the guests at the latter observed any particular effects from their visit, but eight of the dinner guests and seven of the household took scarlet fever. All of these partook of a cream which, it is believed, contained the particulate contagium. One or two streets off, there was another dinner party, and four of the guests took scarlet fever. This case has been investigated by one of the medical officers of the Local Government Board, and we may expect an exhaustive report on it. We have already numerous examples of this propagation of disease through food and drink. The Marylebone fever of 1873 is equally instructive. That enteric fever is known to have attacked 143 households, and was clearly traced to infected water, used for dairy purposes, connected with one particular quality of milk, which was distributed in sealed cans. The epidemic was arrested as soon as the milk-supply was no longer distributed. The enteric fever at Armley, in Leeds, was allocated to a particular dairy in the same way, and was stopped by chaining up the pump which supplied water to the dairy. Now, such illustrations of the distribution of contagium are very important, because the source of it may be altogether outside the locality in which the disease is manifested. In the case of the Marylebone epidemic, the polluted well which infected the milk was in Buckinghamshire, and, therefore, might naturally have escaped attention, unless the investigation had been minute and exhaustive. In the cases which I have mentioned of water-pollution, it is usually traced to the most foul of all filth, the intermixture of excrementitious drainage with the water which man uses as a beverage. When introduced into the system as a fluid, though the contagium is not soluble, it seems more certain in its effects than when respired as air. We may err on the side of grandfatherly legislation; but is it possible to allow the law in relation to food to remain as it is at present? You punish a soda-water manufacturer if lead be in his distributed beverage; but hitherto he has been allowed to use what water he chose to make aërated drinks. If the water contained sewage, it was found by experience that lemonade would not keep under such conditions; but the common aërated drinks do. In the recent Adulteration Act, we managed to insert a clause requiring the use of pure water for aërated beverages; and this provision of law may become a precedent for future legislation. For the distributors of food and drink must be made responsible that they do not distribute contagious diseases with them. When, for instance, we had Dr. Frankland's continued reports that the water of one London Company contains distinct evidences of excrementitious matter, the moral responsibility of a distributing water company becomes very serious, and its legal responsibility is only one step forward in the history of preventive hygiene.

We have lately suffered from a powerful epidemic wave of small-pox; and it will be a matter of great interest to study Dr. Seaton's forthcoming report upon the results of our preventive measures in regard to this disease. If we have failed, when we possess a specific preventive remedy in vaccination, we may well be despondent. But I do not think that there has been a failure. Small-pox epidemics are numerous; in fact they occur at intervals of about four years. But since the great epidemic of 1837-41, there has been none so serious, either in extent or malignancy, as the epidemic of 1870-73. It travelled as a wave over all Europe; and we are able to compare its attack upon this kingdom as contrasted with that on other countries. In last century, before vaccination was general, the annual small-pox rate of death was 3000 per million of the population, including non-epidemic as well as epidemic years; as a mean of the late epidemic, it was 928 per million. But that difference, gratifying though it be, tells us little. Compulsory vaccination has only been reached by successive Acts; and the population below five years of age had scarcely been covered by them in 1870, when the epidemic struck us. Previous to these compulsory laws, three-fourths of the small-pox mortality were among children under that age; but, in the recent epidemic, less than a third of the mortality in England, and less than a fourth in Scotland and Ireland, was due to young children. Our compulsory laws gave them a large, though not complete, immunity from the force of the attack. We learned, moreover, by this attack that the protective power of vaccination wears itself out, and that it requires repetition at puberty. The most gratifying result of a general survey is that our protection laws against small-pox, defective as they still are, seem more efficiently administered than those of other countries. In former epidemics, our rate of mortality contrasted unfavourably with them; but, in the late epidemic, this was reversed. While less than 700 per million died in the chief towns of Scotland, and 1180 in London, Berlin lost 3448, Hamburg 5717, Leipsic 6200, and the large Dutch towns 6455. The general result of our protective laws against small-pox may be summed up thus: at the rate of mortality in the last century, we should lose 70,000 of our population annually by this preventable disease; whereas our annual average mortality in England is now about 5000, and was only 3500 until the last severe epidemic raised the average.

Let us now consider the position of our Ministry of Public Health, as represented in the functions discharged by the Local Government Board. That Board has two main purposes to discharge—viz., to superintend public health and pauperism. It is reasonable to join them under one administration, for they are closely connected as cause and effect. But, though both should be made subjects of prevention, pauperism is an existent evil of such persistence that it is treated chiefly as one of economical administration, and thus it happens that sanitation is viewed in the same light, although

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its chief relation to public interests is in the prevention of disease. The Local Government Board has never yet fully realised its preventive functions. It looks upon its medical officers of health, much as it does upon its Poor-law medical officers, as curers, and not as preventers of disease. The difference of their functions was well described long ago by Xenophon, in his "Cyropædia"; for he states that ordinary doctors are "menders of garments which are already torn," while sanitary officers have "a care of health of a nobler kind; for it is their duty to *prevent* the men from becoming sick." As the name of the central board implies, it ought to foster and not to discourage local government. But, if there be one thing which local authorities might be expected to possess, without being imparted by a central board, it is common sense in the transaction of business; and, if there be one thing which a central government ought to give, it is scientific sense which is not common. But here the Local Government Board completely misunderstands its functions; for it crams common sense into local authorities already saturated with it, and refuses them the scientific sense which they cannot be expected to possess. Its estimates already amount to £695,000, of which only £93,000 is applied for all kinds of prevention, including the sanitary officers and inspectors of the Board, the vaccination system, the Alkali Act, the medical officers of health and inspectors of nuisances. The "menders of torn garments," as Xenophon would describe the Poor-law medical officers, absorb £127,000 more; but I am inclined to add that sum to the preventive staff; for I think they do very largely act as preventers of pauperism in the cure of disease. The Local Government Board, by its present and past ministers, uphold powerfully the independence of local authorities from medical despotism. They think it a gross interference with local authority that the skilled medical experts in London should advise local boards as to their procedure in the eradication of local causes of disease; but they think it no encroachment of central authority when guardians are not allowed to change gruel for arrowroot in a workhouse dietary without the permission of the President of the Local Government Board. If there be some small excess in expenditure in a local authority, down goes one of the thirty-nine Poor-law auditors to audit the accounts. But the idea of auditing the death accounts of the same authority would be deemed to be a wanton interference with the independence of local government. Yet such an audit would be incalculably beneficial, in an economical point of view, both in its relations to the prevention of disease and of pauperism. If one district has a rate of mortality of seventeen, and another locality one of thirty-four in the thousand, a rigid medical audit of the death accounts is called for, in order to discover why there is such an unequal local assessment of life, and why one population is taxed so heavily by a double rate of deaths. Such an audit of death accounts involves in its exercise the scientific sense which I have described as uncommon, and which cannot be possessed by the local authority, whose common sense the Local Government Board so rigidly bridles by central interference.

It is quite true that the Local Government Board sends down medical inspectors to localities to investigate diseases when they have become a scandal to the community; and these officers have often been useful in detecting the causes of the prevalent diseases; yet, practically, there are only three medical inspectors available for this duty. Out of 1,588 boards, they managed last year to visit fifty-seven, and this fractional aid was not very substantial. What I desire to urge is, that their duties should not be detective, but preventive. No doubt, prevention cannot be effectively carried out until there is a public registration of diseases as well as of deaths; for the former represent the wrecks which strew the shore after the storm has passed, while disease-registration would give us the rising and falling of the barometer required to give ample warning of the coming storms. It may be difficult to obtain full knowledge of contagious diseases in private practice, but there should be no difficulty in organising a system by which all such diseases as are treated at the public expense, in hospitals, or by Poor-law medical officers, should be made available for the purposes of public hygiene.

I think that the House of Commons will soon take this matter into its own hands. A new department like the Local Government Board, with an expenditure of nearly £700,000, ought to be looked upon with much public watchfulness. If it have any justification at all in its relations to public health, that must rest in its powers of preventing disease in the localities which it governs. Does it succeed in this primary function? Is preventable disease, other than small-pox, prevented by its agency? I cannot answer these questions either in the affirmative or negative, There are no means for doing so, either in the reports of the Local Government Board or in those of its medical staff. In the latter, indeed, I find important investigations of epidemics which have run their course and an excellent history of their causation. But I find no accounts of action taken to prevent these epidemics from occurring. I find no action described upon an audit of excessive rates of death. The President of the Local Government Board did tell me, in debate in the House of Commons, that he had quarterly returns of death-rates put upon his table, and that he directed inquiry if he found them excessive. Well, utterly inefficient as such a quarterly examination would be, I want to know the results of them. The nation has a right to a specific answer to the question, Is preventable disease prevented by our great expenditure on a central administrative machinery, and by the constant increase in local rates? For no less object is such expenditure justifiable, or should central interference with local government be tolerated. But all the elements for answering this important question are absent from the information given to us by the Local Government Board. I take this opportunity of giving notice that, so far as the influence of a single member of the House of Commons can be effective, I intend to use my constitutional rights to obtain the information necessary to enable the nation to judge whether the Local Government Board is effective in preventing preventable disease; for no lesser function justifies its existence, either in its relation to public health or to pauperism, which stands in such close causation with the insanitary state of communities. It is by a constant care in preventing the growth, or in removing the accumulations of filth in and about the dwellings of the people, that the watchful public officer of health can hope to prevail against disease. He knows well that pure air, pure water, and pure soil are the main conditions for the health of communities when they are earning wages enough for their comfortable existence. The simplicity of the ends in view is not disturbed by the complexity of the problem how foulness acts in producing disease. There may be filth without disease of an epidemic sort. King Edward II., when in confinement at Berkeley Castle, was placed in a room contiguous to a well into which carcases of horses and dogs were thrown, in order to poison him with their effluvia; but the poor monarch would not die, and his entrails were burned with red-hot irons. Yet a sanitarian would know that not only the king, but all in the Castle were in jeopardy by the foul experiment; for a single particular microzyme of a fatal disease might have planted itself on the filthy soil and multiplied exceedingly.

Even the septic living germs of disease may be wanting under certain conditions; but more generally they are present to attack the bodies of the living and to corrupt the bodies of the dead, if they find a filthy soil suitable to their growth. Though the royal captive escaped the deadly effects of his exposure, prisoners before the time of Howard were notoriously victims to like influences. Tennyson, in his recent drama, thus describes the effects of filth on captive heretics—

> "In breathless dungeons over steaming sewers,
> Fed with rank bread that crawled upon the tongue,
> And putrid water, every drop a worm,
> Until they died of rotted limbs; and then
> Cast on the dunghill naked, and become
> Hideously alive again from head to heel,
> Made even the carrion-nosing mongrel vomit
> With hate and horror."

Independently of all theories of causation, we know that diseases require filthy surroundings in the air, water, food, clothing, and soil, before they become permanently located. A great wave of an epidemic may pass over all our sanitary barriers, though the ordinary and lesser waves are broken by them. The greater and lesser epidemic waves are, like storms in the air, beneficent remediers of a disturbed equilibrium; for pestilences, in relation to whole populations, resemble that angel of mercy who stood in the way of the prophet armed with a sword, ready to smite if he had not turned from his evil course. So, when mankind allows itself to be sapped and undermined by the insidious consequences of sanitary neglect, so that the members of a community lose their manly strength, their morality and liberty, then pestilence falls upon the degenerate society and rouses it to a sense of their danger. When the sanitary neglect is general, an epidemic gathers

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itself up in a wave and sweeps along till it meets with some barrier, like an outstretching headland, to break it in its course. Certain diseases, in their epidemic form, appear to break up entirely under the improvements of civilisation, or at least cease to travel in their former force. Instances of black death and sweating sickness are still said to appear in remote parts of India and Persia, but, like the typhus gravior of our large towns, are unable to accumulate into the waves which some centuries ago used to sweep all over Europe. The plague of the East, which still gathers itself up into a frowning crest, breaks before the sanitary barriers which the civilised communities of modern Europe have raised against its progress. But as yet these have been insufficient to meet the cholera wave which every few years threatens to pass over us. We have lately seen it pass with more or less strength over our continental neighbours; but it has broken upon our own shores, and has not traversed the country. Is this due to our sanitary improvements? It would be premature to answer to the affirmative; for at the present moment we see another threatening cholera wave gathering itself up in the East, and we will have more reason for confidence if it again break innocuously on our sanitary barriers. The recent serious epidemic of small-pox should teach us that, though we may be better prepared than other countries for such visitations, yet our preventive medicine has much to do before it has exhausted its powers for the protection of the people. It is because I earnestly desire that our State authorities charged with the care of the health of the people should constantly inform us of their successes and failures that I have, through you, to-day urged the necessity of a national audit of death and disease. But this audit should not be a mere central one. The Local Government Board ought, of all other administrative departments, to develope a system of local government as distinguished from a central bureaucratic government. When improved local organisation of authorities renders that possible, the central board should more and more exert a guiding rather than a controlling influence. Registrars of sickness and death must first be made useful in each locality, for they stand small chance of accomplishing their work of prevention of disease if the whole responsibility for using them be thrown upon the central authority. From thence should emanate the scientific knowledge necessary to apply facts to a general system of useful application; but unless the medical officers of health are trusted by the local authorities as their immediate sanitary advisers, and are encouraged to use the knowledge of sickness and death, gathered in the locality, for the prevention of disease, local government will continue to be looked upon as an unpleasant machinery for augmenting rates, and not as one for economising the life and resources of communities. And so, in my opinion, not increased central administration, but more effective organisation of local authorities, is the crying want of sanitary progress.

An improved organisation would enable local authorities to obtain more highly qualified medical officers of health than they can possibly obtain at the small salaries frequently offered. Although many of them were appointed without adequate knowledge of public hygiene, there has been much growth of technical knowledge among them, and already about nine hundred furnish specific reports of their labours to the central government. Many of these are characterised by great ability, but their influence extends little beyond their own locality, and hard-won experience is lost for the public good. When local organisation is improved, and the central authority is brought into more effective scientific relations with it, we may see an immense impulse given to preventive medicine.

AN ADDRESS
DELIVERED AT THE OPENING OF THE SECTION OF OBSTETRIC MEDICINE.

By J. MATTHEWS DUNCAN, M.D.,
President of the Section.

Cursory Notes on Ovarian Pathology.

The application of physical methods to the investigation of the diseases of the genital organs, brought to light, first, the most superficial or most easily observed of uterine lesions—the ulceration, as it was called, of the cervix; and it was inevitable that to this great importance should be attached, an importance far beyond what it really possesses. This importance has now, for at least a decade, been rapidly declining; and while it is admitted that the lesion is very significant, and forms an element of the most common disease of women, it is now well known that it has been not only exaggerated in importance, but misinterpreted as to its relation to the discharge; and that the treatment, by applying lunar caustic through the speculum to the visible ulceration, once so very widely used, is only rarely a good or successful method. Great improvements have recently been made in the theory and treatment of diseases of the neck of the womb; but we can only say that great and admirable attempts have been made to improve in a similar manner the theory and treatment of the analogous diseases of the body of the organ. Endometritis, even, is very inadequately described; and the attainment of this is, or should be, our first step to knowledge of disease of the uterine body. The influence of displacements and their relation to the uterine congestion are not settled matters, after all the voluminous writing which has been zealously devoted to them.

Advancing knowledge of gynæcology brings more and more into view the cardinal importance of the ovaries, organs which have, from the earliest times of true anatomy and physiology, naturally attracted a great share of medical attention, and whose extensive pathological influence in the minor ailments peculiar to women, Tilt and many others have long tried to demonstrate.

It has been very generally supposed that the ovaries are the *fons et origo* of all the sexual functions, reliance being placed on such evidence as is afforded by the history of their growth and activity and atrophy, contemporaneously with the rise, progress, and decline of menstruation and of childbearing; on the results of disorganising disease of both of them; on the results of their accidental absence, or of their removal, as in Pott's well-known case. I do not know that this view of the ovarian influence has been entertained in recent times by professed physiologists; but, at any rate, it has extensively prevailed among practitioners, and has only lately been rudely shaken by the observations of ovariotomists as to the continuance of menstruation and the occasional persistence of sexual appetite, or its increase even after complete extirpation of both ovaries. I think that of this occasional result of double ovariotomies there can be no doubt, although care must be taken that, in this human vivisectional experiment, all the conditions are truly fulfilled, the whole of both ovaries being removed, and not merely portions of them, or, instead of them, mere parovarian cysts. In antithesis to this argument from removal of the ovaries, we have evidence to the same effect from their occasional functional activity, as observed by Grohe in the newly born, without any evidence of sexual appetite or possibility of sexual potence.

This dethronement of the ovaries from the supreme position in all departments of sexual activity is, however, as yet, not complete; and there is, no doubt, much truth in the view described as being held by practitioners. The rather vague results of the experimental investigations of Eckhard, Obernier, Spiegelberg, and others, have been greatly added to by the further inquiries of many, including Oser and Schlesinger, Goltz and Freusberg. The researches of the two last-named seem to show that there is in the lumbar spine a nervous centre for the sexual function. The phenomena of erection of the penis and seminal emission are so easily made the basis of this experimental investigation that, as a matter of course, males have been used for it, but it is almost certain that the physiological results are true of the female also. These investigations afford, in various ways, possible explanations of the persistence of sexual appetite and activity after the destruction or removal of the organs in which undoubtedly commences the production of these germs for whose growth and development the whole of the complex generative function is arranged.

These physiological questions, purely scientific or merely theoretical though they appear, are far from really being so; for already operations have been many times performed whose justification lies in the belief that the removal of the ovaries is the annihilation of all or some of the sexual activities. I allude to spaying, or what is called normal ovariotomy by Battey, who, as well as Thomas and Sabine, have done it with what is perhaps justly called success. The proper attitude in regard to it is to defer judgment until more is known about its theory and practice. The disease against which its performance is recommended, such as nymphomania, menorrhagia, dysmenorrhœa, are not so dangerous to life as the great ovarian cystoma, for which the very dangerous ovariotomy is now an operation everywhere admitted to be at least theoretically

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justifiable. Spaying must be able to produce better statistics of success than ovariotomy—indeed, a nearly uniform success—to be theoretically equally justifiable, for the diseases against which it is used are not nearly so dangerous as ovarian cystoma.

It will be observed that I introduce with care the words "theoretically" and "practically" when I speak of an operation being justifiable; and it is well worth while to point out the difference between being theoretically justifiable and being practically justifiable; and I am particularly interested in this important distinction, because I have been gravely misrepresented by one or two excellent professional brethren as having changed my mind as to ovariotomy. I have made no such change. It is they who have not properly appreciated the difference between theoretically justifiable and practically justifiable: a difference which explains any apparent, but not real, change in my opinion. My remarks will apply to spaying as well as to ovariotomy; but, to save time, I shall refer to ovariotomy only, which has a history convenient for the purpose.

Ovariotomy is theoretically justified, because the possible success of the operation far outweighs the danger of it and the dangers of the disease combined. But theoretical justification is not a sufficient sanction of its performance in any particular case; is not a practical justification. For that you must have other conditions satisfied, and an operator who may be presumed to have the needful surgical skill, or who has demonstrated that he has it by the statistics of his success. When I opposed the operation I was, as I am now, living in the midst of surgical ability, and I knew of many ovariotomies; but they were, with scarcely an exception, failures, and failures often under the most terrible circumstances; disaster after disaster. The only justifiable practical cry was that of Syme, Miller, Spence, and myself, for mercy on the poor sufferers prematurely deprived of life. The operation was then and there practically unjustifiable. Sufficient trials had been made, and there was no success, or almost none. Who could justly do anything else than oppose ovariotomy there and then? There are at present, even after Spencer Wells has for a long time flourished, many districts, even countries, where ovariotomy, now happily justified theoretically by the whole world, is still practically unjustifiable, and accordingly little, if at all, resorted to. In such districts or countries the good physician must say to his patient, "Go to some great ovariotomist. If you can't do that, stay at home and die. The operation is not practically justifiable, or not practically justified by success, here." Fortunately for Edinburgh, there appeared among us a true surgical genius. Long before Thomas Keith had achieved his unparalleled success, he had done enough to make ovariotomy here, and now, not merely theoretically, but also practically justified. Indeed, since he took up the scalpel, we have never heard a word among us against ovariotomy; and as this silence is logically proper, so was the opposition not only logical, but urgently called for.

I hope I have said enough to show the difference between the theoretical and practical justification of an operation; and I may be allowed to add a word as to the rarity of real surgical talent. I do so with the conviction that there are plenty of young surgeons in whom it may be cultivated; and that, in order to its wider development, encouragement, and ripening, we need not merely invaluable theory and systematic teaching, but also invaluable practical teaching, on the basis of the deficiency of present theory and the still persisting necessary distinction between theory and practice. It is very sad to have to say that operations have in practice to be condemned which are theoretically justifiable and supremely desirable. But it may come to pass that spaying gets recognition as an operation justified both theoretically and practically. It is not so yet.

We may anticipate the time when surgical inquiries shall have been advanced so far as to reveal the conditions essential for success in operations such as ovariotomy. At present they are not known. We know that one operator has a great amount of success, while another has not; and to a very great extent we do not know the cause of the difference between the two. There is no reason to think that the cause of this difference between operators is beyond our powers of discovery; and it is rational and natural to suppose that, when the discovery is made, it will enhance even the success of those previously most successful. Past attempts to discover this cause of difference have been limited to matters of form of clamps, or kind of ligatures, or dealing with the pedicle, or amount of sponging, or method of draining, or mode of after-treatment, and these are all truly important; but the causes of the differences are as yet not demonstrated. When they are so, then great operations will be rendered practically justifiable over a much wider field than at present. Yet, after all, there will never, within reasonable limits of time, be such progress as to reduce surgeons to a dead level. There will always be room for genius and for zealous care.

The subject of ovaritis, acute and chronic, has recently, through the labours of Rokitansky and Slavjansky, made some progress; the former describing follicular and parenchymatous inflammation; the latter, parenchymatous and interstitial: a nomenclature which would seem to indicate a greater difference in their views than really exists. But, unfortunately, we have no means as yet of using this knowledge in practice. Our signs and symptoms have to be immensely improved before such a result can be attained. Rindfleisch, indeed, from the pathologist's point of view, and Churchill from the practitioner's, have well pointed out that we cannot tell where ovarian irritation, as it is called, ends, and inflammation begins. But, although this is true, we have now the authority of most of those who have devoted themselves to gynæcology in this country for saying that we can, in a very great majority of cases of ovaritis, and especially of chronic ovaritis, and still more especially when adhesions are absent, diagnose, by bimanual examination and otherwise, the existence of the disease, with a degree of assurance that, at one time at least, Scanzoni was disposed to dispute. This diagnosis is a matter of very great moment to the practitioner, not only on its own account, for that is a matter of course, but also on account of the value of its discovery as a contraindication—to which Nélaton is said to have attached importance—of various other gynæcological operations. There are few kinds of cases more frequent occasions for correction of treatment than those that occur under this category. How often is a pessary intolerable because an ovaritis has been neglected? How often is an uterine catarrh inveterate, or a displacement supposed to be painful, or a metritis supposed to be peculiar, when there is an explanation in the neglect of an ovaritis?

Symptoms and physical examination, especially the bimanual, are our reliance for diagnostic purposes; and, in the bimanual examination, a chief point is the size and consistence of the organ. An enlarged, and consequently a heavy, and probably a descending ovary, can generally be felt; while a healthy one, or an ovary merely irritated, may escape the most expert bimanual examiner. The size and consistence of the organ were chief points in Boivin and Dugè's practical classification in kinds of ovaritis, and none better has been proposed. But size and consistence, although often well made out, always escape the examiner in two very important classes of cases—those where the ovary is surrounded by adhesions, and those where it has undergone cirrhotic atrophy. After all, I have no doubt that our improved modern knowledge of ovaritis is one of the greatest steps of progress of gynæcology; and it is a blessed one, for the disease, although often obstinate and liable to return, is also often distinctly amenable to treatment. Further aid in diagnosis is offered to us by the rectal examination pushed even as far as Simon has recently recommended, or the examination per vesicam recently recommended and practised by Noeggerath. But rectal and vesical examination in such cases are not often required.

One of the most striking advances in gynæcology in my day has been in our knowledge of hæmatocele, which I think is generally called by the name uterine to distinguish its origin. But it is well known that some eminent pathologists, and among them the great Virchow, bring in new inflammatory productions in the pelvis as the source of the bleeding; and, as no disease leads more frequently to such developments than ovaritis, so we fined Klebs connecting this great disease with ovarian inflammation. The matter is of great importance with a view to the proper appreciation of such cases, and consequently their proper management. Upon the question I shall not further enter here, merely remarking that I cannot agree with Klebs in, as a rule, connecting retrouterine hæmatocele with any kind of ovarian disease. I speak of the great majority of cases; for I have myself seen in life, and dissected after death, cases in which disease, especially cystic degeneration, of the ovary was the cause of large pelvic hæmatocele. I believe that the majority of hæmatoceles are uterine, and not directly connected with ovarian pathology.

There is, alas, far more of darkness than of light in the field of gynæcology, and I take this opportunity of stating a

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conviction I entertain which is founded on considerable experience. We all know how far from uncommon are those simple follicular dropsies of the ovary, seeing them in autopsies as very thin-walled cysts, often less than an orange. Such cysts are, I am sure, the source of much difficulty in practice, and a retrospective diagnosis of them may be formed in this way. A distinct ovarian swelling is found larger than any ovaritis ever grows, clearly diagnosable as an enlarged ovary; but the diagnosis cannot be made more exact. The commencement of an ovarian dropsy is dreaded. After a time the tumour disappears. Frequently its disappearance is accompanied by adhesive perimetritis. Now, what has happened in these cases? Of course, it may be said that it is a case of mere ignorance, or that the cysts were parovarian; but, to this latter explanation, there is, for me, the great objection that the cases occur more frequently by far than to admit of their being justly so explained. We must suppose, therefore, the bursting of the not infrequent small follicular dropsies. I would further add that the bursting of simple parovarian cysts does not appear to me to be followed by perimetritis, or accompanied by it, so generally in the case of the disease of which I have been speaking.

In connexion with parovarian cysts, a great step of good progress in practice has been made, and progress also in pathology. Such cysts used generally to be described as never reaching a great size, but this is not true. They do certainly attain enormous dimensions, so as to be in competition in this respect with true ovarian cystic disease. After death, or when they are removed by gastrotomy, they may, at least frequently, be easily distinguished by characters which Bantock has recently described; chief among them are the non-implication of the ovary, the almost invariable unilocularity (not surgical, but pathological or absolute unilocularity), and the easy separation of the peritoneum from the internal coat of the cyst-wall. During life they are also, at least occasionally, diagnosable by examination of the fluid withdrawn by tapping from examples of them which have never been inflamed. Then we find the fluid to be limpid or very slightly opaline, of very low specific gravity, containing little or no albumen, and having in solution only a little saline matter, chiefly chloride of potassium and of sodium. Such cysts have been long known and partially described. Even yet they are imperfectly described; but it is interesting to note a kind of identification of them in those ovarian cysts which Boinet found to be most readily cured by the once famous iodine injection. Only the important fact is now known that many at least of such cases are far better cured by mere tapping than by that combined with iodine injection; and the practitioner should always keep in mind these propitious circumstances when he meets with cases of this kind. The subject of parovarian cysts, when fully made out, will be still further interesting and fruitful in gynæcology; for already we may presume that the numerous kinds and examples of cures of ovarian dropsy, without resort to ovariotomy, which have been described by many, including the highest authorities, were merely examples of delusion arising from imperfect knowledge. We know no one example of the cure, otherwise than by the operation of Ephraim McDowell, of an ovarian dropsy properly so-called; not one, however many may be found described, or whoever may be the describer. Cures by one or more tappings, cures by medicines, cures by spontaneous rupture, cures by advancing pregnancy, have been, if not mere egregious mistakes, almost certainly cures of parovarian cysts whose history, as already known, quite accords with and explains such erroneous allegations. These remarks are based chiefly on observations of parovarian cysts that have never been inflamed. The study of inflamed cysts is still in a very backward state. Their pathology and treatment are matters of great difficulty. It must also be kept in mind that simple inflammatory serous collections take place in the peritoneum, and may be mistaken for parovarian cysts.

Ovarian cystoma is the great disease of the ovaries, and improved ovariotomy is the greatest recent step in therapeutics. It is probably to the inspiring influence of the beneficence of this operation that we owe the great amount of scientific exertion that is being made in the field of ovarian anatomy, physiology, and pathology; and already the student may catch glimpses of justly expected practical fruits of this scientific zeal, which will enormously extend the utility of the practitioner.

The anatomy and physiology of the ovary, closely connected as they are, have recently received many additions, and more may still be expected from the application to them of the newest methods of investigation. First among these researches comes the histological anatomy of the organ, and here we find the most recent views of Waldeyer receiving, besides verification, addition also and correction by the excellent work of Foulis. Like Waldeyer, this author, beginning with the normal ovary, pushes his studies into the more difficult and more vexed inquiries as to the origin and growth of the multiple ovarian cyst. These points have by many, and frequently, been supposed to be settled; but it is a vain thought, as one may find who tries to unravel the divisions and subdivisions of recent pathological writers, and then peruses the most recent inquiries and setting forth of views by such authors as Malassez and Foulis.

To notice the whole of the work that is being carried on in connexion with this department, is far beyond my present intention. I shall merely, in conclusion, make brief reference to the difficult questions in connexion with the malignancy of ovarian cystoma. The uterus, although far from being an isolated organ, is generally regarded, among others by Walshe, as remarkable for the slowness or rarity of the spreading of cancerous disease from it as a centre, the slowness or rarity of what is now called the infection of neighbouring or distant parts. There is, on the other hand, no organ in the body which is actually more isolated than the ovary, whether in health or disease, at least, so long as it has no adhesions; yet many pathologists, especially Klebs, who cites various authors, have attracted attention to cases of apparent infection, especially of the peritoneum, having malignant ovarian cystoma for their source. The diagnosis, especially in their earlier stages of growth, of even large malignant ovarian cystomata, is often a matter of great difficulty, and the examination of the fluids drawn off by tapping is anxiously made with this view, but, as yet, without completely satisfactory results. In fact, we have, in all departments of ovarian diagnosis, more to admire in the zeal and diligence of histologists, in regard to the fluids, than in the exactness and reliability of the practical results they can show. In connexion with burst and unburst ovarian cystoma, it is well known that chronic peritonitis of great extent is often set up and long maintained; but the examination of the fluids has led Foulis to the belief that in the bursting of malignant ovarian cysts we have a new kind of evil, an explanation of the infection of other parts, and especially of the peritoneum, with malignant disease. While the diffuse chronic peritonitis is explained, to some extent, by a rude induction of analogies, the diffusion of cancer is less understood. Foulis believes he can identify in the fluids of certain ovarian cysts a peculiar richly proliferating epithelial cell which he regards as the seed sown broadcast, when a malignant cyst bursts, over the peritoneum, finding in any part of this large surface a suitable soil for its further development into cancerous nodules, such as are seen in the ordinary malignant peritonitis, as it is sometimes called. To the discussion of this subject, Thornton and Lawson Tait have contributed, and we hope that, as a final result, the truth will be elicited. We shall then have ovariotomists instructed and guided as to the special urgency and claims of a class of cysts that may be equally important and urgent with those which are in a condition of suppuration.

I might still further enlarge on the present state of ovarian pathology, had I not already overpassed the proper limit of time. Many diseases and many researches I have not even hinted at, and the silence is not to be attributed to neglect or to an estimate of inferior importance.

In opening the section with these remarks, I congratulate you on the promise of interest that is offered by the list of papers to be read, and I can assure you that everything which contributes to increase, improvement, or illustration of our knowledge, will be received with the respectful attention which it ought to command.

LEEDS SCHOOL OF MEDICINE.—The following prizes were awarded at the close of the summer session last month:—Thorpe Prize in forensic medicine (value £10), Mr. A. K. Scattergood; forensic medicine (medal), Mr. A. K. Scattergood; midwifery (certificate of honour), Mr. G. F. Bates; materia medica (medal), Mr. J. D. T. Reckitt, (certificate) Mr. Robert Hagyard; botany (medal), Mr. R. B. Morley, (certificates) Mr. J. W. Oglesby and Mr. R. Hagyard; practical chemistry (medal), Mr. R. Hagyard, (certificates) Mr. R. B. Morley and Mr. E. P. Pickersgill.

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ORIGINAL COMMUNICATIONS.

CASES OF OBSCURE NERVE DISORDER.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

(*Continued from page* 361, *vol.* i., 1875.)

Case 12.—*Hysterical Trance.*

S. S., FEMALE, aged seventeen, seen in consultation with Dr. Westmacott, October 22, 1870, at 11 p.m. She is a healthy girl; has catamenia regularly; has never had any epileptic fits. Was attacked quite suddenly on evening of 21st; she had been upstairs, and on coming down shrieked out and became insensible. No marks of injury on head. Since then—a period of about twenty-six hours or rather more—she has remained quite insensible and motionless, except for a short time this afternoon, when she asked for and drank some tea, and ate a little bread and butter, but soon relapsed into her former state. She has been quite powerless, but now she moves her limbs occasionally, though her arms when raised fall quite inert. Pulse has been 130, is now 100, of fair force; temperature 38·4° (101·1°). Bowels not opened by some aperients and injection. Heart and lungs are healthy. Forehead and temples hot; lips red; face looks full, rather puffy. No scarlet-fever eruption. Breathing regular, rather deep, of about normal frequency. She will not, or cannot, swallow: lets liquid run out of her mouth. Sinapisms have been freely applied to limbs and spine, and a blister is now on nucha. Hirud. x. capiti, et ol. crotonis ℥j. in ol. ricini.

October 23.—Urine, specific gravity 1027, feebly acid, deposits palish lithates copiously, is slightly albuminous. She has been conscious for a few minutes once or twice to-day; moves her limbs.

24th.—Has been quite conscious several times to-day, has recognised persons, and taken a good deal of nourishment; is still very stuporous; will not put out her tongue. Opens her eyes very wide at times; pupils not at all large. Temperature 98·9°; pulse 95, regular, of fair force; respiration quiet. Head hot; said to-day that her head was beating like a hammer. Thinks she shall die; has frequently said so, and now in my presence refers to this idea, but in a sort of semi-ostentatious way, not as if she were giving expression to a grave presentiment. At one time to-day, her friends assure me, she seemed as if there was almost nothing the matter with her; at another, they thought that she was dying. Once or twice she has become quite rigid. Leeches and ice have been applied to the head, and the bowels well moved with croton oil.

November 2.—On October 28, a week after her first seizure, she became, at just about the same hour in the evening, very delirious; had delusions, and struck the wall with her hands. On 30th she asked for a hymn-book, and sang several hymns, and so she did yesterday. Has had no convulsions, but fits of laughing at times. Yesterday she seemed very well all day; sat up in bed, was quite rational, conversed, and seemed to have nothing the matter with her. Her faculties were then and at other times perfect; in fact, her friends say that she seems shrewder and keener than usual. This morning she ate a hearty breakfast, but soon after passed into her present state. She is lying at full length stretched out, her arms and legs rigid; the arms can, however, be readily raised by rotation at the shoulder-joints, but fall like a dead mass when let go. No effect is produced by tickling the soles of the feet; she seems quite unconscious. Her eyes are wide open; touching the eyelashes causes no winking of the lids, and touching the sclerotic very little, but touching the cornea causes immediate closure of the lids. The pupils are of medium size, and seem insensible to light. She swallows now and then, though her teeth are mostly clenched. I cannot get her to answer any questions. Expression of face perfectly placid and calm. Lips of a good red. Temperature 99·3°; pulse 66; respirations 22. She closed her eyes to-day at one time, and turned on her side. She has had her bowels kept open with croton oil, and has lately had bark and ammonia. I made my visit about 9 p.m., and having given her a pinch of some very strong snuff which happened to be in the house, I took my leave. No effect was produced while I was in the room, but the same evening I received a note from her brother saying that I had not been out of the house two minutes before his sister came to her senses, sneezing, laughing, and joking, and accusing a friend who was staying with her of having given her the snuff. Further, that she began to eat very heartily of fowl and sago pudding, drank about half a pint of beef-tea, and half a bottle of lemonade. He adds, "I hardly think you would credit the difference between her now and when you were here, for she seems now as though nothing had been the matter with her." I saw no more of her, but heard from Dr. Westmacott in May, 1872, that she got quite well on the former occasion, but had had two or three weeks previously a recurrence of similar disorder. Her mother has recently informed me (April 21, 1875) that three of her children, this patient included, have had cataracts in their eyes in early life. Their father is obliged to use spectacles; their mother has no ocular defect. S. S. used to be able to do needlework, but cannot now unless she uses glasses; she has been operated on for cataract at St. George's.

Remarks.—Some may think it a sufficient account of this case to say it was "all hysteria," without caring to define the meaning of this term more particularly than to signify by its use more or less distrust of the *bond fide* character of the morbid phenomena. Of course, if I could think that the girl had been malingering, that the disorder was in any degree simulated, I should not waste time in commenting upon the phenomena; but I am satisfied that no ground exists for any such suspicion. The parents were in humble circumstances, but not in poverty; the mother was an active, sensible, practical woman, not at all like one who would spoil her children. Neither was the account given me of the patient such as would lead one to anticipate the occurrence of hysterical disorders. She was active and useful in the household, and her motor nerve centres were, I imagine, too well exercised to afford much opportunity for her sensorial and emotional becoming unduly excitable. It did not appear that she had suffered any mental distress. She was apparently healthy, but the cataract which subsequently appeared probably indicated some infirmity of the nervous system. Arlt has noticed a connexion in children between convulsions and cataract, and it seems likely that this depends on the developmental affinity of the eye and of the brain rather than on any possible injury caused to the structures of the eye by the convulsions. The patient had never had any epilepsy, and I think it is impossible to consider her malady as of this nature, though in some particulars there is certainly a resemblance. Thus, the seizure supervened suddenly (the first was ushered in by a cry), were attended by profound unconsciousness, and sometimes with rigidity of the limbs. But the absence for the most part of all convulsions, the quiet respiration, the prolonged insensibility, with occasional returns of consciousness, and the peculiar mental state, are quite unlike epilepsy. At the outset, or soon after, the temperature was 2° Fahr. above the normal, the pulse quick (130 to 100), and the urine slightly albuminous. All this betokened positive physical derangement; and at first I was much inclined to think that some amount of meningitis existed. But the progress of events soon disproved this view, and obliged me to relegate the disorder to the demesne of the neuroses. As it was neither epilepsy nor catalepsy, but simply coma, associated with sundry features of ordinary hysteria, I think we may fairly designate it an instance of hysterical trance. The torpid state of the hemispheres coincided with a similar torpor of the spinal centres, evidenced by absence of reflex movements on application of stimulus to the feet, the eyelids, and the sclerotic. It was, however, remarkable that, at the same time, stimulation of the cornea produced immediate contraction of the orbicularis palpebrarum. The motor centres were evidently not paralysed, for the limbs were moved occasionally, and at times were rigid, and the teeth clenched. The sensory nerves—at any rate, the filaments of the fifth—judging from the effects of the snuff, were not unexcitable; for it is certainly most probable that the trance on the last occasion was dispelled by the impressions they conveyed to the sensorium. The mental condition during the intervals of consciousness was variable—now grave, now jocose, and occasionally manifesting greater keenness of faculties than usual. This is certainly a feature of hysteria. It seems impossible to determine the real cause of the trance, or of the pyrexia and albuminuria which attended its commencement. Unfortunately I am unable to say whether the albuminuria persisted or not. Most probably it was temporary, and did not depend on any organic disease of the kidneys. The depletion practised in the early period of the malady probably was unnecessary, but it does not seem to have been injurious, and was, I conceive, justified by the circumstances, especially the pyrexia and coma.

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SUICIDE BY LAUDANUM.

By J. FENN CLARK, M.R.C.S.E., L.A.C., etc.

THE following case appears interesting from the absence of some of the usual prominent symptoms. I was summoned at 9 a.m. on the 25th ult. to a young man, aged twenty-two, in his bed in a comotose state, with livid countenance, occasional stertorous breathing, and frothy sputa; the respiration variable, occasionally full and deep, then ceasing for a time; the heart's action healthy but feeble, varying with the respiration; pulse sometimes full and nearly normal, at others scarcely perceptible, neither slow nor laboured. The pupils neither expanded nor dilated, but nearly natural as to size, yet did not respond to the influence of light. There was no biting of the tongue, nor lateral epileptic jerking, but acute cerebral congestion, unconsciousness, and no movement beyond that of the lips and of the chest of an unusually powerful frame.

Sinapisms to the nape of the neck and region of the heart were applied, and brandy administered, with a view to prevent immediate paralysis of the heart. He sank shortly before eleven, no reaction having taken place. Two hours after death I found the pupils were equally and moderately dilated.

The circumstances in which he was living negatived the suggestion of anything unnatural, but two letters had in the interim been discovered, indicating his intention to destroy himself, and a nearly empty two-ounce laudanum bottle with about a drachm of its contents remaining. There was then no odour of opium about the mouth, nor had I perceived any during life.

Christison fixes the period at which death from laudanum usually takes place at from six to twelve hours. If the deceased took the poison on returning home at night, as he probably did (his laced boots, placed under his bed, were soiled with his long walk of ten miles home from Coventry), I must have seen him probably about the tenth hour, when the pin-point contraction of the pupils had relaxed, and they had commenced to dilate, as Christison states, shortly before death, and the usual slow and laboured pulse had already altered in character.

A post-mortem examination revealed excessive fluidity of dark venous blood filling the veins of the diploe and cerebrum generally; there was some ecchymosis on the surface of the cerebral hemisphere, and effusion of about an ounce of recent serous fluid into both lateral ventricles, the greater part in the left. The other organs of the body were healthy. No clots were found in either the cranium or heart, the latter organ being unusually free from blood, but healthy. The stomach, when first opened, emitted no odour of opium, nor did its contents (when subsequently undergoing examination) at the moments previous to ebullition, the periods when it is most usually noticeable. The absence of odour, however, cannot be considered a proof, for Christison quotes a case in which that organ was opened half an hour after laudanum had been taken, which "did not smell of opium." There was that which Royle describes as "the irrefragable test of bitterness" present; and other chemical tests after operating according to the usual formulæ, by perchloride of iron, nitric acid, and ammonio-sulphate of copper, etc., clearly proved the presence of meconic acid and morphia in considerable quantity.

P.S.—I enclose a newspaper report of the case before the coroner.

Leamington.

INTRAVENOUS INJECTION OF CHLORAL.—At the last meeting of the Académie des Sciences, M. Bouillaud communicated another case of anæsthesia induced by the intravenous injection of chloral. The subject was a woman, who for several years had suffered from trifacial neuralgia, and which from being intermittent had become so constant as to almost entirely deprive her of sleep. Prof. Gintrac, Surgeon of the St. André Hospital at Bordeaux, after consulting with Prof. Oré, the originator of this method, resolved upon this mode of using chloral, in order to enable him to divide the nasal nerve. Sleep by its injection was procured in a few minutes, and was followed by complete insensibility, during which the operation was performed without any pain. M. Bouillaud stated that this made the thirtieth case in which this new mode of inducing anæsthesia had been successfully employed, Prof. Oré having himself had twenty-five cases under his care. In no case had death ensued.—*L'Institut*, August 4.

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THE MEDICAL TIMES AND GAZETTE *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, AUGUST 14, 1875.

SECTIONAL ADDRESSES.

THE Section of Public Health was presided over by Mr. Lyon Playfair, who, in his opening address, made some useful practical remarks on "the recent efforts of the Legislature to improve the health of the people." Sanitary measures have been put very prominently forward by eminent members of the present Government in public addresses, and formed a very conspicuous part in her Majesty's speech at the opening of the now ended session of Parliament; and it would, undoubtedly, have been very interesting and edifying to the members of the British Medical Association could they have had the honour of hearing the Premier on the sanitary legislation of his administration: he would think Mr. Lyon Playfair's exposition of the "recent efforts of the Legislature to improve the health of the people" a very prosaic performance. Nevertheless, we venture to say that it is both interesting and instructive, and gives fair and full credit to the Government for what they have actually done in the way of sanitary legislation; while though Mr. Lyon Playfair must, we suppose, be counted among their political opponents, he was silent on sanitary measures proposed and introduced, but withdrawn. He did not speak of the failure of the Rivers Pollution Bill. Of the Public Health Act he said—and most people will probably agree with him—that, as an amending Act, it is trivial; but he admitted that as a consolidating Act it is distinctly useful, and will be recognised by all sanitarians as an important contribution to sanitary law. Of the Artisans' Dwellings Bill he expressed his belief that it will undoubtedly do good in towns animated with the spirit of Edinburgh, Liverpool, and Glasgow, and that London will certainly make use of it to clear away some of her nests of disease and crime; but he remarked that it is permissive only, and does not apply to towns having less than 25,000 inhabitants, and that it will have to be followed by an Act applicable to the smaller towns, and to country districts, if any

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marked impression is to be produced on the general evil of overcrowding—an evil common to all gatherings of people in civilised communities. The evils of overcrowding and filth in fixed dwellings were well illustrated from the history of the American Indians. When on the war-path their mortality was small, but in times of peace it grew rapidly greater. When, however, things became very bad, they changed their encampments, and the mortality lessened. But when the Christian missionary came among them they were doomed, "for they became fixed in villages, with all the traditions of their modes of uncivilised life still clinging to them, and, unable to change their locality, the fatal effects of overcrowding and filth told upon them with far more severity than the bullets of their enemies in their life of savage warfare."

Even the Prime Minister has not had the courage, we think, to boast publicly of the new Adulteration of Food and Drugs Bill, and few, perhaps, will be found to quarrel with Mr. Lyon Playfair's remark that the chief changes it makes in the former Act "have been in relaxing its provisions in the interests of traders, and in diminishing the securities which it gave to the public." One step in advance it does, nevertheless, contain, in that it requires the use of pure water in making aërated beverages; and this may be the commencement of legislative enactments against a danger, the existence of which we are only beginning to comprehend—viz., that articles of food and drink may become vehicles of contagious disease.

The most interesting and suggestive part of Mr. Lyon Playfair's address is, however, that in which he considers "the position of our Ministry of Public Health as represented in the functions discharged by the Local Government Board." He observes that it is reasonable that the superintendence of public health and of pauperism should be under one administration, for they are closely connected as cause and effect, but that unfortunately this has led the Local Government Board to look upon its medical officers of health much as it does upon its poor-law medical officers—as curers, and not as preventers, of disease; though what ought to be the difference of their functions was well described by Xenophon in his "Cyropædia," when he speaks of ordinary doctors as "menders of garments which are already torn," while sanitary officers have "a care of health of a nobler kind, for it is their duty to *prevent* the men from becoming sick." The Central Board, the speaker observed, "crams common sense into local authorities already saturated with it, and refuses them the scientific sense which they cannot be expected to possess." "If there be some small excess of expenditure in a local authority, down goes one of the thirty-nine poor-law auditors to audit the accounts. But the idea of auditing the death accounts of the same authority would be deemed to be a wanton interference with the independence of local government. Yet such an audit would be incalculably beneficial, in an economical point of view, both in its relations to the prevention of disease and of pauperism." It is true that the Local Government Board sends down medical inspectors to localities to investigate diseases when they have become a scandal to the community; and these officers have often been useful in detecting the causes of prevalent diseases; but their duties should be preventive, not detective. On this subject, and on the necessity of constant watchfulness to *prevent* waves of epidemic diseases, Mr. Lyon Playfair dwelt at some length, and urged the necessity of a national audit of death and disease, in order that our State authorities, charged with the care of the public health, should keep us constantly informed of their successes and failures. He expressed his conviction that "when local organisation is improved, and the central authority is brought into more effective scientific relations with it, we may see an immense impulse given to preventive medicine." He is conspicuous among our most able, most advanced, and most earnest sanitary legislators; and it is satisfactory to have his public declaration that he means to use his "constitutional rights to obtain the information necessary to enable the nation to judge whether the Local Government Board is effective in preventing preventable disease."

Dr. Matthews Duncan, in opening the Section of Obstetric Medicine, addressed to the members some remarks on ovarian pathology. He pointed out how modern observation and experiment have tended to dethrone the ovaries from the supreme position that has been accorded to them "in all departments of sexual activity." It is pretty generally known that ovariotomy on one side has been sometimes followed by persistence and even a marked increase of sexual appetite; but Dr. Duncan pointed out that not only this, but also the continuance of menstruation, have been occasionally observed after the complete extirpation of both ovaries; and he suggested that the explanation of these conditions may perhaps be found in some recent investigations which seem to show that there is in the lumbar spine a nervous centre for the sexual appetite—though, as he well observed, in considering the full significance of the "human vivisectional experiments," above alluded to, with regard to the functions of the ovaries, care must be taken that the whole of both ovaries have been removed, and not merely portions of them, or, instead of them, mere parovarian cysts.

This led to some remarks on the bearing that the true physiology of the ovaries must have on the even theoretical justification of the operation of spaying, "or what is called normal ovariotomy by Battey," as a remedy in such diseases as nymphomania, menorrhagia, and dysmenorrhœa; for if the removal of the ovaries does not insure the annihilation of sexual activity, all justification for such an operation ceases. And this, again, gave Dr. Duncan the opportunity to point out that an operation may be theoretically justifiable before, and even long before, it is justifiable practically. He had, he said, been "gravely misrepresented by one or two excellent professional brethren" as having changed his mind as to ovariotomy. At the time when he opposed the operation, ovariotomies had been, "with scarcely an exception, failures, and failures often under the most terrible circumstances; disaster after disaster." Ovariotomy is *theoretically* justifiable, because possible success far outweighs the danger of it and the danger of the disease together; but at that time "sufficient trials had been made, and there was no success, or almost none," and the operation was then and there unjustifiable *practically*. And even now, he observed, "even after Spencer Wells has for a long time flourished," there are districts and countries where ovariotomy is still practically unjustifiable or not practically justified, and where "the good physician must say to his patient, 'Go to some great ovariotomist. If you cannot do that, stay at home and die.'" In Edinburgh, since Keith had appeared, that happily need not be said. "Since he took up the scalpel," said Dr. Duncan, "we have never heard a word among us against ovariotomy; and as this silence is logically proper, so was opposition not only logical, but urgently called for." Dr. Duncan makes some remarks on "the rarity of real surgical talent," and on the need not merely of "invaluable theory and systematic teaching; but also of invaluable practical teaching, on the basis of the deficiency of present theory and the still persisting necessary distinction between theory and practice." He pointed out that the conditions essential for success in such operations as ovariotomy are not yet known—one operator has a great amount of success, while another has not; and the causes of this are not yet fully demonstrated, though, even when they shall have been, surgeons will not be reduced to a dead level: there will still undoubtedly "be room for genius and zealous care."

In the rest of his able address, Dr. Duncan spoke of the progress made in our knowledge of ovaritis, acute and chronic,

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of hæmatocele, of ovarian and of parovarian cysts, and, in short, of the advance made in the field of ovarian anatomy, physiology, and pathology. And, with regard to ovarian cystoma, he mentioned the aid afforded in its diagnosis by the microscopical examination of the fluid, and alluded to the contributions to the discussion of this point by Mr. Knowsley Thornton and Mr. Lawson Tait, communications from whom on the subject have lately, it will be remembered, appeared in our own pages.

We regret that want of space forbids us to do more than very briefly direct the attention of our readers to Professor Rutherford's Address on Physiology. He made able use of the occasion to make some just and high-toned remarks on the value and necessity of vivisection, rightly employed, in the teaching of physiology. He observed that physiology is an experimental science, and that no right conception of the subject can be obtained unless the student be shown the experiments that are necessary for the demonstration of certain facts; that it is not enough to *tell* him the great fundamental facts—they must be *demonstrated*; by that means, his attention is far more forcibly arrested, and the facts are far more deeply imprinted on his mind. "He is apt to forget that which he has merely been told, but the impression of that which he has seen is with difficulty effaced." "No one," the Professor observed, "can deny that animals daily suffer pain in order that they may be eaten by man, and also in order that man may not be eaten by them. If it be thought necessary to put countless animals to a painful death for the purpose of keeping the human race alive, may not the physiologist inflict pain, not only for the discovery of new truth, but also for the right education of those who have to spend their lives in preventing and in healing disease? Is the one object less important than the other? Indeed, is not the object in both cases precisely the same? Why, then, this clamour against physiologists?" "I would not, however," he continued, "for a single moment speak lightly of the production of pain, for it is the function of those who pursue medicine to alleviate pain and suffering. Our students would, indeed, be badly trained for the pursuit of a calling so humane as that of medicine if they did not find us on all occasions carefully avoiding the giving of pain that is not absolutely necessary. Therefore it is our duty, for this as well as for other and obvious reasons, to use narcotics in our experiments upon animals whenever it is possible. It is not necessary for a sound physiological education that our students be shown *all* the experiments that are needed to demonstrate physiological truths. We probably do enough if we show them experiments on the cardinal points of physiology; and I aver that all the experiments on the higher animals that are really required for the purpose of education can be performed with the aid of narcotics."

Dr. Burdon Sanderson, in moving a vote of thanks to Professor Rutherford, also referred to the subject of vivisection in terms that will meet with general approval and acceptance. The knowledge gained through skilled vivisection experiments is, he asserted, of the most valuable and permanent kind; but we must see to it that no grain of suffering be in this way inflicted on animals fruitlessly. And "it ought to be laid down as a principle, that the best methods of investigation should be used, the best apparatus, the best experimenters, and the best teachers."

The latter part of Professor Rutherford's address was devoted to a report and description of a large number of very careful and valuable experiments, made by himself and M. Vignal, on the secretion of bile in dogs. Very interesting and suggestive results were obtained, to which we may refer hereafter; here we will only add that the Professor pointed out that this report was simply a contribution to comparative physiological pharmacology, and that the clinical investigator must compare the results obtained with those observed in human pathological conditions.

THE WATER-SUPPLY OF HASTINGS.

As a watering-place Hastings possesses many natural advantages, which give it a higher place in public estimation than most of its rivals. Unfortunately, however, its water-supply is far from satisfactory, not so much, perhaps, in point of quality as in quantity. For a considerable time the want of a more liberal water-supply has been felt, and the sanitary authorities have endeavoured to meet and remedy this serious defect. Their efforts have not, however, been very successful, owing to the natural difficulties to be overcome before new sources of supply can be reached. But, of course, it cannot be tolerated that a favourite watering-place should be deficient in water-supply; we are therefore pleased to know that the local authorities have taken the first step towards getting over their difficulties by calling in the professional assistance of Mr. W. Topley, F.G.S., Associate of the Institute of Civil Engineers, to consider the geological questions relating to the existing supply of water, and to determine how that supply may best be augmented, or superseded. This gentleman has just presented his report, from which we learn that it is probable an increased supply can be obtained from the existing wells or from their immediate neighbourhood, by deepening the existing wells, sinking new wells, or by driving headings or galleries nearly at right angles to the fissures which now yield water. At the same time, these measures may fail, and at best the supply would not be sufficiently abundant to meet the demand a few years hence if the population of Hastings continues to increase at its present rate. It is, then, pretty evident that, sooner or later, water must be sought from a more distant source, and Mr. Topley believes that an ample and permanent supply might be obtained by sinking wells either in the Cuckmere Valley, sixteen and a half miles from Hastings, or at Glynde, a distance of twenty-one and a half miles. The latter locality promises to afford the best supply of water, both as regards quality and quantity. To bring water from such a distance would, of course, entail a considerable outlay of money, but it is to be hoped that the sanitary authorities will not be deterred by motives of false economy from carrying out such works as may be necessary to insure a permanent and ample supply of pure water, without which both the health and prosperity of the town will be seriously endangered.

AN INQUEST OR A BURLESQUE?

We have been pretty well accustomed to hear of peculiar proceedings associated with coroners' courts, but the details of an inquest, which reach us from Saltash, Cornwall, disclose a depth of absurdity beyond what we should have thought possible in connexion with this ancient institution. The report, as given in the *Western Morning News* of yesterday week, reads like a burlesque, but the high character of the paper in which the report appears, necessitates the belief that it is a faithful account of actual occurrences. The dead body of an infant child was recently found lying upon the mud by the waterside at Stonehouse, Devon, and, as is customary in that part, it was taken to Saltash, in Cornwall, in order that an inquiry might be held into the circumstances attending its death. Accordingly, the Mayor of Saltash (who, we presume, is coroner *ex officio*) and jury, together with the Town Clerk, assembled in the Guildhall for this purpose. A boy related how he first discovered the body, and gave an alarm to the police, and a policeman minutely described how his attention was called to the body and how that he picked it up from the mud quite dead, with a cloth tied over its face; after which the Town Clerk gravely delivered himself of the opinion that the jury had sufficient evidence before them to return a verdict of "Found dead."

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After some deliberation on the part of the jury, the foreman said that two or three of their number were of opinion that the deceased came by its death by foul means, but the rest were quite agreed that the child was "found dead." Hereupon the Town Clerk said that unless twelve, at least, agreed in their verdict, he should have to lock them up. Not to be put down without protest, one of the dissatisfied jurymen again asserted his belief that the deceased met its death by violence, and recommended that a verdict to that effect should be returned. The Town Clerk, however, told the jury that they could not return such a verdict unless a medical man were to examine the body, and give his opinion as to whether the child ever did live, and, if so, what manner of death it died. This, as one of the jurymen pointed out, would be attended with some expense to the county, so the whole court speedily departed to pursue their avocations in private life, previously, however, recording their unanimous opinion that the deceased *was* "found dead." Yet it must not be thought that the jury had no scientific evidence whatever to assist them in arriving at the above conclusion. The policeman said that he considered from the manner in which the cloth was tied it was sufficient to cause suffocation. Moreover, he believed the child was a fortnight old. It is not stated how the policeman was able to determine the age with such accuracy, neither is anything said as to signs on which he grounded his belief as to the child being alive at the time the cloth was tied around its head. It may have been that the cloth was applied in this manner for convenience of carrying. However this may be, the whole affair must be regarded as most unsatisfactory, and calculated to encourage a similar disposal of any superfluous infants.

THE WEEK.

AD LECTOREM.

We exceedingly regret to be unable on the present occasion to publish the very valuable and instructive Address on Surgery delivered by Professor Spence before the British Medical Association, but hope to publish it in full next week.

TOPICS OF THE DAY.

The annual report of the Conservators of the Thames, for the year 1874, has lately been published. It is not quite satisfactory to learn from it that above the intakes of the water companies four towns still continue to empty their sewage into the river. Of these, two—Oxford and Reading—have sewage works in a forward state; and of the other two, Windsor has commenced sewage works, and Abingdon is about to do the same. It is to be hoped, therefore, that very shortly all sewage will be diverted from the river above the source of the chief water-supply of the metropolis. It would appear, however, that between the intakes of the water companies and the western limits of the metropolis, where the main drainage scheme comes into operation, a less satisfactory state of matters prevails. Notwithstanding the measures taken by the Conservators under their Acts of Parliament, the local authorities, with the exception of Twickenham, have not yet diverted their sewage from the river. The Conservators declare that they will not relax their efforts to enforce a compliance with the provisions of the Conservancy Acts until the diversion of the sewage, and the consequent purification of the river above the limits of the metropolis, has been fully accomplished.

A case of poisoning from eating poisonous fungi has just been reported from Woodditton, Suffolk. The wife of a labourer, aged thirty-two, and her daughter, aged thirteen, persisted in eating what they supposed to be mushrooms. After suffering considerable pain for two days, death resulted in both cases.

It is with great pleasure that we have to record the completion of the Metropolitan Main Drainage System. Last week the western pumping-station at Pimlico was formally opened by Lieutenant-Colonel Sir James M. Hogg, K.C.B., M.P., and thus the works, which were commenced so far back as the year 1859, have now been brought to a termination. That great results have already borne testimony to the value of these works, there can be no doubt. The Thames, in its course through the heart of London, has ceased to be a grievous nuisance, productive of epidemics, and wisely avoided by everyone who could give it a wide berth; and the sewage of this great city is now carried away without being allowed, for the briefest time, to stagnate and give off poisonous gases. The metropolitan main drainage system, it is now calculated, conveys away the sewage-matter of over 4,000,000 of people, from an area of 117 square miles, at a total cost of about £4,500,000 sterling. Before the year 1815 it was penal to discharge house-drainage into sewers, and the foul deposit was stored under the houses in cesspools, till at last the ground became so saturated with the constant accumulation that disease and death were the almost inevitable consequences. In 1847 the law required the destruction of cesspools, and the drainage of all houses into sewers; the house-drainage was consequently turned into the culverts, which had previously taken only surface drainage, and was conveyed by them into the natural watercourses which discharged their contents, into the Thames in London. The metropolis had suffered from three different outbreaks of cholera in 1831, 1848, and 1853, and the Thames had become so polluted that no one willingly approached its banks, and the removal of the Houses of Parliament to some point more distant from the river was at one time seriously spoken of. So matters remained until 1856, when the Metropolitan Board of Works was constituted, and power was given to them to grapple with these evils, the result being that they eventually determined to divert all sewage from the Thames near London, and convey it to Barking and Crossness, fourteen miles below London-bridge; and, by means of no less than eighty-two miles of sewers, they have now brought to an end a most useful and gigantic undertaking.

Surgeon-Major Sydney Alder, of the Army Medical Department, was last week tried at Haverfordwest for the wilful murder of Lieutenant Walker, of the Royal Artillery. The trial extended over two days, and resulted in the acquittal of Dr. Alder, who was, however, most earnestly admonished by the Lord Chief Justice to be careful of his future conduct.

By an extract from a letter just come to hand from Damascus, dated July 22 last, we regret to find that cholera, which has for some time prevailed at Hamath, Antioch, etc., is now raging at Damascus. Four hundred cases a day are reported, but the real number is concealed; the Christian quarter of the town is deserted, and sudden deaths occur in the streets. The Vali has resigned, his wife having died of cholera. There are no medical men, and there is nothing at hand for the sufferers. The disease prevails also at Salahich, in the Hauran, at Deir Ali, and among the Druses. The British Syrian schools are closed, and the children dispersed; cordons of soldiers have been placed round some of the affected districts, but there is a total want of medical aid, medicines, bedding, and clothing, these latter articles belonging to those who have perished being immediately burned. The letter closes with an appeal for assistance from this country, and the Universal Alliance Association, to whom it is addressed, have announced a meeting to consider what steps can be taken for affording the required relief.

The Metropolitan Board of Works must be credited with a desire to avail themselves fully and promptly of the powers which the Artisans' Dwellings Bill has placed in their hands.

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The Bill in question only became law in June; but already a report has been furnished by the Works Committee, stating that, in their opinion, certain houses, courts, and alleys within the area represented by the Medical Officer of Health for the Holborn District are unfit for human habitation, and in such a sanitary condition as cannot be effectually remedied otherwise than by an improvement scheme for the rearrangement and reconstruction of the streets and houses within such area, or some of them. The same grave objection is recorded against houses, courts, and alleys within the area represented by the Medical Officer of Health for the Whitechapel District; and in both cases the Committee recommend that an improvement scheme be made, to be referred to the engineer and superintending architect, and finally to the solicitor for his report thereon.

The Town Council of Brighton have recently passed a resolution to grant the British Medical Association the use of the suite of rooms attached to the Royal Pavilion upon the occasion of its visit to that town in the year 1876.

The action brought by Sir William Muir, the Director-General of the Army Medical Department, against the proprietors of the *Broad Arrow*, for statements reflecting upon his character, was set down to be heard at Croydon on Monday last. After the jury had been sworn, it transpired that the managers of the paper were willing to admit that they were not justified in publishing the article in question, and that there was no foundation for the charges made against the plaintiff; and as Sir William Muir's counsel explained that his client had no other object in bringing the action than to vindicate his character, a juror was withdrawn, and the case terminated.

Two inquests were held last week which were singular, on account of the advanced age attained by the parties in each case. The first was held by Dr. Hardwicke, on the body of a Mrs. Allen, aged 102 years, who had fallen out of bed and broken her leg. At first her statement that she had sustained a fracture was not believed, and it was some time before medical assistance was called in. Subsequently it transpired that she had fractured the neck of the thigh-bone on the left side, and, three days afterwards, she died from exhaustion consequent upon the shock and injury. In the other case, Mr. Carter investigated the circumstances attending the death of Mrs. Sackett, a widow nearly 100 years old, who had fallen headlong downstairs fracturing several of her ribs. In this case, although the deceased died on the 29th ult., it was not until the 3rd inst. that the certificate was taken to the registrar; and, in consequence of the hot weather, the body was fearfully decomposed. The jury, in delivering their verdict, complained greatly of the delay which had occurred, and the Coroner remarked that neither he nor his summoning officer were responsible for the irregularity in question.

Mr. Rickman J. Godlee, M.S. (Univ. Lond.), and late Surgical Registrar at University College Hospital, has been appointed Demonstrator of Anatomy at Charing-cross Hospital.

We are glad to hear that Dr. Stephenson, Physician to the Children's Hospital of Edinburgh, has been appointed Professor of Midwifery in the University of Aberdeen. There could not have been a better selection. Dr. Stephenson is a most able and industrious man, and has already demonstrated his powers by the work he has laid before the world. Of the appointment to the chair of medicine in the same University there is, in the meantime, nothing fresh to be said.

A NEW METHOD OF COUNTING THE RED AND WHITE BLOOD-CORPUSCLES.

Mons. L. Malassez has recently described in the *Archives de Physiologie*, 1874, page 32, a modification of the processes of Vierordt and Welcker for estimating the number of blood-cells in a given volume of blood. He draws the blood into a peculiar kind of pipette, in which he dilutes it with a hundred parts of an indifferent liquid, so that its constituents may be as equally distributed as possible. The liquid he uses consists of one volume of a solution of gum of specific gravity 1020, and three volumes of a solution containing equal parts of sodic sulphate and sodium chloride, also of specific gravity 1020, to which one drop of a concentrated solution of sodic carbonate may be added. The diluted blood is transferred from the pipette into a fine capillary tube of elliptical section, whose dimensions are accurately known; this is brought directly under the object-glass of the microscope, and the corpuscles are then counted by means of a micrometer eye-piece.

In counting the white corpuscles the blood is only diluted fifty times instead of a hundred, and a longer capillary tube is used than in the case of the red corpuscles. To count the latter it is not necessary to use a tube longer than twice the breadth of the field of the microscope, whereas for the former it is better to use one about ten times as long. The number of corpuscles thus counted gives what the author calls "the actual richness of the blood"—*i.e.*, the number of blood-cells in a unit of volume. To determine the "relative richness" in the two kinds of corpuscles for any particular blood, their number must be estimated separately, and then their relative percentage calculated.

M. Malassez has already obtained the following results by his method. He finds that while the number of red blood-cells is uniform throughout the arterial system, in the venous it varies with the kind of organ from which the blood comes. Thus there is an increase in their number in the veins of the skin and muscles, especially during muscular action. There is also an increase in the blood from the secreting glands; but, curiously enough, this is most pronounced, not during secretion, but when the organ is at rest. The red corpuscles in the splenic vein are most numerous when digestion is going on; whereas, in the intestinal veins, they are diminished at that time, and increased during fasting.

In some examinations of the blood of persons suffering from lead-poisoning, Malassez has found that the red corpuscles are considerably diminished, frequently even to half the normal proportion, and that this diminution continues a long time after the subsidence of the acute symptoms. Purgatives increase their apparent number in this disease, probably by producing concentration of the plasma of the blood. Malassez has examined the blood of patients with erysipelas, and finds that in the uncomplicated affection its "relative richness" in white corpuscles is increased very considerably; but if suppuration occurs, the "actual richness" is also much greater until an outlet is made for the pus, when it at once disappears. The number of white corpuscles also diminishes very considerably during convalescence. Lastly, Malassez has made the interesting and important discovery, after examining the blood of a number of persons with abscesses, carbuncles, empyemata, amputation-wounds, and puerperal affections, that there is a constant increase in the number of the white corpuscles of the blood whenever suppuration is occurring in any part of the body. Though at first sight this fact might be cited as an argument in support of the theory of the origin of pus in the white blood-corpuscles, yet on consideration it is clear that it might equally well serve the cellular pathologists, and that the apparent increase of white corpuscles might be merely due to cell-multiplication at the seat of suppuration, and subsequent migration into the blood from thence.

THE TREATMENT OF NEURALGIA BY GELSEMIUM SEMPERVIRENS.

"Gelsemium sempervirens," or yellow jasmine, a native of the southern portion of the United States, has long had a considerable reputation in America in cases of neuralgia, but

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it has as yet attracted little attention in Europe. It has, however, in this country been recommended by Dr. Wickham Legg and Dr. J. Sawyer as a valuable remedy for neuralgic toothache. This drug has recently been tried in the Dispensary at Heidelberg, which is under the direction of Prof. von Dusch, by Dr. A. Jurasz, assistant-physician; and he has reported, in the *Centralblatt* for July 10, the favourable results which followed its use in several cases. He gave the gelsemium in the form in which it appears to be most prescribed in America, namely, in that of the tincture; the dose being from five to twenty minims three times a day.

With five minims given in this way for three days, a man of thirty, who had been suffering for a week with neuralgia of the right supraorbital nerve, which had resisted quinine and veratrum ointment, was completely cured. The same dose given for six days gave permanent relief to a woman who had had brachial neuralgia on the left side for more than a year and a half, and been treated with various other remedies without success. Two other neuralgias of the fifth nerve were rapidly cured with five- and ten-minim doses; and a case of very severe sciatica on the right side in a man of sixty, which had completely disabled him and confined him to bed, was quickly relieved by eight-minim doses three times a day, and the patient was able in a fortnight to walk with a stick; the cure being completed by warm baths and the use of the constant current. On the other hand, the gelsemium failed completely in two cases of muscular rheumatism, and in a case of long-standing hemicrania.

In no instance was any unpleasant effect observed, either on the circulatory or digestive organs; but the dose of twenty minims was never exceeded.

THE GLYCOGENIC FUNCTION OF THE LIVER.

In a short communication to the *Centralblatt* of July 31, Professor Lussana, of Padua, asserts that glycogen is not a physiological product of the liver; that there is, as he expresses it, "no hepatic function of glycogenesis." This statement is made on the strength of a series of experiments extending over the last five years, in all of which the liver was examined immediately after death. Various animals—pigeons, fowls, frogs, rabbits, and dogs—were used. A large porcelain basin was kept ready full of boiling water, and the instant the abdomen was opened the vessels and ligaments were rapidly divided, and the liver removed and thrown into it. In the still boiling liquid the liver was cut up into very small pieces, this procedure lasting an hour, and then all was allowed to cool. The residue was then strained, and if necessary, repeatedly filtered, until the filtrate was absolutely colourless and transparent, and free from all albuminoid substances. In not a single experiment conducted in this way could Lussana detect the faintest trace of glycogen; on the other hand, this substance was always found in varying amount in livers which were not examined until some little time after the death of the animal, the quantity being proportional to the length of the interval which elapsed before examination.

WRITERS' CRAMP IN TELEGRAPHISTS.

It appears that among the telegraph clerks who make use of Morse's instruments, the same kind of cramp occurs as in writers and others who have to execute the same motion with the fingers uninterruptedly for a long time. In Morse's system the letters are represented by dots and lines, and the disease first shows itself by a difficulty in forming the letter "s," which consists of three dots, "i," which consists of two dots, and "v," which is made up of two dots and a line. By degrees every combination of dots and lines becomes difficult in the ordinary position of the hand, and the patient generally attempts to work with his thumb only, next with the forefinger and the middle finger together, and lastly with the whole hand, until he is obliged to desist altogether, owing to attacks of cramp in the whole forearm. He may also suffer from giddiness and sleeplessness. According to Onimus, who has described this affection in the *Gazette Médicale* (No. 15, 1875), the best means of avoiding it is to use the different fingers alternately from time to time, and as soon as the least sign of cramp is noticed to exchange the Morse's instrument for that of Hughes, which is also in operation in France.

CHOLERA IN SYRIA.

We take the following from the *Berliner Klin. Wochenschrift* of August 9:—"The cholera has broken out with great severity in Syria. It first showed itself in May of this year in Hamah, a large town between Damascus and Aleppo. This place lies so far out of the usual line which the disease usually follows, that it was at first doubted whether it was true cholera or not. Since May, however, the epidemic has spread to Aleppo, Antioch, and Damascus, and has reached considerable proportions in the latter city. Between the 5th and 12th of July 1118 persons were attacked in Damascus, and 506 of them died. The Turkish Government has sent a number of medical men to the infected districts, and quarantine regulations have also been instituted."

HONORARY DEGREES CONFERRED BY THE UNIVERSITY OF EDINBURGH.

At the graduation ceremony, held in the General Assembly Hall, Edinburgh, on August 2, the degree of Doctor of Laws was conferred on Dr. James Warburton Begbe, Edinburgh; Dr. John Hughes Bennett, formerly Professor of the Institutes of Medicine in the University of Edinburgh; Dr. James Matthew Duncan, Edinburgh; Sir William Fergusson, London; Dr. Alfred Henry M'Clintock, Dublin; Dr. William Pirrie, Professor of Surgery, Aberdeen; and Dr. John Burdon Sanderson, London. The Right Hon. John Inglis, Lord Justice-General and Chancellor of the University, presided, and there was a large attendance.

ARMY MEDICAL SERVICE

We are indebted to the Director-General of the Army Medical Department for the following list of Army Medical candidates who were successful at both the London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley, August —

	Marks.		Marks.
1. H. Charlesworth	4261	5. E. A. Mapleton	3976
2. J. C. Dorman	4100	6. E. W. Kelsall	3560
3. G. H. Le Mottée	4014	7. D. O'Sullivan	3435
4. W. L. Chester	4006	8. C. E. Sharpe	2933

NAVAL MEDICAL SERVICE.

The following is a list of Naval Medical candidates who were successful at both the London and Netley examinations, having passed through a course of instruction at the Army Medical School, Netley:—

	Marks.		Marks.
1. Marsh, H. E.	4077	6. Lynch, A. R.	3148
2. Strickland, H. G. T.	3796	7. Dudley, J.	2843
3. Patterson, A.	3608	8. Sherlock, J. J.	2420
4. Ronan, M.	3393	9. Bookey, D. B.	2381
5. McAdam, J. A.	3285		

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

At the ordinary meeting of the College on July 29, the following members were elected to the Fellowship:—Robert Hunter Semple, M.D. St. Andrews; George Foster Burder, M.D. Aberdeen; Charles Augustus Adey, M.D. Edinburgh; James Barclay Montgomery, M.D. Glasgow; Henry Fearnside, M.B. London; Daniel Hack Tuke, M.D. Heidelberg; William Stewart Falls, M.D. St. Andrews; William Matterson, M.D. St. Andrews; Stephen Monckton, M.D. London; Richard

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Torne Thorne, M.B. London; Augustus Burke Shepherd, MB. Oxford; William Miller Ord, M.B. London; William Hery Corfield, M.D. Oxford.

APOTHECARIES' HALL, LONDON.

THE Court of Examiners elected by the Master, Wardens, and Court of Assistants of the Society of Apothecaries for the ensuing year were duly sworn in on Thursday last week, viz.:—Robert Norton, M.D.; Thomas Peregrine, M.D.; George Corfe, M.D.; James Parratt, M.D.; Robert Hunter Semple, M.D.; Charles Taylor, M.D.; Thomas Rivington Wheeler, F.R.C.S.E.; John Randall, M.D.; John Sherwood Stocker, M.D.; John Charles Thorowgood, M.D.; Robert Fowler, M.D.; William Bathurst Woodman, M.D. Secretary and Registrar, Richard Hopkins Robertson, M.D.

PARLIAMENTARY: IRISH PUBLIC HEALTH ACT.

IN the House of Commons, on Wednesday, August 11,

Dr. O'Leary drew attention to the unsatisfactory working of the Irish Public Health Act. He complained that the medical officers under the Irish Public Health Act were most inadequately paid for their services.

After some observations from the Solicitor-General for Ireland and Dr. Ward, the subject was dropped.

THE EDINBURGH MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE forty-third meeting of the British Medical Association has now passed away, and we are in a position to review it in detail. That, we think, should be done in no carping spirit, for it is not an easy thing to bring a meeting of some 1500 men to a successful issue; and, viewing matters from our present 'vantage-ground, we are bound to say that the meeting was a very successful one. The public addresses were good; the working of the sections was capital; a real interest was manifested in the papers; and good debates sprang up. But the chief features which have given life to the meeting have been the demonstrations. The morning meetings in the Infirmary, where Professor Lister displayed the results of his antiseptic system, were largely attended, and cannot fail to have made a profound impression on the minds of those who witnessed them. Equally successful, in another way, were the demonstrations of Professor Burdon Sanderson, of the electric results of inducing motion in the *Dionea muscipula*, or Venus's fly-trap; the demonstrations of Dr. McKendrick and Professor Dewar of the impression of light on the retina; of Dr. Wolfe in transplanting tissue from the eye of a rabbit to the human eye; as well as others which might be named. The evening meetings and the dinner also passed off without a hitch; and the excursions on the Saturday took place in the brilliant weather which had, on the whole, characterised the meeting.

Some important changes were made in the *personnel* of the Association during the business meetings. Owing to illness, deeply to be regretted, Mr. Southam, of Manchester, resigned the important post of President of Council, and Dr. Falconer, of Bath, who has long and well filled the post of Treasurer, was chosen in his stead; whilst Mr. Husband, of York, was elected Treasurer in the place of Dr. Falconer. When they came to discuss the proposals for a place of meeting next year, two invitations came before the meeting, one from Liverpool and one from Brighton. After some little discussion, not altogether free from acrimony, it was decided to accept the Brighton invitation, and there, accordingly, the Association will meet next year. On Wednesday morning, a discussion took place on the subject of female membership, which I mentioned last week,

Mr. O. PEMBERTON, Birmingham, said it would be in the recollection of those present at Tuesday's general meeting that he then referred to the names of two ladies in the list of those who were to read papers. He presumed those ladies were members of the Association, though how they became so—whether by a vote of Committee or Council or through any branch—he was not aware. This circumstance, however, he was acquainted with—that in a matter of this kind the general voice of the Association should have been previously taken. He was not there for one moment to say whether the matter commended itself to their judgment or whether it did not, but, as he read the laws of the Association, the only description he could find of a member referred either to "he" or "him," but not to "she." He therefore proposed—"That it be an instruction to the Secretary, between now and next annual meeting, to issue a circular addressed to every member of the Association, requesting their opinion, 'yes' or 'no,' as to the admission of female medical practitioners to membership."

Dr. MARSHALL, Bristol, seconded the motion. It seemed to him that they should be content to spend, at their annual meetings, some time in the business of the Association, as well as in making complimentary speeches. On Tuesday they performed the astounding feat of passing a report which had never been read, and while he admitted that thanks were due to the Committee of Council for the way they did the work of the Association, he thought that at these annual meetings the members ought to express some opinion and take account of what had been done. Now, during the past year two ladies had been admitted members of the Association, whether by the Committee of the Council or by a local branch he did not know; but he contended that in either case a great liberty had been taken with the laws of the Association, and with the Association itself. Those living in Edinburgh or in London, where there were other societies, could hardly estimate the importance of the Association in provincial towns where no other medical societies existed; and therefore, without wishing to enter into the merits of the case, so important a change as that now in question should not have been begun without thoroughly ascertaining the feeling of the entire Association. He might be told that, looking to the laws, it was open to any individual branch to say whether or not any member of the Association should be a member of that branch—in other words, that ladies might be members of the Association without being members of branches who did not wish to receive them; but the whole position of matters would be changed thereby. If it was the opinion of the Association that women were disqualified by sex for being members, there was an end to the question. If, on the other hand, it was considered they were not improper persons to be members, it became a personal question. In his own neighbourhood of Bristol there was a lady practising in medicine, whose general accomplishments and professional acquirements were such as commanded the respect of most men about her. He was glad to say she was meeting with great success in her practice, and he wished her all success. But he should feel that if she became a member of the Bristol branch of the Association their discussions would be much hampered and their social gatherings made much more formal. For these reasons he should be sorry to see women admitted. But if the general principle was carried, and women were rendered eligible the lady referred to would be a most proper person, and, if she would allow him, he would be glad to propose her as a member. But he expected the Association would, by a large majority, express a different view. At all events, he thought it was a subject on which the general feeling of the members should be ascertained.

Dr. A. STEWART said Mrs. Garrett-Anderson was admitted in due form by the Metropolitan Counties Branch. He himself had very great pleasure in proposing her; not that he approved of the general principle of ladies being members, but for this very good reason—that the regulations admitted any legally qualified member of the profession, and that Mrs. Garrett-Anderson, being a legally qualified member of the profession, he did not see how they could keep her out.

After some little discussion, the proposition was agreed to.

MEETINGS OF SECTIONS.

At the meeting of some of the sections important addresses were delivered, such as we this week publish and comment on. In others, shorter, but not less valuable, addresses were given. Thus, in the Section of Medicine, Professor GAIRDNER spoke something as follows:—It had, he said, often occurred to him that perhaps the way in which they could best gauge the progress of medicine, and know in reality if they were getting upon a solider and surer foundation, would be to ask the question, whether, if some such man as Brown,—Cullen's pupil, and afterwards his antagonist—were to arise now and broach such a system as he did, it would have a shorter life and be more easily extinguished; whether, in short, it would be less

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revolutionary in its effects. He found one of Brown's prescriptions was to the following effect, and they would recognise in it something not unlike what they had seen in their own time:—"For breakfast, toast and rich soup made on a slow fire; a walk before breakfast, and a good deal after it. A glass of wine in the forenoon from time to time. Good broth or soup to dinner, with meat of any kind he likes, but always the most nourishing. Several glasses of port or punch to be taken after dinner, till some enlivening effect is produced from them, and a dram (of whisky?) after everything heavy. One hour and a half after dinner, another walk. Between tea-time and supper a game with cheerful company at cards or any other play, never too prolonged; a little light reading; jocose, humorous company, avoiding that of popular Presbyterian ministers and their admirers, and all hypocrites and thieves of every description; lastly, the company of amiable, handsome, and delightful young women, and an enlivening glass." He thought in that prescription they could see what was the nature of the famous Brownonian system, and the end and issue of Brown's lectures upon direct and indirect debility and excitability. It was a very curious proof of how things went to sleep and were revived again in medicine, that they should have seen a revival of this in their own day. People had come repeatedly to himself who had been advised to take four or five glasses of port wine after dinner, and after that as much toddy as their heads could carry, as a regular part of a prescription going on for weeks together. But the advancement which had taken place in the sciences, the fact that the clinical study of medicine had been far more carefully systematised, and the introduction of those practical methods of teaching to which Sir Robert Christison had referred, had made it impossible for any man coming forward with a new theory to make such a revolution as was the case in Brown's time, and as had been the case in the history of medicine almost from the days of Hippocrates. In regard to medical teaching, he sympathised very much with Sir Robert Christison's remarks. The true ideal was to have the practical and the systematic methods in one hand; and that, he believed, would do all that could be done to secure medical doctrines against such revolutions as he had referred to. Regarding the medical art as a tree, he remarked that unless its roots were well fixed into the realms of fact, it would be overturned, and unless its leaves were freely opened to the current of opinion, it would be choked out.

In the chair of the Psychological Section, Dr. Lowe, who was president, made the following remarks:—In opening the proceedings he took occasion to refer to the ebb and flow which, he said, no one would deny to be continually taking place in medical opinion. For example, it was not long since antimonial wine was almost universally prescribed; but now, how little was it employed! He would not say that the trade of the leech was gone, but certainly leeches were at present scarcely sold; while a more recent instance of the caprice to which he alluded was to be found in the fact that podophyllin was introduced within the easy recollection of them all by a practitioner of high and well-deserved repute, and yet he was told by druggists that it was now rarely made up. Nor would anyone, he thought, deny that this fashion, this ebb and flow of opinion and practice, had obtained in that particular branch of medicine which they called the psychological school. A few years ago they heard a great deal of the pack-sheet and Turkish baths, which, with many other things, had, as they all knew, been from time to time extolled; and then, from no other reason, so far as he could see, except than that of want of novelty, these had fallen into disuse; and who dared say that chloral and bromide of potassium—their sheet-anchors at present—would not in turn give place to other remedies? This ebb and flow could not be taken as always indicative of progress; yet this was all they had apparently arrived at until a few years ago, when something more than a temporary fashion in psychological medicine was seen to dawn on the horizon. It was in this country, from the slight but brilliant scintillations which emanated from their venerable friend, Dr. W. A. F. Browne, Dumfries, that a truer and more lasting course of study was inaugurated. Psychology was now only in its infancy: happily the infant was a vigorous one. Then, again, if to Dr. Browne belonged the honour of the first steps in psychological instruction, could they forget the more recent and more systematic teaching of their late friend Dr. Skae? A very few years ago the now well-recognised disease of general paralysis was scarcely known; now, alas! how little was treatment available except to prolong a wretched existence; but who could say to what results the pathological observations of that disease—first made, he believed, at the Royal Edinburgh Asylum by Dr. Howden—might presently lead? At all events, let them contrast the value of such researches with the speculations and practices of a former generation, when they floated on the opinions of the day guided by little else but phenomena, of the cause of which they were entirely ignorant. It was even in his day, and in the remembrance of many present, that their asylums were many of them dens, or at best only receptacles for lunatics. They were now throughout the country a credit to humanity and civilisation, and, instead of being dens or mere homes for the insane each might now be regarded as a school of psychology, instead of psychology being tacked to the end of the course of medicine. Public lectures and clinical teaching were provided for any who might desire to cultivate this most important branch of study. If such was the progress made within the last few years, was it too much to predict that ere long they should see not only extramural teaching, but in the Edinburgh University a chair of psychological medicine? The subject would never be justly estimated or fitly taught till this important step was gained. The present Professor of Medicine, Dr. Laycock, whose efforts had ever been directed in forwarding the science of psychology, would not, he was sure, be the one to retard its progress. Were every commissioner in lunacy and every physician of an asylum compelled to produce his diploma in psychological medicine, while the class was at the same time open to the general student, who could doubt but that this great measure would be valued, and more, would be self-supporting? He believed he was neither too sanguine nor too enthusiastic in believing that, in much shorter time than it had taken to accomplish the present hopeful state of things, the imaginary chair he had sketched would be attained.

One very important and useful function the Association has lately assumed is the assistance given by them pecuniarily to investigators of physiological phenomena. On the present occasion, Dr. Falconer submitted the report of the Committee on Grants for the carrying on of scientific investigations. The Committee stated that they had thought it desirable to adopt for the present year the "conditions" for grants which were in use by the British Association for the Advancement of Science. The following were the grants recommended by the Committee at their meeting in January, 1875, and approved by the Committee of Council:—Mr. Hicks—Researches on Alcohol, £50; Mr. P. M. Braidwood and Mr. Francis Vacher, Birkenhead—The Life History of Contagion, £15; Dr. R. Caton, Liverpool Royal Infirmary—The Electric Currents of the Brain, £20; Dr. J. M. Fothergill, London—The Effect of certain Agents upon the Circulation, £10; Dr. M'Kendrick and Mr. James Dewar, Edinburgh—Physiological Action of Chinodine and Pyridine Compounds, £25; Dr. Mahomed, London—The Pathology of Albuminuria, £20; Dr. Munro, Cupar—An Antidote for Chloroform, £5; Dr. W. H. Spencer, Clifton, Bristol—The Action of Uranium Salts in Diabetes, £20;—in all, £165. Of these grants the following amounts have been expended:—Mr. P. M. Braidwood, £12 12s. 4d.; Dr. R. Caton, Liverpool, £8 16s. 9d.; Dr. Fothergill, London, £3 18s. 10d.; Dr. M'Kendrick, £5; Dr. Mahomed, £5 12s. 8d.; Dr. Munro, £2 15s. 11d.; and Mr. W. H. Spencer, £13 15s. 11d. The Committee also recommended a grant of £30 in aid of researches carried out during the past year on the Biliary Secretion by Professor Rutherford, University of Edinburgh, and M. Vignal. The results of this investigation would be laid before the Association at the present meeting by Professor Rutherford in his Address on Physiology. The balance in hand would then be £101 6s. 5d., which would be returned to the treasurer. The Committee recommended that a further grant of a total sum not exceeding £300 be made for the purposes of scientific work during the year ending July 30, 1876.

Dr. J. D. Heaton, Leeds, moved that the report be adopted, and a grant of £300 made for the year 1876, in accordance with its recommendation.

Dr. Morton, Glasgow, seconded the motion, remarking that the only thing he regretted was that the sum at the command of the Association for such purposes was not much greater.

Mr. Husband, York, said he believed the Association was quite disposed to make as large grants for the promotion of medical investigation as Dr. Morton could desire; but they had ascertained, after careful inquiry in committee, what the requirements would be for next year. If they found a dispo-

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sion on the part of scientific men to take up inquiries which would make a greater demand on the funds of the Association, they would not hesitate to give what was asked for. But, as has been stated, all the money voted last year had not been expended.

The report was adopted.

LETTERS FROM MADRAS.

No. XVII.

ON THE LINGAM (OR PHALLIC?) AND SERPENT WORSHIP: GREAT PREVALENCE OF LINGAM WORSHIP; EMBLEMS FOUND WHEREVER SIVA IS ADORED; PURE LINGAYETS; NATURE OF RITES; SIGNIFICANCE OF THE WORSHIP; NOT INDECENT, LIKE THE PHALLUS; PROBABLE ORIGIN; SERPENT WORSHIP AND ITS SIGNIFICANCE.

ONE of the matters that is regarded with some curiosity by strangers here is the worship of the Lingam; and as this is a custom followed by millions of the human race, and is a part of the natural history of the human mind, it deserves the notice of the physician and the philosopher.

To show how prevalent it is, let me recapitulate that in the Presidency of Fort St. George, or Madras, there were, as Dr. Cornish tells us, at the Census of 1871, thirty-one millions and a half of people. Of these, the Hindus numbered more than twenty-nine millions (29,160,807), the Mohammedans nearly two millions (1,866,363), the Christians more than half a million (545,120), of whom 501,627 are native Christians. Out of the twenty-nine millions of Hindus, there are eleven and a half millions of worshippers of Vishnu, nearly a million of "other" and miscellaneous, and between sixteen and seventeen millions of worshippers of Siva; and the Sivaites take and worship the Lingam, or organs of generation, as the visible emblem of God.(a)

Sometimes, I am told, the Lingam is worshipped in the form of any conical or cylindrical stone, and for this purpose oval pebbles from the bed of a sacred river are much esteemed. Dr. Furnell describes "the famous Lingam stone" in the Temple of Bisheswar at Benares, as a "plain black stone, shaped very much like the large conical shot of modern artillery, placed on the floor, and standing about eighteen inches or two feet high."(b)

FIG. 1.

FIG. 1.—This represents the upper part of an upright tombstone in one of the Hindu cemeteries at Madras. The sacred bull, the *vahan* or appropriate vehicle of Siva, is seen guarding the sacred emblem. The Lingam, guarded by a five-headed cobra, which is erect over it, stands up from the middle of the Argha. The Yoni, on the side next the bull, ends in a spout, to allow the water poured on the Lingam by worshippers to run off.

But far most frequently the Lingam, which represents the masculine power, is seen in conjunction with the Argha or boat-shaped cavity, whose rim is called the Yoni, which typify the female elements. The conventional form is seen in Fig. 1. There is sometimes said to be some attempt at representing anatomical details, but they are hardly, if at all, recognisable in general. As things are, the outline of the Lingam and Yoni resembles that of a flat candlestick, or of a steamer with a funnel, or a sauceboat, and no one would detect the resemblance that is intended unless he knew it beforehand.

In conjunction with the Argha and Yoni, Lingams are made of all sizes out of stone and other materials—some of large size, and stationary, in temples; some very minute and portable, for houses, or to be worn in little caskets by the devotees. The Lingam is generally guarded by *Nandi*, the sacred bull of Siva, an effigy of which accompanies it on the walls and pinnacles of temples, and in religious books. But the places where these emblems are seen most constantly are the Hindu cemeteries. At the Sivaite end of the cemetery may be seen substantial brick and stucco tombs and monuments (Fig. 1), each with its Lingam. As I have said before, many of the Sivaites bury their dead, although the caste people, or upper classes amongst them, burn, as the Vishnuvites do. In one cemetery I lately walked through, at Mylapore, the Sivaites occupied one end of the cemetery with substantial tombs and graves on which shrubs were planted. The Vishnuvites had a few tombs only, amongst the burning-places at the other end. (Let me say, by way of parenthesis, that I was horrified at seeing a Pariah woman grubbing with her hands amongst the heap of cinders and clinkers where a body had been lately burned, to find out any portions of unburned fuel, which she put into a basket and carried home to cook her dinner; and I am told that many people will steal fuel from a funeral pyre whilst the body is burning, unless strictly watched.)

The Lingam, as an emblem of God, occupies the chief place in all temples dedicated to Siva under any one of his thousand names, or to his wife, or to his sons, or sons' wives, or servants; for in the complicated mythology of the Hindus every god has a large family, and it is supposed that the sons or other inferior deities are the channels by which petitions on important matters reach the Supreme himself. Their images are innumerable.

But there is a sect numbering 155,658 persons in the Madras Presidency, who are known as Jangams, Vira Saivas, or Lingayets, who are followers of Basava, a prophet of the twelfth century, who "determined to get rid of all Brahmanical priestcraft, and refused to worship any deity but Siva, whose image, the Lingam, is the most ancient idol known to the Hindus."(c) These Lingayets wear a silver casket containing a Lingam, suspended from the neck by a string, or tied to their left arm, or concealed in their hair. These people, when duly initiated, have the privilege of making for their daily devotions a temporary Lingam of earth or clay (Parthiva Linga), which they put upright in their left hand. This is next "consecrated" or made a symbol of the divine presence by the utterance of *muntrums* or sacred formulæ, of which, I am told, the words "I put in life" are the chief. Having made and consecrated his idol, the devotee proceeds to offer to it Puja, or worship. First he offers to it water for ablution, or water mingled with honey, sugar, and milk. He adorns it with a garland of flowers, and utters muntrums, especially repeating 108 of the 1000 names of Siva. Then he burns camphor and benzoin, on a silver dish if a rich man, on a leaf if poor; then offers to it fruits, rice, and other eatables, which are afterwards consumed by the worshipper or given to the poor; and then disconsecrates the idol, uttering the words "I send it back to its own place," and throws it into water. I have seen mud or clay Lingams on newly made graves.

The majority of the worshippers of Siva do not wear the Lingam about them, saying that they prefer to have God in their heart, and do not think it needful to hang him to a string round their neck.

Pouring water on the Lingam is one of the chief acts of worship, and all the little temples and shrines have a spout outside to let it run away.

So far we have dealt with matter of fact—with what people say and do. Now for theory. And first of all let me say what the Lingam is not. Especially there is nothing about this highly conventionalised emblem to suggest indecency or licentiousness. Here let me quote from Mr. Fergusson:—

"Nothing is more common than to connect the worship of the Lingam with the impurities with which the Hindu

(a) "Lingam" is a Sanskrit word meaning a mark, sign, token, emblem; anything that distinguishes or defines; mark of sex or gender.

(b) "From Madras to Delhi and Back," p. 60.

(c) C. P. Brown, "On the Creed, etc., of the Jangams," *Madras Journal of Literature and Science*, vol. xi., p. 143.

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religion is only too justly reproached. This, however, is a mistake. The worship of Siva is too severe, too stern for the softer emotions of love, and all his temples are quite free from any allusion to it. The contrary is the case with the Vaishnavas, who abhor the Lingam. Love pervades all their myths, and their temples are full of sexual feelings, generally expressed in the grossest forms. The existence of any such representation in a temple at once fixes it as originally dedicated to the worship of Vishnu or some of his Avatars."—(Fergusson, "Tree and Serpent Worship," p. 71.)

"This symbol," says Mr. Brown (*op. cit.*), "is as separate from indecency in the Hindu mind as circumcision is in the Mohammedan mind."

The Hindu speaks of the Lingam as innocently of any prurient meaning as possible. I am not learned enough to say whether the origins of the Hindu Lingam, of the Egyptian *Thau* or symbol of life, and of the Greek and Roman "phallus" and "priapus" were identical. But anyone who has ever seen a "phallus," or any of the priapic images preserved in a museum of Italian antiquities, will see that they are distinctly sexual and prurient in form and intent, whilst the Lingam is not. Let me quote, in support of this, from that charming account of an Italian tour in Matthews's "Diary of an Invalid." He is describing the objects in what used to be called *Museo Borbonico* at Naples, but since the fall of the Bourbons it is known as *Museo Nazionale*.

"The *Phallic* ornament worn round the necks of the ladies as a charm against sterility appears in every variety of material—gold, silver, coral; and invention seems to have been racked to represent it under every variety of shape. Sometimes it is a snail peeping out of its shell; sometimes a Cupid astride is crowning it with a chaplet; and sometimes it terminates in some frightful reptile, that turns round with an expression of rage. What can demonstrate more clearly the coarseness and corruption of ancient taste, unless it be the monstrous conjunctions, consecrated by their abominable superstition, which are still more shocking evidences of the depravity of their imaginations?"—(Matthews's "Diary of an Invalid," p. 191; Lond., 1820.)

The worship of the Lingam, decently or indecently, was early very widely spread, and its origin seems to point to a time when men were less artificial than at present, and when they spoke and thought with freedom of those most miraculous forces of generation by which the human race is increased and preserved from extinction. Amongst ourselves, people are becoming so nice and superfine that they object to the plain speaking of the Office for Holy Matrimony, and really blush to be told that the end of marriage is the procreation of children. At one time, when men were simpler, the renewal of all created beings by generation and birth must have appealed to their minds with all the force of wonder and mystery which really belong to it. To them it was creation made visible; and it is not to be wondered at that they took the instruments of the process to be symbols of the power that lay beneath; for, observe, in the first place, these symbols are not worshipped otherwise than as symbols. It is not the genitals, or their function, which are the object of idolatry; there is nothing prurient or impure about them or their worship; it is not sex which is worshipped, but the god whose power is manifested in the operations of sex. In the second place, in worshipping *Siva*, they intend to worship the supreme and only god, although, most likely, they only look upon him as co-existent with, and pervading and animating all matter, living and dead, and not such a personal God as we contemplate, who is over all, separate from all, and the pre-existent Creator of all. The Phallus of the Greeks and Romans had degenerated, before the time when Roman literature flourished, into the emblem of Lust; it was essentially impure, and suggestive of licentious thoughts, and intended to be so.

We are told that the earliest idols were stones or logs; and that "some shapeless log, or a black stone or the red-stained trunk of a tree, is still the object of adoration amongst the masses in India" (Hunter's "Orissa," vol. i., p. 95). What we know as modern Hindu religion, in which Siva or Vishnu is recognised as the representative of God, is Aryan and Brahmanical. The question then comes, Did the Brahmans accept the ancient prehistoric *fetish*, and give it a sexual meaning, or were the ancient stocks and stones sexual emblems from the first?

Anyhow, the Lingam is now environed with subtle theories by the priests, and with grotesque legends amongst the vulgar. The prevalent sect of philosophers say that when the supreme being (such a being as the German *Universum*) became conscious of his own existence, he felt desire to be; and so the world came into being, which next divided itself into male and female, or *siva* and *sacti*, out of which all things were generated; the Lingam is therefore an emblem of God in creation. [N.B.—God and matter are inseparable.] Of the popular legends, I need not quote samples; they are grotesque and silly rather than indecent.

The sum is, that the Lingam is the emblem of God, and worshipped as such, and, when consecrated, is believed to be *Swami* or God. No doubt women pray to it for children; but so they do to every other conceivable god and goddess.

Amongst antique objects of reverence are trees and snakes—not to mention the sun, and other objects of nature. Trees and snakes are worshipped still in Madras; and here and there by the roadside may be seen two trees—the peepul and margosa,—and under them three carved stones: one representing two snakes in conjunction, another Krishna strangling a snake, and the third probably a Lingam guarded by a seven-headed cobra. Ages of Brahmanism, says Talboys Wheeler, have failed to stamp out the old primitive worship of the serpent, as not only the deity of the regions below, but as the guardian of the household. There is said to be a sacred serpent in a garden near the Lying-in Hospital in Madras, to which the patients address their prayers. That the serpent-worship was once widespread is evident from the serpents represented as twining round the rod of Æsculapius, which are the same as those sculptured by the Hindus of old. These figures abound in the ruins of Pompeii. Mighty nations—as the Scythians of old—took the serpent for their emblem (Fig. 2); there were *naga*, or serpent dynasties; and

FIG. 2.

FIG. 2.—This represents an upright stone, with two serpents sculptured in relief, and the Lingam between them.

of such nations, one tribe at least—the Nagas of Assam—have made themselves known to the British public of late. There is a monument in Madras Cathedral to Mr. Mack, a young surgeon of great promise, and this represents Hygeia holding the funeral urn with one hand, and giving drink to a serpent out of a patera with the other. All these familiar emblems deal with the serpent as a good guardian and tutelary genius; but it has the greatest repute as a bestower of offspring, and hence these serpent-shrines are much frequented by childless mothers. For my own part, I suspect a phallic significance in the serpent as an emblem. This opinion is fully worked out by the Rev. Dr. Donaldson in his well-known "Book of Jasher."

I must not conclude without expressing my thanks to various Hindu friends who have supplied me with informa-

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tion on their religion, worship, morals, and customs. On all matters connected with Vishnu, I have to repeat my acknowledgments to T. Ramachendra Row, Esq., J.P. I must thank Mr. C. Sabapathy Iyah, barrister-at-law, for procuring me some most interesting conferences with the learned Sivaite pundit, Tambrapurney Subramany Dikshitur, Shastru, and for acting as interpreter.

REVIEWS.

A Treatise on Food and Dietetics, Physiologically and Therapeutically Considered. By F. W. Pavy, M.D., F.R.S., F.R.C.S., Physician to, and Lecturer on Physiology at, Guy's Hospital. Second edition. Pp. 613. London: J. and A. Churchill.

In a remarkably short time Dr. Pavy's book has passed into a second edition,—a due appreciation on the part of the public of its merits. It is in many respects by far the best work we have seen on food physiologically considered. In especial we can commend the earlier chapters as giving in a concise and accurate manner the modern ideas of food and its destination, of the relationship of nitrogenous, fatty, and starchy food to work and other developments of force. In this part, food is spoken of merely as seen in chemically pure substances; but later it is discussed as to its origin in the shape of flesh from various animals, the products of various vegetable substances, and of the simpler vegetables themselves. This is perhaps, in some respects, the most unsatisfactory part of the book. As regards our ordinary articles of diet, knowledge as to the digestible nature of substances is so uncertain that a proper standard is hardly possible—not even, we fear, if renewed experiments similar to those on Alexis St. Martin were undertaken. The conditions of life, too, are so various, are so different, that it is not easy to obtain comparative results. These, however, are absolutely necessary, and very much might be done in this way by making extended researches on a group of convicts. Theirs is the only class subject to perfect and absolute control; they are generally healthy, and are seldom troubled with the activity of brain which is apt to disturb calculations founded on more highly intellectual beings than most of the class. This was the day-dream of an old friend who had long studied convicts, but who is now no more. We have never heard of a better mode of investigation. Dietaries for convicts are now in existence, but they are hardly so perfect as might be. To return to Dr. Pavy, we find that in this second edition his chapter on wines is decidedly improved, and is now very fair indeed; and when we come to the foods of various nations we are still more pleased with the book. The whole reads much like a novel—*i.e.*, a novel of the older sort, not such as we get nowadays. In this chapter is collected a vast deal of information as to the food of various nations, and the way in which they mix it. Turning to the subject of cooking, we find the various processes enumerated, but little said about it as seen in actual practice. Among the multitude of cookery-books—and they are many and various—there are few hints given as to cookery for invalids. The subject is not a great one in one sense, but very great in another; for the messes palmed off on poor patients as very nice are often detestable. It perhaps hardly falls into the compass of a book like this, yet the want is none the less real. True, the few hints here given are good as far as they go; but we could desire to see them in a separate form go a good deal further. We have but given a faint sketch of the book itself, but we should exceedingly desire to see it in the hands of the profession and the public; it cannot fail to do much good. In the new edition the price has been reduced, though several pages have been added—an exceedingly sensible step on the part of the publishers.

A Manual of Family Medicine in India. By W. J. Moore, L.R.C.P.E., M.R.C.S.E., etc., Surgeon to the Rajpootana Political Agency, &c. Pp. 518. London: J. and A. Churchill.

We do not know that we can do more for this worthy little volume than tell its history. Some years ago the Government of India instituted a competition. The reward was a large one, and many came forward. There had a great want been felt by European sojourners in India. Far from any reliable medical help, they wanted some reliable book on elementary medicine, especially one which would enable them to utilise the resources of the country. The competition was declared; Dr. Moore came out victorious, and we have now before us the mature outcome of his labours. It seems to us entirely suitable to its purpose.

Affections of the Throat and Larynx: their Classification, Pathology, Diagnosis, and Treatment. By Arthur Tebbern Norton, F.R.C.S., Assistant-Surgeon at St. Mary's Hospital, etc. Second edition. London: Baillière, Tindall, and Cox. 1875.

This little work gives a succinct yet adequate account of the principal diseased conditions of the pharynx and larynx from a clinical point of view. Mr. Norton has not followed the hackneyed descriptions of the text-books, but has evidently studied each disease carefully from nature. His remarks on treatment are practical and, we think, judicious. We would venture to suggest that the hints on the use of the laryngoscope, which are almost too brief to be useful to an inexperienced person, should either be omitted entirely or else expanded in another edition, and that some account of the instruments used in laryngeal operations might be inserted with advantage. In all other respects the book is excellent, and we can recommend it to our readers as the most complete treatise on diseases of the throat, of moderate compass, as yet published in England. The plates are well executed, and the general appearance of the book reflects great credit on the publishers.

GENERAL CORRESPONDENCE.

A CORRECTION.

Letter from Mr. R. Brudenell Carter.

[To the Editor of the Medical Times and Gazette.]

Sir,—In the last number of your journal you have described me as "late" Surgeon to the Royal South London Ophthalmic Hospital. Will you permit me to say that I still hold the office indicated, and that I have no intention of relinquishing it.

August 9. I am, &c., R. Brudenell Carter.

REPORTS OF SOCIETIES.

THE PATHOLOGICAL SOCIETY.

Tuesday, May 18.

George Pollock, F.R.C.S., President, in the Chair.

Reports of the Committee on Morbid Growths.

The report of the Morbid Growths Committee on Mr. Bryant's case of Cancerous Stricture of the Rectum (*vide Medical Times and Gazette*, January 16, p. 75), was read. The characters of the growth were those of true cancer; the disease was probably not primary in the rectum, but had extended thence from the ovary.

The report of the Morbid Growths Committee on Mr. Wood's two specimens exhibited on March 16 (*vide Medical Times and Gazette*, p. 379), was read. The tumour of the scapula was found to be a spindle-celled sarcoma with certain peculiarities. The tumour from the zygomatic fossa was found to be a myxoma with a certain amount of adipose tissue.

Blood Cyst formed in a Sarcoma.

Mr. Godlee exhibited a specimen of the above. The specimen handed round was a sample of the contents of what is known as a "blood cyst," which had been growing for a year in the outer part of the leg of a man forty-seven years old. A seton had been passed through it once, and free incisions made in it on two other occasions, without effecting a cure. It formed a tumour, three inches in diameter, projecting above the surface, distinctly fluctuating, and having on its surface two or three purple patches which exuded a dark red fluid. The tumour was removed by Mr. Erichsen; it contained a little fluid blood, a considerable amount of what had the naked-eye characters of blood-clot, and some rather firmer material in the walls. It was superficial to the deep fascia. The supposed blood-clot, however, proved to be the tumour itself when examined microscopically; it was a sarcoma with round and spindle cells, the individual fasciculi of which were separated by hæmorrhages which had taken place into the interior.

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Two similar cases reported by Mr. Holmes and Mr. Lawson were referred to, which differed from the present one in an important particular: that, whereas in them the new growth existed only in a thin layer in the cyst wall, and had thus been expanded into a cavity by the hæmorrhage, in this case the microscopical elements were throughout the whole mass separated by the bleeding which had occurred at an indefinite number of points.

Nails in the Crop of a Duck.

Mr. Arnott showed a specimen of this nature for Mr. Curran, of India. Seventeen nails were found in the crop.

Tubercle in Pheasants.

Dr. Edwards Crisp exhibited recent specimens of tubercle in a pheasant. He had examined thirty birds within the last few weeks; the liver was affected in all, the intestines in many, the lungs in one only. The tubercle differed essentially, Dr. Crisp held, from that found after inoculation. Cocks were rarely affected; and the affected hens had had, as a rule, two broods within the year.

The President inquired of Dr. Crisp whether he had ever seen a disease resembling scarlatina in fowls. He had been informed of a fatal disease among fowls, resembling scarlatina.

Dr. Crisp replied in the negative.

Hæmorrhage into the Cord of a Fowl.

Dr. Crisp also showed this specimen, which was taken from the body of the fowl shown by him at a former meeting. The animal did not improve, and was killed. A few small coagula were found in the cervical portion of the cord.

Cancer in the Fowl.

Dr. Crisp showed a third specimen—a malignant tumour from the breast of a fowl; also a cystic tumour from the orbit.

Dry Gangrene of the Lower Extremities.

Dr. Duka exhibited a specimen of dry gangrene of both the lower extremities from a young Hindu married woman, aged fifteen years and a half. She was first seen in the eighth month of her first pregnancy, early in March, 1868, at Simla, in the Himalayan Sanitarium of the Punjaub, when Dr. Duka was in medical charge of it. Mortification appears to have commenced spontaneously in the feet, and ascended symmetrically to within two to three inches of the knee-joint. The line of demarcation being well defined, and the general strength of the patient fair, amputation was at once performed. The parts were in the same mummified condition as they were exhibited. There was hardly any bleeding; the conical stumps soon healed, and the patient gave birth to a fully developed child in the following April, about five weeks after the operation. The infant survived nearly three months, and the mother was still alive and in good health in August last, more than six years after the loss of her limbs. Dr. Fayrer, who saw the patient some months later, mentions, in his work on "Clinical Surgery of India," cases of gangrene caused by malarious poisoning. In Dr. Duka's case plugging of the artery seems to have been the pathological condition, as no pulsation could be discovered below the popliteal space.

The President asked whether the patient had been exposed to cold.

Dr. Duka said that she had not.

Prolapsus Linguæ.

Mr. Fairlie Clarke related the further history of the case of prolapsus linguæ which he had exhibited three years ago. The child had been seen occasionally since the operation; he had grown an active, intelligent boy. The tongue was still thick, but could be kept in the mouth, although the stump habitually presented behind the teeth. Speech was thick and indistinct to all but his friends. The teeth were regular, and approached mutually to within a quarter of an inch. The case was unique in this country of the operation at such an early age.

Mr. Wagstaffe inquired into the nature of the portion removed by operation, and respecting the intelligence of the child. He had seen a case where the tongue was very large, and there certainly was defect of intellect.

Mr. Clarke replied that one inch and a quarter of the tongue had been removed by the écraseur. The microscopical characters had been described in the *Transactions*. There was no intellectual defect.

Tumours in the Sacral Region.

Mr. Francis Mason showed such a specimen, which proved to be a lymphadenoma. It occurred in a child of sixteen months—first as a protrusion from the anus; a large tumour was then felt behind the rectum. Concomitant acute renal catarrh precluded operation. Post-mortem a lymphadenomatous tumour was found lying between the rectum and sacrum. A sister of this child had spina bifida (and was brought forward by Mr. Mason), and the mother had an angular curvature of the lower part of the spine.

Softening of the Cerebellum.

Dr. Edwards Crisp exhibited such a specimen, taken from the body of a woman of twenty, who was found dead in bed. She had complained of severe headache for two years, chiefly over the left ear. The serious nature of her disease would appear not to have been suspected. Post-mortem the left lobe of the cerebellum was reduced to a pulp, and the lateral ventricles were distended. This was the fourth case observed by Dr. Crisp without impairment of motion.

Dr. Hare inquired whether the bone was diseased.

Dr. Crisp replied in the negative. There was no affection of vision.

Dr. Coupland inquired as to otorrhœa.

Dr. Crisp said there had been none. Neither was there any suspicion of syphilis.

"Bony Deposit" in the Lung.

Dr. Crisp also showed a specimen of this nature. There was no tubercle elsewhere. The specimen had not been examined microscopically, and might not be true bone.

Purulent Pericarditis.

Dr. Crisp also exhibited a specimen illustrating this condition, from a young man.

Complicated Dislocation of the Astragalus.

Mr. Mac Cormac showed a specimen, cast, and drawings illustrative of this injury. A bricklayer fell from a scaffold, and is supposed to have been treated for fracture at the ankle; he was cured, and returned to work. Two years later his thigh was amputated by Mr. Mac Cormac for disease of the knee, and in dissection of the limb the seat of the previous injury was examined. The ankle was quite anchylosed, the head of the astragalus was still in contact with the scaphoid, but the rest of it was displaced backwards; the tendo Achillis adhered to its external articulating surface; the internal malleolus had been fractured; the other tendons were much displaced. A case had occurred to Mr. Le Gros Clark in 1863, and the description given of it might apply to this. Mr. Mac Cormac had just found this patient; he now walked about perfectly well; the bone still lay as it did at first. It was a remarkable fact that little harm seemed to come of displaced astragalus—nearly all cases had been successfully treated.

The President asked how much movement there was, in the second case, at the ankle. From considerable experience he concluded that dislocation of the astragalus was rare without fracture—rarer than in Sir Astley Cooper's practice.

Mr. Mac Cormac stated that there was considerable movement in the second case, with rough crepitation in the ankle-joint.

Mr. De Morgan, speaking from memory, described two cases where the astragalus had to be removed by operation; both recovered. He had seen another case a few months ago of dislocation backwards—of the astragalus only; there was probably no fracture of any bone above or below: the displacement was readily reduced.

The President related his experience of several cases.

Colloid Cancer of the Rectum.

Mr. Arnott showed the parts from a case of colloid cancer of the rectum two years after colotomy. A girl of twenty-seven was first seen suffering from hæmorrhage from the anus two years after this symptom, as well as pain and obstruction, had begun. A hard substance was readily felt surrounding the rectum one inch from the anus. Colotomy was at once performed—on February 24, 1872; recovery was fairly satisfactory. In the following November, menstruation returned, and the girl returned to her employment. Next summer the cancer appeared externally, and obstruction was complete. Fifteen months after the operation the disease invaded the vulva, and probably had travelled up the bowel as well. The patient lived for two years after being relieved by colotomy. The prevertebral glands became invaded at last, and a striking appearance was produced by the consequent œdema, which invaded the lower part of the body and the legs, but left the rest free. Post-mortem the whole of the rectum, perineum, part of the vulva, and to within one inch and a half of the

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seat of operation, formed a single mass of colloid cancer. The lymphatic glands along the spine, part of the uterus, and the lymphatics over the ovaries were all involved, but no other organ whatever. The microscopical characters were those of ordinary colloid cancer.

MELANOTIC TUMOUR OF THE EYE.

Mr. GEORGE LAWSON exhibited a specimen of this nature. The disease affected an eye, the sight of which had been lost twelve years before in consequence of injury. It had given no trouble until the present disease began, with pain, swelling, and exophthalmos. When first seen, the tumour perfectly filled the orbit. It was removed by operation. On examination it was found that the growth was a pigmented spindle-celled sarcoma, and that it involved both the ocular and extra-ocular tissues. The patient made a satisfactory recovery.

CONTRACTED AORTA.

Dr. GOODHART showed two specimens of this condition. There was an annular contraction in each at the usual spot—just beyond the subclavian. They occurred in men of twenty-seven and thirty-seven respectively. The symptoms lasted three months, and were chiefly general dropsy and marked albuminuria. There was a systolic bruit at the apex in both, and something resembling a pericardial friction. The collateral circulation had been maintained by large superior intercostals and by the internal mammary and epigastric vessels. There was remarkably little sign of strain on the vessel behind—only a little atheroma in one, and perhaps none in the other,—but in both there was evidence of chronic endocarditis, allowing mitral regurgitation. In both cases there was evidence of the change being inflammatory in its origin.

AORTIC ANEURISM SPONTANEOUSLY CURED.

Dr. GOODHART also exhibited this specimen. A man of forty was ill for nine weeks, with symptoms of paralysis, gangrene of the lower limbs, and loss of power of the bladder and rectum. The lower limbs had suddenly become numb. An aneurism was found post-mortem, connected with the upper part of the abdominal aorta. It had become gradually closed, and the aorta and both mesenteric arteries were blocked.

Mr. MORRANT BAKER, referring to Dr. Goodhart's first case, asked what the state of the pulse was in the arms and legs.

Dr. GOODHART replied that the radial pulse was quick and small in both cases; the femoral doubtful.

HERNIA TESTIS IN AN INFANT.

Mr. MORRANT BAKER related this case. The subject was eighteen months old. The disease followed an abscess which was opened. The organ was removed. The chief interest lay in the early age.

ACUTE TUBERCULOSIS.

Dr. DUCKWORTH showed the organs from a case of acute tuberculosis in an infant eight months old. The disease was general; the bronchial glands were cheesy.

Dr. GREEN said that acute miliary tuberculosis was not very rare in infants; he had met with a case lately in a child of seven months and a half.

OBITUARY.

JOHN CHURCHILL.

LAST week we announced the decease of Mr. Churchill, the eminent medical publisher, from whose house the *Medical Times and Gazette* has been issued during the last five-and-twenty years. We now propose to give a short account of his character and career, in doing which, we are permitted to refer to a most interesting series of autobiographical notes which Mr. Churchill amused himself in drawing up during the last few years, since his retirement from business. These memoirs were not intended for publication generally, but only for the perusal of his family and more intimate friends. It is impossible to read them without a higher sense of the acuteness, good feeling, and probity of their author, than we had formed even during thirty years of considerable intimacy. More especially would we call attention to the valedictory sentence in which the writer says: "I shall through the remainder of my life indulge in feelings of respect and gratitude to that profession, my intimate association with which has strewn my pathway with flowers."(a) His association with many of the more eminent members of our body was, in fact, a source of well-grounded pride and happiness. He likewise believed that some account of his own career would be encouraging to others. "Not that my life," he says, "presents any remarkable incidents, but it does illustrate how a young man with but little patrimony and prestige of family connexion and influence may, by his own industry and aptitude for seizing favourable openings, rise to a position of respectability and influence."

What amount of patrimony in money young Churchill may have inherited, we know not; but most certainly he possessed advantages of person and character which must be born with a man, if he is to have them at all. His father is described as a remarkably gentlemanly, prepossessing man, and from him and his mother he derived that best of patrimonies—good looks, good character, and the advantage of a hearty, if not influential, circle of friends, who put him into the right road for helping himself. He believed that his family was of Dorsetshire extraction—at any rate, his father was born, and his great-grandfather lived, at Wareham in that county. We would remark that the name of Churchill has flourished for more than five centuries amongst the landed gentry of that county, and the successful traders, who were the younger brothers of the gentry. Without going back to the Curicil, "who came over with the Conqueror," we find a William de Churichulle, Vicar of Osmington, 1309; Joshua Churchill, Vicar of Fordington, under the Parliamentary *régime*, ejected 1662, and afterwards a Dissenting preacher at Dorchester; and William Churchill, whose monument in St. Peter's Church, Dorchester, states that he married Elizabeth, daughter of Nicholas Awnsham, of Isleworth, and died 1706, aged seventy-eight. He was father of Awnsham Churchill, who was the greatest bookseller of his age, and after making a fortune at the sign of the Black Swan, in Paternoster-row, where Longmans' house now stands, retired to his native county, purchased estates at Osmington and West Ringsted, which are held by his family to this day, and became a very influential man and M.P. In fact, the name and arms(a) of Churchill are to be found widely scattered over the written and sculptured records of Dorchester, Wareham, Poole, and many other places in Dorsetshire.

Sprung, as we believe, from some branch of this family, James Churchill became a Dissenting minister at Ongar, in Essex, and married the daughter of Mr. George Morss, an official of the dockyards, Portsmouth, whose third son, John Spriggs Morss Churchill (more generally known as plain John Churchill), was born at Ongar on August 4, 1801. In 1807 the family removed to Henley, where John Churchill passed a happy boyhood, save in one most unfortunate particular. He was a scholar of the Grammar School of Henley, then under the rule of the Rev. Dr. Scobell as headmaster, and of one Mr. Lamb as usher. The instruction seems to have been scanty, the punishments frequent and heavy. Great was the delight of the boys when Dr. Scobell was laid up with the gout, although his hand was apt to be uncommonly heavy on his recovery. Lamb, who was called "Wolf" by the boys, had the privilege of smiting the scholars' hands with a ferule—a barbarous punishment, not yet, we believe, abolished. Scobell alone was empowered to use the birch, and on his recovery from each fit of the gout, seems to have wiped off old scores with great satisfaction—to himself. It is very evident that the young John Churchill hated the school more than he loved the Latin, which was the staple subject of instruction.

In 1816 he was brought to London to be apprenticed to Dr. Gilham, who enjoyed a considerable practice in the Blackfriars-road. But Gilham wished, before receiving his new apprentice, to get rid of an assistant whose example he thought might be pernicious, and so John Churchill went to pass a fortnight at the house of Mr. Cox, the medical bookseller of St. Thomas's-street, who, like Gilham, was a friend of his father's. Here quite a new turn was given to his future destination. Before the fortnight's visit was over, Mrs. Cox asked him if he would like to be a bookseller, and a bookseller he chose to be, and so was bound apprentice for seven years to Mr. Cox.

This was the first step in the ladder of practical life, and was a very fortunate one. In Mr. Cox's business Churchill began that acquaintance and familiarity with the first members of the medical profession, which he was fortunate enough

(a) It will be understood that any passage in the following columns marked by inverted commas, or followed by the letters *MS.*, are taken *verbatim*, or with slight abridgments, from Mr. Churchill's manuscript.

(a) "Sable, a lion rampant argent debruised with a bendlet gules."

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to retain to the last. Travers, Green, Cline, Babington, Haighton, Bransby Cooper, Callaway, Tyrrell, South, Coulson, Blundell, Addison, and Ashwell, some in the zenith of their fame, some yet pupils, frequented the shop, and the young apprentice became known to most of them. But amongst the eminent medical men who then constituted the glory of Guy's and St. Thomas's, it was Sir Astley Cooper, "the idol of the Borough School," who appeared to him as the true King of Men. His handsome form and splendid reputation were only exceeded by the inborn generosity of his soul. Mr. Cox's father, who from being an engraver had risen to be a bookseller, had published Sir Astley's famous work on "Hernia," and on his death Sir Astley took one of his five sons as an apprentice without a fee, which was equivalent to a money gift of 500 guineas. Mr. William Cox, the son selected for this distinction, who was a young man of great promise, died at an early age. Sir Astley had brought out most of his surgical works before Mr. Churchill's publishing career began, but Mr. Churchill records with a feeling of great satisfaction how, soon after he had entered on business in Prince's-street, Sir Astley called on him, gave him a hearty shake of the hand, and said, "Churchill, you shall be my publisher." So he brought out the work on the "Testis." Ten years later he suggested to Mr. Bransby Cooper the issue of a new edition of Sir Astley's popular work on "Fractures and Dislocations," to be in octavo, with wood engravings by Bagg, instead of the original ponderous quarto. This was published in 1842, and was entirely successful.

We must return to John Churchill's apprenticeship at Cox's, in the Borough. The seven years soon passed away—he received a certificate of faithful service from his master, and became a freeman of the Stationers' Company. He next for some years was employed in the house of Longman and Co., where he became acquainted with the leading members of the wholesale publishing trade.

Aided by the fortune of his wife, whom he married in 1832, he made a good start in business on his own account, purchasing in the same year the old-established business of Callow and Wilson, of Prince's-street, Leicester-square. He gives an interesting picture of medical bookselling in the days of our fathers. "Medical publishing, as an exclusive branch of business, has existed only during the last fifty or sixty years. Before that, the great works of the last century, of the Hunters, Pott, Baillie, etc., were brought out by Longman, Cadell, Nicholl, and other general publishers. Editions seldom consisted of more than from 500 to 750 copies, and a work that commanded a sale of 300 or 400 annually was deemed eminently successful. Moreover, during many years most standard works, both general and medical, were issued by a combination of publishing houses; thus Thomas's 'Practice of Physic,' Hooper's 'Medical Dictionary,' and Cooper's 'Surgical Dictionary' (the last edition of which is dated 1872), were issued at the charge of twenty proprietors; a sort of publishing with limited liability" (*MS.*). As capital and enterprise increased, and as the sale of books increased with the greater intelligence and greater number of readers, individuals were more ready to publish on their own responsibility. The Apothecaries Act of 1815 gave a great stimulus to medical literature.

As the London hospitals became more and more frequented by pupils, who came first to "walk the hospitals," and next to hear the courses of lectures which were established, so shops arose contiguous to each, to meet the demand for books. "John Callow in Crown-court was midway between St. George's, the Middlesex, and the Westminster Hospitals; Cox and Son adjoined Guy's and St. Thomas's; and Anderson, St. Bartholomew's" (*MS.*). Renshaw afterwards established himself near King's College. Another characteristic feature was, that the bookseller's shop became the daily resort of medical men, who met in friendly intercourse. The daily papers and periodicals were there for their use. Gerrard-street, Soho, was said by an old inhabitant to be half-filled of an afternoon with carriages in waiting at Callow's, who had removed from Crown-court to the corner of Prince's-street and Gerrard-street. Mr. Churchill's "recollections picture Astley Cooper, Henry Cline, Drs. Haighton, Mason-Good, Babington, Cholmley, and others meeting at Cox's. This habit gradually passed away as the library and reading-room became part of the hospital, and as the commodious apartments and extensive libraries of the College of Surgeons and of the Medical and Chirurgical Society offered greater attractions. The modern club-houses also have their influence" (*MS.*).

The business of Callow and Wilson, when Mr. Churchill bought it, was chiefly a retail business of first-class; the customers' names were amongst the most honoured in the profession, and some of them had been on the ledger for nearly fifty years. A lending medical library formed part of the concern, and there was a second-hand and old book department. The new incumbent set himself energetically to work, and devoted to the last department, to use his own words, "a loving and earnest attention." He attended book sales, and the sales of the libraries of deceased medical men, took care to secure choice and scarce books, and issued an annual catalogue. Even in the old coaching days, he never hesitated to go to Manchester, Nottingham, or elsewhere, to attend the sale of some well-known library. He "gradually possessed a choice collection of black-letter, of Aldine, and other scarce books; he attended sales of serial and periodical literature; seldom passed a bookstall without inspection, and thus frequently picked up a volume worth twenty times its cost." He could offer a century of periodical literature, also the first printed book on Surgery, and the first on Midwifery. "I could generally supply the inquirer," he says, "though I always parted with unique copies as we take leave of a dear old friend. The Sydenham Society, by reprinting the old classics, has much curtailed this branch of business" (*MS.*).

Under this vigorous system the business increased, but not satisfactorily. The practice of "underselling" was beginning to undermine the prosperity of the medical bookseller. Up to about 1820, the stated price of a book was asked and cheerfully paid without deduction; but now "active competition set in. The cheap bookseller began to keep and mark the best selling works at reduced prices, and many houses long associated with medical literature succumbed to the pressure of the times" (*MS.*). These circumstances induced Churchill to turn his thoughts to publishing; and to prove how small a share mere "luck" had in his success, we may show, in his own words, how carefully he explored the ground he was about to venture on. "I studied," he says, "the wants of the profession, attended the medical societies, informed myself of the contents of the periodicals, proposed works to authors whose names were identified with the subject, improved the getting-up of the volumes, and, by printing larger editions, fixed a price below the average of previous years."

One of his earliest characteristic publications was Liston's "Practical Surgery." The author, some time after his arrival in London in 1835, as Surgeon to the North London Hospital, began to frequent Churchill's shop, and showed great interest in scarce surgical works. He and Churchill soon became acquainted, and at once Churchill proposed to him a work on operative surgery. The offer was declined at first, but, in a week or two, accepted; the result was the handsome demy octavo volume, with its exquisite delineations by W. Bagg, published, with Renshaw as joint publisher, in 1837, of which repeated editions have been demanded. This friendly intercourse and genial familiarity, which thus began with Mr. Liston, continued unabated till the untimely death of the latter in 1847. The day after Liston's funeral, Sir William (then Mr.) Fergusson called in Prince's-street; the well-known Manual on Surgery and a lifelong friendship were the results.

The well-known series of manuals was a subject of great satisfaction to Churchill, not merely for their commercial success, which was great, but from their being the fruits of his shrewdness in seeing an opening, and his skill in taking advantage of it. Whatever other books medical men may indulge in, they must, when students, have text books and class books. He therefore determined to bring out a series of such books by competent authors, handsome, well illustrated, and cheap. The first of the series was Erasmus Wilson's "Anatomist's Vade Mecum." When Liston was preparing his above-mentioned work on operative surgery, he said, "I must have assistance to select the subjects for the engraver, and to direct the artist," and pointed to "his most promising pupil and correct anatomist, Erasmus Wilson." No sooner was Mr. Liston's book out of hand than Wilson and Bagg were invited to take coffee, and hear proposals for the "Anatomist's Vade Mecum." The repute of the book, which appeared in 1840, need not be mentioned.

"A publisher," says Mr. Churchill, "must either sink or swim, according to the judgment exercised in the selection of the MSS. offered to him. Paper and print form the rock on which many publishers have sunk. I have often been asked to whom I referred the MSS.? I always relied on my own judgment. From constantly watching the progress of

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medical literature, acquainting myself with the contents of the periodicals, and attending the medical societies, the rising status of promising men became known to me, and when I saw a void in any department of medical science, I sought to supply that want through an adapted author. I will give a few illustrations. Attending a meeting of the Westminster Medical Society, Dr. A. T. Thomson read a paper on materia medica. In the debate which followed, a young man showed so much acumen and knowledge of the subject as to make an evident impression on the meeting. Having but recently joined the Society, he was personally known to but few. I decided at once to propose a work to him. It was Dr. Golding Bird, and a connexion was thus formed" (*MS.*), of which the "Manual of Natural Philosophy," and the work on "Urinary Deposits," were successful results. Dr. Bird died at the early age of thirty-nine, to the great regret of his publisher, and of all others who knew him.

Reverting for a moment to the subject of a publisher's judgment of MSS., we may add that, though Mr. Churchill was not, and did not think himself, infallible, yet he had but few failures to lament. He could not bring to mind the names of more than three authors whose works he had declined, and whose subsequent success made him regret his decision, whilst in many cases, works rejected by him were brought out by others to their grievous loss. He had many anecdotes of the preposterous expectations of authors—how, for instance, a respectable practitioner of no literary or scientific position would insist on strict legal documents, securing to himself and family all future profits from a little book which he was going to bring out, and which never paid its expenses; and how orators have dreamed that their oration, when published as a pamphlet, shall sell by the thousand. Of the numerous pamphlets he published, only one paid its expenses, and that was Mr. Lawrence's Hunterian Oration in 1834.

As one instance of success beyond expectation, Mr. Churchill mentions Dr. A. T. Thomson's "Conspectus of the Pharmacopœia," which enjoyed the largest sale of any book of its class during his earlier bookselling career. The author sold the copyright to Underwood, of Fleet-street, for £20, and after passing through five editions the copyright was bought by Longman and Co. for £600.

Just as he selected Golding Bird as the likely author of a work on natural philosophy, so from hearing Mr. Fownes lecture, when quite a young man, at the Western Literary Institution, he was led to propose to him to write a manual of chemistry, which, since the author's early death in 1849, has been edited in successive issues by Hofmann, Bence Jones, and Watts. It may be said of Golding Bird, Fownes, and Bence Jones alike that they were engaged in correcting proofs up to the hour of their deaths.

In 1838, Mr. Churchill became the publisher of the *British and Foreign Medical Review*, which gave an immense impulse to his business and to his increasing acquaintance with the most promising men of the day. It happened thus:—On the death of Sherwood, the publisher, in 1837, the affairs of that firm fell into confusion, and Dr. Forbes, who then lived at Chichester, was obliged to look out for another publisher for the *Review*. Proposals were made simultaneously to three houses, of which Churchill's was one, with a request for an immediate answer. Churchill, instead of writing by post, booked a place in the Chichester coach, and went off at once to that town to have a personal conference with Forbes, and returned next day the publisher of the *British and Foreign Medical Review*. His connexion with Forbes, thus summarily begun, was a most happy one, and he speaks in his memoirs with enthusiasm of Sir John Forbes's character, and of the pleasure and benefit he derived from associating with him. Amongst the long list of Churchill's clients and friends (we speak here of those who are no more), three names strike one particularly—of three men of high character, banded together by early companionship and similarity of studies—Sir James Clark, the model of a genial, courteous, high-principled gentleman; Forbes, seemingly more robust and brusque; and Conolly, whose special mission for the alleviation of the sufferings of the insane was energetically promoted by all three alike. To have enjoyed the friendship of such men is a true distinction. Conolly, although most refined and scholarlike in manner, was a man of genial instincts, and greatly desired to establish a friendly medical club, who were to dine together at Brighton four times a year. This proposition came to nothing, for, in truth, tavern conviviality may well be a thing of the past, now that private dinners are, if anything, too numerous and elaborate. It was through Forbes that Churchill became acquainted with Dr. Carpenter, and the publisher of his works on Physiology and on the Microscope. We know in what estimation this most able and prolific writer was held by his publisher, but in a notice of this kind it is the dead we celebrate, and not the living. For the same reason we must pass over the names of Parkes and Spencer Wells, to whom he was also introduced by Forbes, with a well-merited prophecy of the future career of each of them. Alas! even amongst the authors whose works issued from Churchill's house, the dead almost surmount the living in number. We speak not of Prout, whose last grand work on Stomach, etc., Diseases was published in 1842; nor of Sir Astley, who died full of years and honours; nor of poor Bransby Cooper, whose most tragical history shows how a man may be overwhelmed with unforeseen misfortunes; nor of the philanthropic Newnham, Wardrop, Warren, the American surgeon who wrote on the Mastodon, and whose book on Tumours was published by Churchill; Crosse of Norwich; Sir Ranald Martin; the venerable Martin of Reigate; T. Wakley of the *Lancet*, whom Churchill knew whilst serving in Mr. Cox's shop in the Borough; and Forbes Winslow the psychologist; but we may lament such men as Dalrymple, Fownes, Golding Bird, and Bence Jones, removed in the plenitude of their usefulness, or ere they had attained the full development of their powers.

Amongst various points in his publishing career we may notice his early appreciation of the truth that it is better to realise a profit from a large number at low prices, than from the sale of a limited number at high prices. Thus he astonished his brother bibliopoles by the extremely low price at which he more particularly brought out expensively illustrated works, such as "Medical Botany," edited by Dr. Stephenson and by his brother, Dr. James Morss Churchill; Dalrymple's "Morbid Anatomy of the Eye"; Maclise's "Surgical Anatomy"; the "Medical Anatomy" of Dr. Sibson, whose talents and future career he had noted in 1843 at Nottingham. He records his advice to Crosse, who gained the Jacksonian Prize in 1834 for his essay on Calculus. To do honour to the college which awarded the prize, Crosse wanted to bring it out in folio. "I told him that the day of folios and quartos had passed, and urged him to make it a handsome octavo volume, particularly as the drawings could be well and accurately represented in that size" (*MS.*). Crosse, however, insisted on its being at least in quarto, and so the sale, though considerable, is believed by Churchill not to be one-half of what it might have been.

Amongst incidents in his publishing life we may call to mind that in 1844 he brought out the anonymous "Vestiges of the Natural History of Creation," which excited a perfect *furore* amongst a large class of society. During the years 1842 to '47 he was publisher of the *Lancet*, with the editor of which he was on friendly terms, with slight exception, from the Borough days down to Mr. Wakley's death in 1861. In 1850 he began to publish the *Medical Times*, with which the *Medical Gazette* was amalgamated by special arrangement with Messrs. Longman in 1852.

But it would be impossible here to give a full account either of his business transactions, or of all the friendships they led to. We have been successful if we have shown how, with his rich patrimony of health, activity, and intelligence, spite of an imperfect education, he fought his way upwards. In 1852 he built a large house at Wimbledon; in 1861 he was made a county magistrate, and was well received everywhere; but his relations with the medical profession were the chief source of his pride and pleasure. In early life he attended medical societies; he was also a frequent and welcome visitor at the annual meetings of the British Medical Association, where, as in well-known instances at Bath and Nottingham, he was able to pounce upon likely men, and enrol them amongst his authors. He seemed to think that he belonged to the medical profession; and one friend, with a smile, said that to hear him talk of "my authors," one would think that the medical profession belonged to him.

In 1854 he took a step which showed that prosperity had increased to the degree of opulence. He removed from Prince's-street to New Burlington-street, sold off his miscellaneous stock, gave up the retail trade, and confined his attention solely to publishing. Eight years afterwards, when his family was decreased by the happy marriage of his children, he gave up the large house he had built at Wimbledon, and finally settled at Pembridge-square, Bayswater. But dark days were at hand.

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For some years he had been subject to occasional attacks of gouty dyspepsia. In 1868 this was followed by dyspnœa, anasarca, and other signs of cardiac disease. He had repeated attacks of anasarca, with cardiac distress, and enlargement of the liver; but, thanks to a vigorous constitution, with the aid of mercurials, from which he derived marked benefit, besides diuretics and occasional acupuncture, he struggled successfully with his symptoms, and enjoyed intervals of considerable comfort. Three or four months ago he suffered from acute hepatitis, during which the liver became enormously enlarged, and, as the physicians, including his son and his son-in-law think, inflammatory adhesions were set up between it and the stomach or the intestines. Nevertheless, the pain subsided under treatment, and the patient, feeling in much better health, repaired to Tunbridge Wells in July. Here he was going on well, and recovering strength rapidly, when on Thursday, July 29, being for years infirm with impaired resiliency of joints, he jumped from the carriage-step to the ground, instead of allowing himself to be helped out as usual. Uneasiness in the region of the liver and vomiting of bile-stained fluid supervened, and continued unceasingly for four days, although there was a marked absence of pain and tympanites. He gradually sank from exhaustion, and died on August 3. His remains were deposited in the Brompton Cemetery.

He left issue three sons and three daughters. His two elder sons—John and Augustus—having been their father's pupils and associates since the year 1855, succeeded to the business upon his retirement at the close of 1870; the third (Frederick) is a Fellow of the Royal College of Surgeons of England, and practises in London. Of his daughters, the eldest is married to Dr. Clapton, of St. Thomas's Hospital; the second, to Captain Pepper, of the 31st Regiment; and the third, to Colonel Robertson, C.B., of Callander, Perthshire.

We may add that Mr. Churchill was one of the founders of the Star Life Assurance Company in 1843; was a member of the Board, and for many years Deputy Chairman.

R. D.

MEDICAL NEWS.

UNIVERSITY OF ABERDEEN.—During the past year the following candidates, after the usual examinations, received degrees in Medicine and Surgery:—

THE DEGREE OF M.D.

Thomason, William James, M.R.C.S., L.S.A., and L.M., Royal Navy; Wilson, James, M.R.C.S., L.S.A., late Surgeon, Royal Navy.

At the same time the following gentlemen received promotion to the degree of M.D.:—

Adams, James, M.B., Ashburton, Devon; Dempsey, Meldon Joseph, M.B., London; Downes, Arthur Henry, M.B., C.M., St. Leonard's-on-Sea; Duguid, William Robert, M.B., C.M., Buckie, by Fochabers; Farquhar, James, M.B., C.M., Pudsey, near Leeds; Field, Albert Frederick, M.B., C.M., Saffron Walden, Essex; Gibbes, Cuthbert Chapman, M.B., C.M., South Devon and East Cornwall Hospital, Plymouth; Gosse, Charles, M.B., C.M., Adelaide, South Australia; Greenway, James R., M.B., C.M., London; King, Alfred, M.B., Balham, Surrey; Leftwich, Ralph Winnington, M.B., C.M., London; Lill, William Frederick, M.B., Lincoln County Hospital; Lloyd, Edward James, M.B., C.M., the Infirmary, Denbigh; Lowson, David, M.B., C.M., Huddersfield; McCalman, Robert Gilmour, M.B., C.M., Lairg, Sutherland; Mackenzie, Stephen, M.B., C.M., the London Hospital; Nicholls, Henry A. A., M.B., C.M., Dominica, West Indies; Nicolson, David, M.B., C.M., H.M. Prison, Portsmouth; Ogston, Francis, M.B., C.M., Aberdeen; Orchard, James S., M.B., C.M., Salford Hospital, Manchester; Orchard, Thomas N., M.B., C.M., Pendleton, Manchester; Reid, James, M.B., C.M., Ellon; Reid, Robert William, M.B., C.M., St. Thomas's Hospital, London; Rennie, Thomas, M.B., C.M., Takow, Formosa, China; Robbins, Henry John, M.B., C.M., Aldeburgh, Suffolk; Sinclair, William Japp, M.B., C.M., Clinical Hospital, Manchester; Smith, James Broom, M.B., C.M., Loftus-in-Cleveland; Tytler, Peter, M.B., C.M., Manchester; Venn, Albert John, M.B., C.M., London; Walker, Alexander, M.B., C.M., Manchester; Welford, George E., M.B., C.M., Sunderland.

THE DEGREE OF M.B.

Anderson, Alexander, Banchory; Anderson, James, Skene; Anderson, John, Brechin; Austin, John Alfred, Ceylon; Bailey, Samuel Henry, Nottingham; Baird, Alexander, Wigtonshire; Bannerman, William, M.A., Banff; Barnes, Robert Sydenham Fancourt, London; Barron, John, M.A., Aberdeen; Blackhall, Adam, Fraserburgh; Buckland, Alfred George, Auckland, New Zealand; Carey, John Thomas, Frogmore, Guernsey; Carline, William Arthur, Lincoln; Connon, Charles James, Yorkshire; Cran, George, Tarland, Aberdeenshire; Dalal, Kharshedji Ardeshir, Bombay; Doyle, Charles William, Nynee, Tal, India; Duncan, James, Aberdeen; Edgelow, William Ford, Teignmouth; Elliott, Frederick Hawes, Andover, Hants; Edmond, George Maitland, M.A., Aberdeen; Garvin, Thomas Forrest, Colombo, Ceylon; Hardwick, Fredk. Septimus, Sullington, Sussex; Harris, John, Newcastle, New South Wales; Hicks, Edward John William, London; Hutchings, Arthur Carey, Alderbury, Salisbury; Innes, John Fraser, Hampstead; Jack, William, Latheron, Caithness; Laws, Robert, M.A., Aberdeen; McAldowie, Alex. Morison, Aberdeen; McDougall, Robert Horsburgh, Farr, Sutherland; Mackay, John, Thurso; M'Ritchie, Donald, Inverness; Mason, John Wright, Marston, Grantham; Mearns, John Herbert, Sheffield; Moir, John Hay, Woodside; Morrish, William, London; Murison, John Falconer, Brucklay; Napier, Alex. Disney Leith, Montrose; Pearson, John Cale, Aberdeen; Polgnand, Malcolm, Monmouth; Reid, George, Aberdeen; Ross, James, M.A., Balintore, Ross-shire; Saunders, Frederick Herbert, London; Shand, Henry Miller, Aberdeen; Skene, Thomas Alex., Aberdeen; Smith, George Henry, Bedford; Smith, Robert, M.A., Kincardine O'Neil; Thomson, John, Lybster, Caithness; Tuckey, Charles Lloyd, Canterbury; Vice, William Armston, Leicestershire; Walker, George Abraham, Yorkshire; Wallis, John Michael A.; Wardrop, Douglas, Aberdeen; Westland, Albert, M.A., Aberdeen; Wharry, Robert, Old Charlton; White, Edward Arthur, Norwich; Wilson, Robert Morrison, M.A., Old Deer; Wright, Frederick Wade, Wakefield, Yorkshire.

THE DEGREE OF C.M.

Anderson, Alexander; Anderson, James; Anderson, John; Austin, John Alfred; Bailey, Samuel Henry; Baird, Alexander; Bannerman, William; Barnes, Robert S. F.; Barron, John; Blackhall, Adam; Buckland, Alfred G.; Carline, William A.; Connon, Charles James; Cran, George; Dalal, Kharshedji A.; Doyle, Charles William; Duncan, James; Edgelow, William F.; Elliott, Frederick Hawes; Edmond, George Maitland; Garvin, Thomas Forrest; Hardwick, Frederick S.; Harris, John; Hicks, Edward John W.; Hutchings, Arthur Carey; Innes, John Fraser; Jack, William; Laws, Robert; McAldowie, Alex. Morison; McDougall, Robert Horsburgh; M'Ritchie, Donald; Mason, John Wright; Mearns, John Herbert; Moir, John Hay; Morrish, William; Murison, John F.; Napier, Alex. Disney L.; Pearson, John Cale; Reid, George; Ross, James; Saunders, Frederick H.; Shand, Henry M.; Skene, Thomas Alex.; Smith, George Henry; Smith, Robert; Thomason, William James; Thomson, John; Tuckey, Charles Lloyd; Vice, Wm. Armston; Walker, George A.; Wardrop, Douglas; Westland, Albert; Wharry, Robert; White, Edward Arthur; Wilson, James; Wilson, Robert M.; Wright, Frederick Wade.

Of the above-mentioned candidates, Alexander Anderson, George Maitland Edmond, John Harris, Alexander Morison McAldowie, Robert Horsburgh McDougall, and Albert Westland, received their degrees in Medicine and Surgery, with highest academical honours; and William Bannerman, Charles William Doyle, William Jack, Robert Smith, and Robert Wharry, their degrees in Medicine and Surgery, with honourable distinction.

On this (the first) occasion, the John Murray Medal and Scholarship were awarded to Albert Westland, as the most distinguished graduate of his year.

At the same time, George Robert MacGregor was certified as having passed all the examinations, but did not graduate.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 5:—

Dudgeon, John Matthew, Dalbeattice, Kirkcudbrightshire.
Edwardes, Edward Joshua, Llansantffraid, Montgomeryshire.
Highton, Thomas, St. Thomas's Hospital.

The following gentlemen also on the same day passed their primary professional examination:—

Allen, M. H. L., St. Mary's Hospital.
Goode, Charles F., St. Mary's Hospital.
Bowen, Owen, Guy's Hospital.
Jaquet, J. L., Westminster Hospital.
Moorehouse, Edward D., Owen's College, Manchester.
Harper, Robert R., St. Thomas's Hospital.
Bennett, Arthur, London Hospital.
Johnstone, William, University College.
Joseph, S. W. L., St. Thomas's Hospital.
Cree, Percy K., Middlesex Hospital.
Walker, William, Middlesex Hospital.
Stephens, Charles, Liverpool Hospital.
Gillam, Thomas H., St. Bartholomew's Hospital.
Hallsworth, F. A., St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CANTON, ARTHUR F., L.D.S.—Assistant Dental Surgeon to the National Dental Hospital.

CLARK, LANE, L.D.S.—Assistant Dental Surgeon to the National Dental Hospital.

COLES, OAKLEY, L.D.S.—Dental Surgeon to the National Dental Hospital, *vice* Mr. Joseph Steele, resigned.

STOCKEN, JAMES, L.D.S.—Assistant Dental Surgeon to the National Dental Hospital, *vice* Mr. G. Gingell, resigned.

WHITE, CHARLES E., L.D.S.—Assistant Dental Surgeon to the National Dental Hospital.

WYNDHAM, COTTLE, B.A. Oxon., F.R.C.S. Eng., L.R.C.P.L.—Assistant-Surgeon to the Hospital for Diseases of the Skin, *vice* Waren Tay, appointed Surgeon to the Hospital for Diseases of the Skin.

BIRTHS.

CARVER.—On July 31, at 85, Corpus-buildings, Cambridge, the wife of Edmund Carver, M.A., F.R.C.S., of a daughter.

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RADFORD.—On August 5, at Ben Rhydding, Yorkshire, the wife of George Radford, Esq., of Liverpool, and eldest daughter of the late William Macleod, M.D., of Ben Rhydding, of a daughter.

ROCHE.—On July 30, at Springfield, Boswells, Chelmsford, the wife of F. E. Roche, B.A., M.D., Surgeon West Essex Militia, of a daughter.

MARRIAGES.

BURDETT—SHUTE.—On August 5, at the parish church, Greenwich, Henry Charles Burdett, Esq., to Ellen, second daughter of Gay Shute, F.R.C.S.E., Greenwich.

CORDNER—TUSON.—On July 1, at Meerut, Lieutenant-Colonel J. E. Cordner, Royal Artillery, to Editha Plantagenet, eldest daughter of E. B. Tuson, Esq., Deputy Surgeon-General, British Forces.

FERGUSON—PEASE.—On July 29, at Brighton, Fred Ferguson, M.D., 1 15th Regiment, to Kate, youngest daughter of the late Clifford Pease, Esq., of Kingston-upon-Hull.

HALL—BROOMHALL.—On August 5, at St. John's Church, Penge, Edgar Atheling Hall, M.B., C.M. Edin., of Surbiton, to Adeliza Henrietta (Tattie), elder daughter of John Broomhall, Esq., J.P., of the Manor House, Penge.

LIDDELL—IRVING.—On August 7, at Crosthwaite Church, Keswick, Gerald Henry Liddell to Mary Dare, eldest daughter of the late R. F. Irving, M.D., Keswick.

LOUGHBOROUGH—WILLIAMS.—On August 7, at St. Mark's, Marylebone-road, Arthur Loughborough, Esq., barrister-at-law, of Lincoln's-inn, to Elizabeth Ann Wynn Williams, eldest daughter of Arthur Wynn Williams, M.D., of 1, Montagu-square, Hyde-park.

MEADEN—MYERS.—On August 4, at St. Mary's, Kilburn, the Rev. R. Alban Meaden, M.A., to Annie Harriet London, youngest daughter of the late H. Myers, M.R.C.S.

REED—PERKINS.—On August 5, at St. John's Church, Taunton, Walter Hugo Reed, M.R.C.S., of Churchinford, Devon, to Alice Catherine, only daughter of Thomas L. Perkins, Esq., of St. Mary's-terrace, Taunton.

SHARWOOD—PITMAN.—On August 3, at St. Peter's, Plymouth, Edward Julian Sharwood, M.D., Royal Marine Light Infantry, to Henrietta Eliza, only daughter of the late Thomas Pitman, Esq.

SIMMS—FULLER.—On August 5, at St. Thomas's, Portman-square, Francis Manley Simms, F.R.C.S., to Alice Belgrave, second daughter of the late Henry William Fuller, M.D., Senior Physician to St. George's Hospital.

WEIR—UPJOHN.—On July 31, at St. Jude's, Mildmay-park, Harrison Weir to Alice Mary, youngest daughter of the late Francis R. S. Upjohn, M.R.C.S.E.

DEATHS.

KERR, ARTHUR DAVID, M.B., C.M., eldest son of David Kerr, M.D., of Aberdeen, accidentally drowned at Millport on August 5.

MOTT, REBECCA ANN, relict of the late J. H. R. Mott, M.D., on August 5, at Bexley Heath, Kent, aged 73.

NORRIS, JOSEPHINE ANNE, wife of C. C. R. Norris, M.A.; and second daughter of J. J. A. Brown, M.D., of Grantham House, Grantham, on July 28, at Trumpington, near Cambridge, aged 30.

SAVORY, HELEN BESSIE, daughter of Charles Savory, M.D., on August 9, at 1, Douglas-road, Canonbury, aged 13 months.

THORNTON, EMILY MARY, the beloved wife of Philip Thornton, M.R.C.S., and daughter of T. P. Baker, Esq., C.B., R.N., on August 4, at Greenwich, aged 26.

VERNON SMITH, G. A. C., M.R.C.S. Eng., youngest son of the late W. H. Smith, D.C.L., barrister-at-law, on June 28, at Colombo, Ceylon, from the effects of a fall from his horse, aged 25, deeply regretted.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOURNEMOUTH GENERAL DISPENSARY.—Resident Medical Officer and Secretary. Applications, with testimonials, to the President, on or before August 31.

BURY UNION.—Medical Officer for the Radcliffe District.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Board of Guardians, Christchurch, before August 16.

CROYDON GENERAL HOSPITAL.—House-Surgeon. Candidates must possess both a medical and surgical qualification. Applications, with testimonials, to the Secretary, on or before August 18.

DAVENTRY UNION.—Medical Officer for the Workhouse and the First District.

DUDLEY DISPENSARY.—Resident Medical Officer at Michaelmas.

HAY UNION.—Medical Officer for the Herefordshire District.

KEYNSHAM UNION.—Medical Officer for the Keynsham District.

LEEK UNION.—Medical Officer for the Norton District.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

ORMSKIRK UNION.—Medical Officer for the Second District.

ROYAL SEA-BATHING INFIRMARY, MARGATE.—Resident Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before August 14.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Must be duly qualified. Applications, with testimonials, to William Beer, Assistant-Secretary, on or before September 5.

ROYSTON UNION.—Medical Officer for No. 5 District. Applications on or before September 6.

UCKFIELD UNION.—Medical Officer for the Maresfield District.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Second Assistant Medical Officer. Candidates must possess both a medical and a surgical degree, and be unmarried. Applications, with testimonials, to Dr. Parsey, at the Asylum, Hatton, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Atcham Union.—The St. Chad's District is vacant; area 19,234; population 14,634; salary £122 per annum.

Eastry Union.—Mr. J. F. Williams has resigned the Eythorne District; area 8333; population 2167; salary £30 per annum.

APPOINTMENTS.

Chertsey Union.—John Francis Stafford, L.R.C.S. Edin., L.R.C.P. Edin., to the Fourth District.

Hollingbourne Union.—John N. Bredin, L.R.C.S. Ire., L.S.A. Lond., to the Sutton Valence District.

Newport (Mon.) Union.—Wm. H. Davies, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., to the Mynyddyslwyn.

Newport Pagnell Union.—Henry C. Rogers, M.R.C.S. Eng., L.S.A., to the Tenth District.

Richmond (Surrey) Union.—Frederick S. Palmer, M.R.C.S. Eng., L.S.A., to the Mortlake District.

St. Ives Union.—James Deane, M.D. Glasg., M.R.C.S., L.S.A., to the Warboys District.

Swansea Union.—David Griffiths, B.M. & M.C. Edin., to the Llandilotalybont District.

Wellingborough Union.—Joseph B. Wright, M.R.C.S. Eng., M.D. Edin., to the Finedon District.

Wolstanton and Burslem Union.—James M. Taylor, M.R.C.S. Eng., L.R.C.P., L.S.A., to the South-West District.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council held on the 9th inst., Mr. Joe Poppleton, L.S.A., Bradford, Yorkshire, was admitted a Fellow of the College, his diploma of Membership bearing date October 5, 1838.

SCHOOL OF MEDICINE, EDINBURGH.—Mr. Andrew Wilson, author of the "Elements of Zoology" and "Student's Guide to Zoology," has been appointed Lecturer on Natural History in the Extramural School of Medicine of Edinburgh.

MR. W. A. SUMNER, Public Vaccinator for St. Marylebone, has been awarded £149 18s. (second time) by the Local Government Board for the efficient manner in which vaccination is carried on at his stations.

ESERINE IN CHOREA.—In a paper read at the Société de Thérapeutique, Dr. Cadet de Gaussicourt stated that the subcutaneous injection of chloral, which he had employed in treating four cases of chorea, so far from being attended with the success attributed to this remedy by Prof. Bouchut, proved in his hands quite inefficacious.—*Journal de Thérapeutique*, July 25.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Coxlodge, Newcastle-upon-Tyne.—If Mr. Wickham will refer to our number of July 24, page 101, he will find a report of the meeting of the Royal College of Physicians, at which the resolution about which he writes was passed, and will see that we have there expressed the hope that the other examining bodies will also grant the petition of the Lecturers on Psychological Medicine.

A Correspondent asks for intelligence as to "openings for the practice of members of our profession in Russia, and the probable amount of success to be expected." Perhaps some of our readers can kindly help to supply the desired information.

Zeno.— "Will be both noisome and infectious."—*Cymbeline.*

Clarence M.—Yes. Dr. Johnson says, "I have often thought that there has rarely passed a life of which a judicious and faithful narrative might not be useful."

K. M. H., Bristol.—

"Good unexpected—evil unforeseen,
Appear by turns, as fortune shifts the scene;
Some rais'd aloft come tumbling down amain,
Then fall so hard, they bound and rise again."

Maurice E.—When a youth, Sir Edward Wilmot, the physician, was so far gone in consumption, that Dr. Radcliffe, whom he consulted, gave his friends no hopes of his recovery, yet he lived to the age of ninety-three, and Dr. Heberden notes—"This has been the case with some others who had many symptoms of consumption in youth."

Executor.—Full information can be obtained from Mr. Robert Freeman, the Secretary, at the office, 37, Soho-square, W.

E. E., Liverpool.—Dr. Letheby's return to the Society of Medical Officers of Health, of the metropolitan waters for July last, states that, according to the returns of the water companies, the number of houses supplied was 518,127, and the quantity was at the rate of 36·9 gallons per head of the population daily.

Enquirer.—The Department of Botany in the British Museum has recently received many additions, but the principal have been cryptogamic, including a large collection of lichens from Dr. Nylander, of Paris.

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Quis.—The late Sir Henry Holland said that "the practice of a West-end physician in London abounds in cases which give little occasion for thought or solicitude, and are best relieved by a frequent half-hour of genial conversation."

Cremation.—The *Japan Mail* says—"The usual mode of disposing of the dead by cremation, which was forbidden by imperial proclamation in 1873, is again permitted by a notification which abrogates the prohibition. It would be interesting to learn whether the removal of the ban is due to the pressure of social feeling, or to the tendency which the Government exhibits to leave the practice of religious rites to the untrammeled sense of the people. It is possible that the revival of cremation in Europe has not been without its influence."

Quid.—The proverb is—Physicians' faults are covered with earth, and rich men's with money.

L. L.—The first Vaccination Act passed in 1840, 3 and 4 Vict., c. 29, and amended in 1841, by 4 and 5 Vict., c. 32. It provided the means of vaccination at the public cost, but it was optional to go to the public vaccinator for this purpose, or not.

Harry T. F.— "Unhappy he whom fate doth urge on
To practise as a country surgeon."

Garrow N.—Dr. Francis Willis took holy orders in 1740, but obtained the degree of doctor of medicine from Oxford in 1750. His medical and theological studies led him to turn his attention to the subject of insanity, and he kept an establishment for the treatment of the insane at Greatford, in Lincolnshire, where he died on December 5, 1807, aged ninety-six.

COMMUNICATIONS have been received from—

Rev. J. Alton Hatchard, St. Leonard's-on-Sea; Messrs. Street Bros., London; Charity Voting Reform Association; Mrs. Betts, Bonchurch; Dr. Rutherford, Edinburgh; Messrs. Salt and Son, Birmingham; Mr. Williams, Liverpool; Mr. R. H. B. Wickham, Coxlodge, Newcastle-on-Tyne; Mr. G. Sneath, London; The Registrar-General, Edinburgh; Professor Huxley, Edinburgh; Mr. J. Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

Hayden's Diseases of the Heart and of the Aorta—Tufnell's Successful Treatment of Internal Aneurism—Goodwillie's Anchylosis of the Temporo-Maxillary Articulation—Fasey's Philosophy of Laughter and Smiling—Report of the Hygiene of the United States Army—Donkin on the Relation between Diabetes and Food—Longman's Impressions of Madeira—Monod, De l'Exérèse—Harting's Rambles in Search of Shells—Bennett's Disposal of Refuse on Building Sites—Seguin's Clinical Thermoscope—Carter's Diseases of the Eye.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Practitioner—Veterinary Journal—Hastings and St. Leonard's Chronicle—Isle of Wight Advertiser—American Journal of Insanity—Commercial Compendium—Nordiskt Medicinskt Arkiv—New York Medical Journal—Melbourne Medical Record.

APPOINTMENTS FOR THE WEEK.

August 14. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

16. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

17. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

18. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

19. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

20. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 7.

BIRTHS.

Births of Boys, 1036; Girls, 1014; Total, 2014.
Average of 10 corresponding years 1865-74, 2108·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	701	639	1340
Average of the ten years 1865-74	835·6	794·0	1629·6
Average corrected to increased population	...	...	1744
Deaths of people aged 80 and upwards	...	...	39

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	8	10	...	7	...	1	...	11
North	751729	1	10	14	2	9	...	1	...	25
Central ...	334369	1	5	6	...	6	...	2	...	24
East	639111	...	8	14	1	15	1	2	...	31
South	967692	...	10	29	7	17	...	1	1	41
Total	3254260	3	41	73	10	54	1	7	1	132

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·890 in.
Mean temperature	59·8°
Highest point of thermometer	78·2°
Lowest point of thermometer	43·6°
Mean dew-point temperature	54·4°
General direction of wind	N.
Whole amount of rain in the week	1·25 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 7, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Aug. 7.	Deaths Registered during the week ending Aug. 7.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2100	1340	78·2	43·6	59·8	15·45	1·25	3·17
Portsmouth ...	122632	27·3	69	33	...	...	...	...	...	...
Norwich	82842	11·1	61	40	77·0	47·5	58·5	14·72	0·02	0·05
Bristol	196186	44·1	137	97	71·1	42·0	56·7	13·72	0·14	0·36
Wolverhampton ...	71718	21·1	61	21	68·4	42·3	55·1	12·84	0·78	1·98
Birmingham ...	366325	43·6	265	168	69·0	43·6	55·9	13·28	0·27	0·69
Leicester	109830	34·3	71	78	...	...	...	...	...	...
Nottingham ...	92251	46·2	63	39	71·7	43·1	56·0	13·33	0·16	0·41
Liverpool	516063	99·1	379	245	68·1	49·4	57·8	14·34	0·63	1·60
Manchester ...	356626	83·1	283	199	77·0	41·0	55·3	12·95	2·37	6·02
Salford	135720	26·3	140	77	75·2	39·3	54·9	12·72	1·61	4·09
Oldham	87437	18·7	62	43	...	...	...	...	...	...
Bradford	168305	23·3	95	92	65·7	45·8	55·0	12·78	0·05	0·13
Leeds	285118	13·2	272	169	69·0	45·0	56·1	13·39	0·06	0·15
Sheffield	267881	13·6	221	140	70·0	44·5	55·2	12·89	3·43	8·71
Hull	133932	36·8	92	75	68·0	42·0	55·8	13·23	1·86	4·72
Sunderland ...	106342	32·2	78	32	70·0	48·0	56·6	13·67	0·37	0·94
Newcastle-on-Tyne	137665	25·6	102	74	65·0	42·0	52·2	11·22	0·52	1·32
Edinburgh	211626	50·5	105	87	...	...	...	...	...	...
Glasgow	534564	88·6	382	248	68·9	45·5	57·0	13·89	0·24	0·61
Dublin	314666	31·3	106	81	74·1	39·6	59·0	15·00	0·57	1·45
Total of 21 Towns in United Kingdm	7742889	37·0	5144	3378	78·2	39·3	56·3	13·50	0·84	2·13

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·89 in. The highest was 30·09 in. on Monday morning, and the lowest 29·71 in. on Friday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Continued from page* 174.)

The Arthropoda.—The *Echinodermata* and the *Mollusca* are the final terms of series of invertebrate animals which diverge from the *Turbellaria*, while the *Tunicata* indicate the course of modification which leads to the Vertebrata. The *Arthropoda*, finally, appear to conclude that series of which the *Annelida* constitute an intermediate term. In fact they are Annelids devoid of setæ, in which the pseudhæmal vessels are ordinarily replaced by a heart and bloodvessels, and in which the appendages are usually segmented, one or more pairs being so modified as to subserve manducation.

In one important respect they differ from the great majority of Annelids, inasmuch as neither the embryo nor the adult ever possesses cilia.

The process of yelk-division may be complete or incomplete, but no known Arthropod ovum gives rise to a vesicular morula, nor has the alimentary cavity been seen to be formed by invagination. The precise mode of origin of the mesoblast has yet to be worked out, but the perivisceral cavity is always developed by its splitting, or is a schizocœle.

As with Annelids, the segmentation of the body results from the subdivision of the mesoblast by transverse constrictions into *protosomites*, and there is every reason to believe that the ganglionated nervous chain arises from an involution of the epiblast.

The neural face of the embryo is fashioned first, and its anterior end terminates in two rounded expansions—the *procephalic* lobes—which give rise to the sides and front of the head. The appendages are developed as paired outgrowths from the neural aspect of each somite, and, whatever their ultimate form, are, at first, simple bud-like processes. Very generally, a broad median process of the sternum of the somite which lies in front of the mouth, gives rise to a *labrum*, while a corresponding median process behind the mouth is the *metastoma*.

In a number of Insects belonging to different orders of the class, an amnionic investment is developed from the extra-neural part of the blastoderm by a method exactly similar to that which gives rise to the Amnion in the higher *Vertebrata*.

The *Arthropoda* are commonly divided into the *Crustacea*, the *Arachnida*, the *Myriapoda*, and the *Insecta*; and though it is impracticable to give a definition which shall absolutely separate the first two groups, it is perhaps not worth while to disturb an arrangement which has much practical convenience. But for purely morphological purposes it may be instructive to regard them from another point of view.

The *Arthropoda* may, in fact, be divided into two series. One of these consists almost wholly of air-breathing forms—which, if they possess special respiratory organs, have either lung-sacs or tracheæ; while the other contains a corresponding predominance of water-breathing animals, which, if they possess respiratory organs, have branchiæ. The latter series contains the *Crustacea*; the former comprises the *Arachnida*, *Myriapoda*, and *Insecta*. In the course of the development of the higher *Arthropoda*, there is a stage in which the body is segmented, but the appendages are not developed; or, if developed, none have the special functions of jaws: there is a stage in which the manducatory appendages (*gnathites*) are like the other limbs: and, finally, there is a stage in which the gnathites are completely converted into jaws. Now, among the water-breathing *Arthropoda*, no trace of limbs has yet been certainly discovered among the *Trilobita*; in the *Merostomata* (*Eurypterida* and *Xiphosura*) the gnathites are completely pediform; while, in the *Entomostraca* and *Malacostraca*, more or fewer of the gnathites are so modified as to subserve manducation and no other function.

In the air-breathing series, no completely apodal forms are known. The *Tardigrada* and the *Pentastomida* appear to have no jaws; but the presence of oral stilets in the former, and the position of the hooks which represent the limbs in the latter, throw some doubt upon this point.

In the *Arachnida* and the *Peripatidea* the gnathites are completely pediform. But, in the *Myriapoda* and *Insecta*, certain pairs of appendages have lost the character of legs, and are converted into manducatory organs. Thus we arrive at the following arrangement of the *Arthropoda*:—

(Water-breathers.)	ARTHROPODA.	(Air-breathers.)
	I. Without Gnathites.	
Trilobita.		*Tardigrada*(?)
		Pentastomida(?)
	II. With Pediform Gnathites.	
Merostomata.	*Arachnida.*	*Peripatidea.*
	III. With Maxilliform Gnathites.	
Entomostraca.		*Myriapoda.*
Malacostraca.		*Insecta.*

The Trilobita.—These ancient Arthropods, which have been extinct since the Palæozoic epoch, occur in the fossil state in great numbers, and in conditions very favourable for their preservation; but, up to this time, no certain indications of the existence of appendages, nor even of any hard or calcified sternal body-wall, have been discovered, though a shield-shaped labrum, which lies in front of the mouth, has been preserved in some specimens. The body consists of a cephalic shield; of a variable number of movable thoracic somites; and of a *pygidium*, composed of a variable number of the somites which succeed the thorax, united together.

The cephalic shield usually bears two compound eyes, and exhibits the remarkable peculiarity of being divided by a suture, which passes on the inner side of each eye to the back part of the shield, into a central and a marginal portion. On leaving the egg, the young are discoidal. The division into somites takes place subsequently, and the number of the somites increases with age up to the adult condition.

The Merostomata.—These have a cephalic shield, like that of a Trilobite, but devoid of the suture, followed by a certain number of free somites, which in the *Xiphosura* become united together, as in the pygidium of a Trilobite. In their development, no less than in their structure, the *Merostomata* closely resemble the Trilobites.(a) But they are provided with a number of pairs of limbs, which amount to as many as thirteen in *Limulus*. The mouth in the latter genus is situated between the bases of the second, third, fourth, and fifth pairs of limbs, which are spinose, and, projecting into the oral cavity, act as jaws. The posterior six pairs of appendages are lamellar, and united with one another in the median line. The reproductive apertures are situated on the posterior faces of the most anterior pair; the lamellar branchiæ are attached to the posterior faces of the others.

The *Eurypterida* are extinct Palæozoic forms, with all the somites which succeed the head free. The *Xiphosura*, which commence in the Carboniferous epoch, and are now represented by the *Limuli*, have the post-cephalic somites more or less united.

In all the remaining *Crustacea* there are completely specialised jaws; and as many as six pairs of appendages may be converted into gnathites.

In the *Entomostraca*, if the body possesses an abdomen (composed of somites which lie behind the genital aperture), its somites are devoid of appendages. Moreover, the somites, counting that which bears the eyes as the first, are more or fewer than twenty. There are never more than three pairs of gnathites. The embryo almost always leaves the egg in the condition of a *Nauplius*; that is, an oval body, provided with two or three pairs of appendages, which become converted into gnathites and antennary organs in the adult.

In the *Copepoda*, which come nearest to the *Eurypterida*, the cephalic shield, which is discoidal and not folded longitudinally, is succeeded by a certain number of free thoracic and abdominal somites. The antennules and antennæ are large, and, as in the *Eurypterida*, are organs of locomotion or prehension. The anterior thoracic members are converted into foot jaws; the posterior serve as paddles, the limbs of each pair being often united together in the middle line, as in *Limulus*. The embryo

(a) The relations of the *Trilobita* with the *Merostomata* have been very fully and clearly expounded by Dohrn—"Zur Embryologie und Morphologie des *Limulus Polyphemus*" (*Jenaische Zeitschrift*, Bd. vi.).

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leaves the egg as a *Nauplius*. The *Epizoa* are Copepods, the females of which are parasitic, and often undergo an extensive retrograde metamorphosis, after passing through the Nauplius and early Copepod conditions.

In the *Phyllopoda* the somites are more numerous than in the *Copepoda*. The cephalic shield may be either absent (*Branchipus*), large and discoidal (*Apus*), or folded upon itself, so as to form a bivalve shell in which the rest of the body is enclosed (*Estheria*). The antennary organs are relatively small, locomotion being effected by the foliaceous thoracic limbs. The embryo leaves the egg as a *Nauplius*.

The *Cladocera* have a folded but not bivalve carapace, one pair of large antennary organs, which are the chief agents of locomotion, very few thoracic limbs, and no abdomen. The embryo passes directly into the adult form.

The *Ostracoda* have a bivalve carapace, the two valves being united by a dorsal hinge, two pairs of large antennary organs, not more than three pairs of thoracic appendages, and no abdomen. There is no heart. The embryo leaves the egg as a *Nauplius*.

The *Pectostraca* (*Rhizocephala and Cirripedia*) leave the egg as a *Nauplius* with three pairs of limb-like appendages, which answer to the antennæ, and, apparently, to the mandibles and first pair of maxillæ of the adult. The antennules are an additional pair of filiform appendages in front of the antennæ, and there is a discoidal carapace. Subsequently, the carapace becomes bivalve (as in many *Phyllopoda*, and in the *Cladocera* and *Ostracoda*), and the antennæ are converted into relatively large, jointed appendages, provided with a sucker-like organ. The thorax grows and developes six pairs of appendages.

Finally, the bivalve-shelled larva, fixing itself by the suckers of its antennæ, the præ-oral region of the head becomes enlarged, and is converted into the base or peduncle in ordinary Cirripedes, while it gives off the root-like processes which grow into the tissues of the animals on which the *Rhizocephala* are parasitic. The Cirripedes are almost all hermaphrodite, a condition which is very exceptional among Arthropods. They possess no heart.

In the *Malacostraca*, the body, in almost all cases, consists of twenty somites (counting that which bears the eyes as one), and of these six (bearing the eyes, antennules, antennæ, mandibles, and two pairs of maxillæ) constitute the head, while eight enter into the thorax, and bear the foot-jaws and ambulatory limbs; and six carry the abdominal limbs.

The *Nauplius*-form of free embryo is rare, but occurs in some cases (*Peneus*). In others (*Mysis*) it is represented only by a temporary condition of the embryo, during which, however, a chitinous cuticula is formed and subsequently shed; and what appear to be remains of such a transitory record of an original *Nauplius* state, are seen in many *Amphipoda* and *Isopoda*, which attain nearly their adult form within the egg. In most *Podophthalmia*, the embryo leaves the egg, not as a *Nauplius*, but as a *Zoœa*, which has thoracic, but no abdominal appendages, and answers to the Copepod stage of the *Entomostraca*.

The *Cumacea* take an intermediate position between the *Podophthalmia* and the *Edriophthalmia* on the one hand, and the *Phyllopoda* (*Nebalia*) on the other.

The mouth in the *Crustacea* may be masticatory or suctorial, and the alimentary canal, usually divided into gullet, stomach, and intestine, presents too many diversities to be capable of general description. Very often the anterior division of the stomach is armed with teeth. Salivary glands are usually absent, but a distinct liver is almost always present. The existence of a special urinary apparatus has not been made out with certainty. A heart may be absent (*Ostracoda*, *Cirripedia*), or may be present, and then either single, few, or many chambered. In the higher *Crustacea* the arterial system is well developed. Branchiæ may be absent, or may be attached to the abdominal or thoracic limbs, or to the side walls of the thorax. In some of the terrestrial *Isopoda* there appear to be rudiments of a tracheal system. The eyes may be simple or compound. Auditory organs are very generally developed, and vary in position from the appendages of the head (antennules) to those of the abdomen. The sexes are distinct in all but the Cirripedes, and the genital apertures are situated in the posterior part of the thorax, or its appendages.

Agamogenesis is common among the *Ostracoda*, *Cladocera*, and *Phyllopoda*, but is not known to occur among other *Crustacea*.

(To be continued.)

FORTY-THIRD MEETING

OF THE

BRITISH MEDICAL ASSOCIATION,

HELD IN EDINBURGH ON AUGUST 3, 4, 5, AND 6, 1875.

ADDRESS IN SURGERY.

By JAMES SPENCE, F.R.C.S. Ed., F.R.S.E.,

Surgeon in Ordinary to the Queen in Scotland; Professor of Surgery in the University of Edinburgh.

MR. PRESIDENT AND GENTLEMEN,—When I was honoured by the request of your Council to give the Address in Surgery, I felt doubtful, and requested a short time to consider how far I would have leisure to prepare an address worthy of the occasion; for, in addition to my winter's avocations, I was engaged in a work which it was necessary to finish before the commencement of another session. I knew, moreover, that addresses were not my *forte*, and that any attempt of mine must fall far short of the elegance in composition, or the eloquence which had characterised the addresses to which you were accustomed. But, on consideration, I felt that my position as Professor of Surgery in this University, the long experience I had enjoyed as Surgeon to the Royal Infirmary, and the length of time I had been connected with the Edinburgh Medical School, demanded that I should not shrink from the duty of doing my utmost in response to the invitation with which I was honoured: I consented the more readily, that I felt sure that the members of the Association would, as practical men, look rather to the matter than the manner of my address.

Having accepted the situation, I had not much difficulty in choosing my subject. My avocations as a hospital surgeon and teacher of surgery necessarily forced on my attention the changes taking place in our views of disease and in the practice of surgery. I decided to review the progress of surgery in relation to its past, limiting myself necessarily to a few departments, from the impossibility of overtaking the whole range of the subject.

I believe it is only by reviewing the advance in relation to the past that we will be able to estimate what real progress our science has made, and in what that progress consists,—whether in the discovery of something absolutely new, or in modifying and improving methods of treatment, the intrinsic value of which had not been fully appreciated, or which had fallen into disuse owing to the imperfect method in which the principle had been carried out. In regard to things absolutely new, we might almost echo the saying of Solomon: "Is there anything whereof it may be said, See, this is new? It hath been already of old time, which was before us."

Looking at some of the more prominent recent changes in surgical practice, a superficial observer might almost imagine that instead of progressing, our science moved in a cycle; and were he inclined to be cynical, he might suggest that we had revolved back to the period of sheer mechanical forces, complicated dressings, and red-hot knives. A nearer and more appreciative examination will show us, however, that even in cases where the principle is not new, the method of applying it has been so modified and improved as to constitute a real advance and addition to our resources. Let me take, as an example of this, a method of treating fractures of the lower extremity now much used—extension by weight and pulley.

The great tendency to shortening and deformity in cases of fracture of the thigh-bone, owing to the contraction of the powerful muscles which surround it, could not but attract the attention of those called upon to treat such injuries; and hence, from the earliest times, surgeons were naturally led to try and overcome the displacing causes by opposing force to force by means of *extension* and counter-extension. The principle of extension is now almost universally admitted to be best in these fractures; but the method by which it is applied makes all the difference. Those who first applied the principle seem to have had in view rather what mechanical forces could effect, than what the living body could bear. You have only to look at the formidable machinery they employed for the purpose, such as the bed of Hippocrates, the "organon," and the various forms of glossocoma,—different kinds of racks and windlasses, in fact,—to under-

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stand how a revulsion of feeling in the profession should have at one time led to the abandonment of the extension treatment in fractures of the thigh-bone, and to the adoption of the method of laying the limb on its outside, with the leg bent on the thigh, and the thigh bent on the pelvis—a principle of relaxing powerful muscles which had proved most useful in fractures of the leg, but which, for obvious causes, proved most disastrous in those of the thigh. The abuse of a power is not a reason for abandoning its use: we would do better to examine into it, and try whether it be not capable of improvement. I fear, however, human nature has a bias to extremes; and so we often miss making improvements on methods of treatment until they suddenly reappear as novelties, and are accounted, and properly so, as marks of progress. Mr. John Bell, in his great work on Surgery, speaking of the machines used in treating fractures, says: "I may, perhaps, do you some service by explaining the simple principles of this department of surgery; and then you will be able to enter the magazines of Scultetus, Hildanus, and Parceus, filled with engines not unworthy of the chambers of the Inquisition, without being tempted to bring out along with you any of their lumber." Accordingly, he does enter the magazines of apparatus, and criticises them with his usual scathing sarcasm. Amongst other "lumber," he unhangs from the walls of the magazine of Hildanus a weight with circle and strap for hanging from the ankle, and drags to light a bed with a surscingle or perineal band of horse-girth for fixing the body to the upper part of the bed; and on this rude apparatus for permanent extension he makes ironically laudatory remarks. Mr. Bell would have been better employed if, when he exhibited the rude apparatus of Hildanus, and admitted its power of maintaining permanent extension, he had thoughtfully considered how it might be modified so as to get rid of its defects, and be converted into a simple and effective means of treating fractures of the lower extremity. Let me again take the dust off this bed and weight of Hildanus, and place them alongside some modern surgical upholstery, and see how like they are. Here is the weight and pulley method copied from a recent work on surgery. How very like! The perineal band or surscingle fixing the patient; the weight hanging from the foot through the pulley fixed at the foot of the bed. But how is the weight hung from the limb? No longer by a circular strap round the ankle, acting on one part only, and so unendurable, but to long plasters fixed to and embracing a great breadth of the limb from immediately below the fracture, and so diffusing pressure that the patient feels no inconvenience, and is scarcely sensible of the extending force. That makes the difference. But something is still wanting to its perfection. Can we get rid of that perineal band, which proves so troublesome to patient, and surgeon, and nurse? How can we dispense with it, and maintain a counteracting force to the extension from the foot? Tilt up the lower end of the bed; place blocks of wood below the feet of the bed; take off the perineal band, and let the body be the counter-extending force; and there you have the simplest, least irksome, and most perfect method I know of treating fractures of the thigh, and, if possible, still more useful in treating oblique fractures of the tibia.

Until a comparatively recent date, I seldom used anything but the long splint for the purpose of extension and counter-extension; and several years ago I drew special attention to what I considered essential to its proper use—viz., maintaining a moderate amount of extension during treatment, more especially when the fracture was oblique; and, so far as the results of my practice were concerned, I had little reason to abandon the long splint for any other method. But it is impossible for anyone who has had much experience in its use not to feel that it had defects, and that much care is required to prevent troublesome results, and to overcome some difficulties. I may mention, for example, the tendency to fretting and excoriation of the soft parts caused by the perineal band or extensor, and by the handkerchief which was generally used for fixing the foot to the splint. Nay, unless great attention was given, the pressure of the handkerchief sometimes gave rise to sloughing, especially in old or very young patients. Indeed, for some years before I began to use the pulley-extension, I had used plasters as the means by which I fixed the foot to the lower part of the splint, so as to obviate the bad effects of the handkerchief round the ankle and instep, and also as maintaining extension in a more direct line, and preventing any eversion of the foot; and I would strongly urge this modification whenever the long splint is used. But there still remained the inconvenience and irritation caused by the perineal band, and the frequent necessity of changing it for cleanliness; and when this band is removed, of course all extension and counter-extension cease for the time, unless kept up by assistants; and there is risk of displacement occurring. Another troublesome, though less serious, effect was the stiffness of knee when the splint was removed at the end of six or seven weeks; and, in some patients of rheumatic diathesis, or those who would not tolerate early passive motion being used, I have known a considerable amount of stiffness remain for years. I confess that my predilection for, and my favourable experience in the use of, the long splint, made me very unwilling to abandon it; but, having to treat a compound fracture of the thigh where the wound was so placed that even the bracketed long splint could not be used, I tried the extension-pulleys, and found that method so effective, that I tried it in ordinary cases, and have found it so simple and effective, so much more comfortable for both patient and surgeon, that I now rarely use the long splint—almost never, except for clinical instruction, that students may see more than one method of treatment. Now, after some years' experience in the use of the extension-pulleys in fractures of the thigh in very young children and in adults, in fracture of the neck of the femur in old persons, and in long oblique fractures of the tibia, I unhesitatingly commend the method to all who may not have tried it. Of course, in fractures of the shaft of the femur, lateral splints are required, just as when we use the long splint, and also for lateral support in fractures of the leg. When there is much bruising, however, I merely use sand-bags to prevent lateral displacement; and I also prefer deep sand-bags to prevent rolling of the limb outwards in fractures of the thigh, to a long lateral splint, as used in America. In fact, the full advantages of the extension-pulley method are only secured when we abandon the perineal *lacque* and long lateral splint, and make the body the counter extending force.

Looking at the extension method, as thus improved and simplified, I think we may fairly reckon it as progress in a most important department of surgery; but, whilst we congratulate ourselves in our advance, and replace the bed and weights of Hildamus in the *armamentarium antiquorum*, let us regard it not as "lumber," but reverently with the homage due to the perception of a true principle, however rude in design and execution the apparatus may be.

The use of plasters, as enabling us to fix apparatus, is capable of numerous applications; and in transverse fractures of the patella I have used it with advantage to enable me to approximate and retain the fragments, by means of Malgaigne's hooks, without penetrating the skin.

The process of union in fracture has been long a subject of discussion. The old Arabian physicians wrote of the ossifying juices poured out from the broken bone—the callus; and surgeons long exercised themselves how to restrain within due bounds the exuberant supply by bandaging, friction, and even by scraping, as recommended by Abulcasis. Speaking of the ideas regarding the exudation of new material for repair of fracture in his day, Mr. John Bell says that many certainly regarded it as "something poured out like lead from a plumber's ladle"; and really if we look to some expressions used, and views held in our own highly scientific age, I hope I will not be considered uncharitable if I cannot help thinking some such views still exist. What, for example about that beautiful provision of Nature, provisional callus, figured and described in not a few modern works? Does it exist as a necessary part of union if the broken bone be properly adjusted and carefully retained in position? Is it true that the fibrine of the blood, extravasated from the vessels of the broken bone and the torn tissues, is valuable as a concrete, which is to become organised and ossified, and make the broken part, to use a common expression, stronger than before? I would not venture utterly to deny the correctness of such views and such beautiful provisions of Nature; but this I know, that I have had a few opportunities of examining very recently united fractures in persons who died suddenly from other causes, and in such cases I have never seen trace of the changes described. A little thickening and vascularity of the periosteum, a narrow line of new ossified material, barely perceptible between the broken surfaces, were all the changes visible in the injured bone; but in these cases the fractures had been properly adjusted and retained in position from the first.

Might I hint that, to some extent at least, the views I have alluded to are the result of misinterpreted facts, observa-

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tions of experiments on animals, or from what is seen in badly or irregularly united fractures. When the femora of rabbits or dogs are fractured, and the animals killed to ascertain the changes which occur at different periods after the injury, great extravasation of blood into the tissues, and around and between the broken ends of the bone, is a very marked condition in that early stage; and, somewhat later, inflammatory infiltration of the intermuscular connective tissue, and amongst the fibres of the muscles, is superadded, giving rise to consolidation of the parts around the broken bone and for some distance beyond. These phenomena are the result of the laceration of texture and irritation produced by unrestrained movements of the broken fragments. Every movement excites spasmodic muscular action, and, consequently, more laceration and irritation, until the extravasation of blood and inflammatory irritation interfere with and prevent the muscles from acting, and, at the same time, serve as a sort of retentive apparatus to the fractured bone. In badly adjusted fractures, where there is overlapping, or in comminuted fractures, when the fragments render the fractured surfaces irregular, the new material is furnished in larger amount to fill up the inequalities; but even in such cases, not to the extent that the feeling of the mass in the limb would lead us to suppose, for the bulk of that is chiefly due to overlapping; and it not unfrequently happens that in comminuted fractures, partly detached fragments become embedded in the muscular or connective tissues of the limb, and the new ossific matter so deposited has led some authorities to assume that the extravasated blood has become organised and ossified. Now, whilst the conditions seen in the experiments on animals or in irregularly adjusted fractures may, if you like, be termed provisional inasmuch as they help Nature's unassisted efforts towards repair under disadvantageous circumstances, I do not believe in such provisional callus being formed when the fracture is well adjusted and retained in position, and muscular action is prevented. Nature is not capricious: the healing process is the same in bone as in other textures; the smallest amount of new material is used for reunion. Just as a wound of the soft parts heals with a fine linear cicatrix if its surfaces be carefully adjusted and retained and undue excitement prevented, whilst a similar wound, left to itself and subjected to irritation from movement or other causes, inflames, suppurates, and heals by a broad irregular scar, so in fracture, if properly set and treated, there will be no ferule or mass of provisional callus at the fractured point.

Refracture in Badly Set Fractures.—Refracture and readjustment of a badly united fracture, when the bone has thoroughly consolidated, is a proceeding which, although popularly believed to be frequently resorted to by surgeons, is one which has been rarely practised since the beginning of the present century. Readjustment, however, by bending over the knee, or by pressure and counter-pressure in the case of deformed and recently united fractures, has often been effected; but interference with a badly united fracture, after months had elapsed, has generally been regarded as improper, and likely, from the force required, to lead to serious risk, with little chance of restoring the limb to better form or usefulness. Yet in early surgery, refracture seems to have been a common proceeding amongst Arabian surgeons. Abulcasis, who objected to the practice, reprobates it in strong terms; but if his remedies for softening and diminishing exuberant callus failed, this same Abulcasis had no hesitation in recommending resection of old fractures. "If the distortion be old and firm," says he, "cut across the bone and saw off all that is superabundant, whether of the bone or callus." And he further remarks to his pupils "that study and practice will make them very expert in the operation." Here, again, we find ourselves coming back to old methods, for amongst our most recent advances, more especially since subcutaneous and subperiosteal operations have been introduced, resections to remove deformity resulting from anchylosis or badly set fractures have been practised with much advantage. The operative proceedings have been varied—sometimes weakening the point wished to be broken, by drills or narrow saws, or osteotomes; sometimes by direct section, by saws or chisels. Even yet, however, the cases are rare in which surgeons have ventured to break thoroughly consolidated fractures by direct force to remove deformity. No doubt when we think of the degree of force to be applied, and look at the apparatus necessary for the purpose, a feeling of repugnance arises in the mind; but some things look worse than they really are. I make these remarks in reference to a method of refracture and readjustment of old badly set fractures of the femur, introduced to the notice of the profession by Mr. Butcher, of Dublin. Mr. Butcher's case was a fracture of the thigh, attended with great deformity and shortening, in a young man who had met with the injury upwards of six months before he consulted Mr. Butcher. Anyone who looks at the photographs of the limbs in that case, before and after the operation of refracture, will, I think, agree with me that it is a triumph of surgery. But when you look on the actual apparatus by which this triumph was obtained, you might be inclined to use the language of John Bell in reference to some ancient apparatus, that it was "an engine of torture fit only for the Inquisition." I have, however, had an opportunity of testing this apparatus, and can state to you that it produced none of the torture or bad effects its appearance might suggest. It happened that at the time I received Mr. Butcher's account of his case of refracture, I was considering that of a patient who had come from the backwoods of Canada to consult me, and ascertain if I could do anything for deformity and great shortening of the limb, resulting from a fracture of the femur he had sustained about two years before. The limb was four inches shorter than the sound one, and a large knee of bone projected, giving rise to great deformity; and, what was worse, the peroneal division of the popliteal nerve had suffered, and paralysed the extensor and peroneal muscles. The case was most unfavourable, both as regarded the form of the fracture and the length of time it had been consolidated, whilst the paralysis of the foot made me doubtful of any interference; but, seeing that he had come a long distance as a last hope, I determined to try what could be done.

By using galvanism after dividing the tendo Achillis, some increase of muscular power and development was obtained, and I had made up my mind to partially resect the fracture with a narrow saw, and then break it through, when the report of Mr. Butcher's case was opportunely sent me. On carefully and anxiously studying it, and communicating with Mr. Butcher, I had his apparatus made and refractured the bone, and though, owing to the unfavourable nature of the case, the result will not compare with Mr. Butcher's, yet the operation has greatly improved the length and form of the limb, whilst the patient has suffered no constitutional disturbance, and scarcely any local irritation, from what seemed an application of great and direct force. That the apparatus admits of much modification and improvement to adapt it for acting on different forms of fracture, I doubt not, but its efficiency and safety even in its present form have, I think, been proved; and, although the necessity for such operations is daily diminishing, owing to the advance of surgical skill, yet, in cases such as those fractures which occur when the patients are at a distance from medical aid, it is well to have it in our power by simple and safe means to remedy these terrible deformities even after some time has elapsed.

Operations for the cure of Ununited Fractures cannot be mentioned either amongst recent acquisitions or revivals of surgical resources, for such operations have long been practised. Many improved methods, however, have been introduced in comparatively recent times, such as Dieffenbach's method of resecting and pegging the resected ends of the bone, a method which has been specially successful in oblique fractures of the tibia. In a case recently reported from the practice of Professor Volkmann, of Halle, a very neat and ingenious adaptation of this method has proved very successful in an ununited fracture of the femur, in which the ends of the bones after resection were chiselled into a steplike form on their opposite sides, and so were accurately fitted to each other and pegged. Success in resection of the femur or humerus in such circumstances has not, however, been eminently successful. Even in cases where constitutional dangers were avoided, the reunion has not often taken place. In 1854, I proposed and carried out successfully a modification of resection in an ununited fracture of the humerus, by cutting down upon and merely separating the fibrous texture between and around the broken ends of bone, and snipped them off only to a small extent with strong bone-pliers, carefully avoiding the use of the saw, or complete protrusion of the bone during section, so as to have as little disturbance of parts as possible, that the action on the ends of the bone should resemble the nature of fracture, and that the amount of bone removed should be merely enough to open up its texture. Since then I have, on several occasions, used this form of resection successfully. There is, however, a method of treating ununited fractures, especially at an early period, which I do

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not think has had sufficient notice taken of it, nor been sufficiently or fairly tried: I mean the plan proposed and practised by my predecessor in this University, the late Professor Miller. The method consists in entering subcutaneously a long narrow but strong knife; passing it on to and between the ends of the ununited bone, dividing freely the fibrous union, scraping the ends of bone, and slightly separating the periosteum; then the limb is carefully firmly bandaged and placed in appropriate splints. I know that this plan has never had much favour; perhaps it seemed too simple to effect the purpose; and it was derided and declared to be inefficacious by some who professed to have tried it. But I also know that I have frequently used it and have generally found it successful when the knife has been effectively used, and the after treatment carefully carried out. I have, indeed, so strong an opinion of the efficacy of this method in comparatively recent cases, that I do not think it warrantable to proceed to severer measures until this simple one has been fairly tried, and I purposely mention it here to press it on the attention of the profession.

From the progress in the surgery of fractures, I am almost inevitably reminded of some of the most brilliant improvements in surgery arising from our advance in the knowledge of the anatomy and physiology of the periosteum and the nutrition of bone. With the progress of this department of surgery the name of Ollier of Lyons must always be connected, as the man who has given it the greatest practical impetus; but those who recollect the experiments of the late Professor Syme, and the memoirs of the late Professor Goodsir on the structural anatomy and nutrition of bone, must credit these eminent men with no small share of our advance. The practical application of the sub-periosteal method of operating is perhaps seen to the greatest advantage in such operations as that for closing the cleft in the hard palate, and in partial removal of bone in some conservative operations.

In excisions of joints, I think the subperiosteal method must be used with discrimination. In cases where, as in the lower extremity, a firm solid support, and not a movable joint, is desired, its value is at once evident; and perhaps in some excisions of the upper extremity, in which we require to remove a very large amount of bone. In ordinary excisions of the upper extremity, we are more troubled with redundancy than deficiency, and generally require to remove a considerable amount of bone to prevent anchylosis from occurring; but in truth, in a great many cases, the question is settled for us by the disorganised state of parts on which we operate.

There is one class of cases in which subperiosteal surgery seems likely to achieve some brilliant successes: I mean cases of acute necrosis, as they are called; in other words, cases in which inflammation of the dense shaft of a long bone has been so rapid, general, and violent, that nutritive changes seem arrested; and the bone separated, or nearly separated, from the investing periosteum, is exposed, with its surface bare, smooth, and white, as if dead. Although in such cases the constitutional disturbance, at first from irritative fever, and subsequently from hectic, always places the patient's life in great jeopardy, and though the tendency of the local action to spread to the epiphyses and involve neighbouring joints is very great, we have hitherto been content to wait patiently, often most anxiously, for nature to separate between the dead and living bone, before interfering. In cases where the state of the patient seemed to point to amputation as the only chance for life, the results have been so unsuccessful, that I think it scarcely warrantable. Now, however, by separating any remaining connexion of the periosteum, and resecting and removing the diseased portion of the shaft, the long process of separation is avoided; the constitution is saved the tax on its powers from discharge, irritation, and hectic; the periosteum which is left furnishes new bone to take the place of that removed by the surgeon; and the limb gradually assumes its normal form and usefulness. Here, it would seem, we have clear advance in the treatment of disease; and I believe it is a real and great progress. Still, we must look at it carefully from different points of view, so as to make sure of this, and avoid the method suffering from being practised indiscriminately, or in improper cases, or during unfavourable conditions. We must remember that, in what we call acute necrosis, the loss of vitality seldom extends to the whole thickness of any great length of the bone; that, whilst the periosteal sources of nutrition may be largely or entirely cut off, the vascular supply and nutrition of the medullary canal and the ossific centres may not be, and rarely are so, to the same extent; and hence we can never be sure for some time how much of the affected bone may really perish, whether there may be a large portion to separate ultimately, or merely superficial exfoliations; or, as I have known, the whole surface of a long bone like the tibia may be exposed bare and white, and yet granulate and heal without a vestige of exfoliation occurring.

But, whilst I think it right that these things should be kept in mind, lest we interfere ultroneously and remove texture which natural processes would have saved; on the other hand, looking at the matter practically, when we see a patient suffering from hectic or occasional hæmorrhage from ulceration of vessels near the diseased bone, and when we consider how long he must be exposed to such sources of debility before the dead bone separates, and the risk of the implication of neighbouring joints occurring and necessitating amputation, I am shut up to the conclusion that resection and removal of the affected bone must be often indicated; and that, if the cases for its performance be judiciously selected, and the operation be properly effected, this method will be found to be a most valuable addition to our resources.

The important question, no doubt, arises, How far can we trust to the reproduction of new or substitute-bone from the periosteum, when the whole thickness and nearly the whole length of a long bone like the tibia has been removed by operation? And this question not unnaturally suggests itself, because we know from experience that under the expectant plan, when large and long sequestra were removed, the thickness of the shaft was never renewed to its full extent, although under that method we had both bone and periosteum to furnish new material. Here, for example, is a specimen, showing a large sequestrum removed when loosened by Nature, and a cast of the leg showing the appearance of the limb after the cure was completed.

During last winter, Dr. McDougall, of Galashiels, now of Carlisle, exhibited a child to the Medico-Chirurgical Society of Edinburgh, in whom he had resected the tibia in a case of acute necrosis, and the thorough reproduction was well seen, and the use of the limb was perfect. In April last I operated on a similar case, and resected the shaft of the tibia close to the epiphysis at each end, after separating the periosteum. Here is the portion removed; and as the case is still in hospital, the members of the Association can judge of the probable result, so that I think we may trust to the periosteum for entire reproduction of the part removed. To these and similar successful cases it may be objected that in cases of compound fractures, when the broken bone protruded, divested of periosteum, resection of the denuded bone was and is frequently practised; but experience has shown in such cases that when the portion of bone so removed is large, reunion is almost never perfect; the ends of bone are atrophied and joined together by a tough fibrous material; or, in the case where there are two bones, as in the leg and forearm, the ends of the resected bone approximate and unite with the other bone. A little consideration, however, will show that there is really no parity between such cases and resection for acute necrosis, because in the case of compound fracture the periosteum is not merely separated, but is generally so torn and bruised that its vitality is destroyed, or so impaired that its reproductive powers are rendered very imperfect; whereas in necrosis its vascularity is increased, the membrane thick and flesh-like, and it almost invariably carries with it small nuclear portions of bone-tissue.

Passing to the consideration of the surgery of the articulations, a wide field opens before me, but I must limit myself to one or two points. In regard to excision of joints, now so firmly established as a conservative measure, and so obviously an advance in the right direction, I shall not enter on it here; but I cannot leave this department of operative surgery without directing attention to a method of excision of the condyloid end of the humerus in cases of anchylosis of the elbow resulting from injury, proposed by my distinguished hospital colleague Dr. Watson. It consists essentially in resecting and removing the condyloid end of the humerus without cutting the attachment of the triceps to the olecranon, or that of the brachialis anticus to the coronoid process—in fact, without removing any part of the articular surfaces of the ulna or radius. By this method the natural movements of the elbow are preserved, and the tendency to recurrence of the anchylosis is prevented. (Paper in *Edinburgh Medical Journal*, 1873.)

Dislocations.—The manual method of reducing dislocations of the hip has been revived and used with great success; so

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much so, that the reduction of these luxations, which formerly entailed much trouble and the expenditure of great force, can now be effected in recent cases as if by magic. I have said that the use of the rotatory or circumduction method has been revised: perhaps I should rather have said revived as a general practice, for, in truth, it has never really been altogether abandoned. We generally hear it spoken of as the American method, and undoubtedly it is to the writings of Drs. Reid and Bigelow of the United States that we owe the more general use of the practice in this country; but it is not a little curious that it has been so little known or used, seeing that it is mentioned and described in some of the principal French works on surgery—not old black-letter, but modern books, in the possession of most of us. Thus in Nélaton's "Pathologie Chirurgicale," published in 1847-48, there is the following statement in reference to dislocations of the hip. "In 1835, M. Desprès made known a method which cannot be too highly recommended on account of its simplicity and the real services which it has rendered in certain difficult cases. . . . This method consists in flexing the leg on the thigh, the thigh on the pelvis, to exaggerate even the movement of flexion and adduction of the limb, then to exercise with it a gentle movement of rotation outwards, whilst at the same time it is abducted." This method, says Nélaton, is described by Pouteau in his "Mélanges de Chirurgie." M. Chassaignac, in the second volume of his "Opérations Chirurgicales," 1862, speaks of this method of reducing dislocations of the hip, and quotes the text of Pouteau as follows. "Surgeon-Major Maisonneuve, of the Regiment of Maugiron, a man of great merit, and trustworthy, assures me that he has reduced such luxations without the assistence of any extension. He first flexes the thigh at a right angle with the body; he then executes with the thigh a movement of rotation, which makes it approach the belly as nearly as possible, then carries it out towards the haunch, and returns it immediately by drawing it down towards the sound thigh." Pouteau adds that this method was known to the ancients, and that it is mentioned by Hippocrates and Paulus Ægineta. The diagram I point to is an enlarged copy of an illustration from a French work on "Bandaging and Surgical Appliances," by Dr. Goffrés, published at Paris in 1859, and shows the surgeon in the act of using the manual method of Desprès. For this I am indebted to my friend Dr. Paterson, formerly of Bahia. M. Chassaignac enters very fully on the principle of the method; and there is a curious sort of coincidence in terms between his use of the letter Y, to assist his description, and the use made of the same letter by Dr. Bigelow, to mean a totally different thing. Dr. Bigelow speaks of the Y-ligament as playing an important part in the rotatory method, describing the ilio-femoral ligament under that name, on account of the divergence of its fibres at their attachment to the femur. Chassaignac describes the leg and thigh, when bent, as representing a pair of compasses opened at a right angle, the lower or horizontal branch represented by the leg, the upper or perpendicular branch by the thigh—this latter divided at its upper extremity into two parts, like the letter Y, one part being fixed, represented by the ilio-femoral ligament, the other movable, represented by the head and neck of the femur,—and then proceeds to demonstrate how, by using the leg as the arm of a bent lever, whilst the ligament, being fixed, forms a pivot—the movable part—the head of the femur is forced or directed to the acetabulum. Here we have an example of advance by the attention of the profession being directed to a method which had been practised from an early period, and which has never been altogether obsolete.

Bloodless Surgery.—It is in connexion with operations for necrosis and the excisions of bones and joints that what is termed "Esmarch's bloodless method" of operating is seen to the greatest advantage, and these subjects suggest to me the consideration of that and other methods of "bloodless surgery." The bloodless methods may be divided into two kinds. First, those that have for their object the prevention of loss of blood during the progress of operation; and, second, those by which the surgeon is enabled to divide textures by means of apparatus which, by the very mode of division, prevent the escape of blood at the time, and also act as permanent hæmostatics.

The method of Esmarch, though another example of a great improvement in carrying out a principle, can only be looked upon as a revival, not as new. The principle was clearly enunciated by the late Sir Charles Bell; and the mode of carrying it out by bandaging the limb from below, and then rapidly screwing tight the tourniquet, is described when discussing the value of the tourniquet in amputations, in his "Great Operations of Surgery." But it is not in amputation that the method is most useful or seen to most advantage; and hence it had generally fallen into disuse. The method of Esmarch, by using the indiarubber roller to expel the blood from the part of the limb to be operated on, and the strong indiarubber tubing to constrict the limb and act as compressor, effects the object in view perfectly, and hence enables us to see the parts on which we operate as in a dissection, and prevents all loss of blood during the operation. It is a most valuable assistance to us in such operations as those for necrosis and resections of bones and excisions of joints. In many cases of removal of large sequestra, or resections of the shaft of a bone especially, we can, by stuffing the wound with oiled lint, and applying a compress and bandaging the limb before removing the circular compressor, render the operation absolutely bloodless. In excision of joints where we require to tie arteries after the operation, I prefer the tourniquet to the indiarubber as a circular compressor. It is equally effective in restraining bleeding; and, by loosening or tightening the screw, the vessels can be secured with less loss of blood than when the indiarubber is employed. Indeed, in many amputations, whilst the incisions are completed bloodlessly by Esmarch's method, the sudden and general oozing from the cut surfaces which follows relaxation of the indiarubber entails more loss of blood eventually than when the tourniquet alone is used. I have repeatedly amputated at the thigh and at the hip-joint, using only the tourniquet or manual compression, with the loss of not more than three or four ounces of blood; and in one case of primary amputation of the hip in the country by candlelight, in which I had the blood carefully collected from the tiled floor, as there seemed to be a large clot, I found, to my astonishment, that it barely amounted to half a teacupful. In many cases of amputation, owing to the septic state of the tissues or the malignant nature of the disease for which we are operating, I consider it inadvisable to repress the blood and other fluids—such as unhealthy pus or cancer juices—into the parts above. In such cases, I draw a band of indiarubber tubing, pressing on the limb from above downwards, and tighten it immediately above the part to be removed. This, of course, saves no blood to the patient; but it renders the operation bloodless in another sense, and is especially useful in private practice, as avoiding soiling of the floor or furniture. In cases of excisions of joints, where the parts are loaded with pus, I constrict above and below the point to be operated on, and thus secure a nearly bloodless operation without risk of repressing the unhealthy fluids into the textures higher up. I cannot see the advantage of the Esmarch method in such operations as ligature of the femoral artery. I have had frequent occasion to perform operations of that kind, and also of seeing them performed by others; but it is rare to see any bleeding; and I think it better that the artery and vein should be left in their natural condition, that the operator may see and deal with them. An empty and collapsed vein would, I think, run greater risk of being injured than when seen full in its natural relation to the artery. I make these exceptions because I think that this form of bloodless surgery is liable to suffer from its indiscriminate use, and from over-laudation; but I have already said that I consider it a most valuable aid in proper cases, and it seems as if it were revived now with special relation to the progress of conservative surgery.

The bloodless surgery comprised under the second head consists, as I indicated, in division of parts by means of the various apparatus which prevent bleeding during the process, and permanently. It includes cauterising agents, whether red-hot knives or galvano-cauteries, and crushing divisors, such as the different kinds of écraseurs. In regard to the cautery to stop hæmorrhage, I need hardly say we cannot claim that as new, or as a discovery of the present time. Indeed, I referred to this as one cause that might lead an observer to suppose that we were revolving back to primitive surgery. Before the general use of the ligature, no small ingenuity was used to invent instruments which would sear and arrest bleeding as they cut the textures; and some surgeons, when they ventured to cut through living textures, used the summary method of applying hot pitch or tar over the face of the stump to arrest the bleeding. I am old enough to recollect seeing the result of an amputation of the thigh which had been thus treated. The man had been injured on

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board a whaling vessel; and, for lack of other aid, the ship's carpenter amputated. Whether from his acquaintance with ancient surgical authorities, or simply acting on the rules of his craft, he "paid" the stump with hot pitch. The man recovered well, possibly owing to the antiseptic action of the pitch, and subsequently eked out his means of living by exhibiting himself at the surgical classes as an "Ancient Mariner" and a connecting link with antique surgery. Although heated knives are again being used, I cannot and I do not think the profession will hail their revival as a mark of progress in surgery. But, in regard to the use of the galvano-cautery for the purpose of dividing very vascular textures, or for removing tumours in situations where we cannot reach and tie divided vessels, or where there is danger from the blood entering the air-passages during an operation, as in some operations on the mouth, I think there can be but one opinion of the value of such means, and also that modern surgery has made advances, and I trust is destined to make further advances in this direction. The chief difficulties to be overcome are in the cumbrous nature of the apparatus and the difficulty of getting a galvanic power in moderate compass to heat a platinum wire of sufficient thickness. In the surgical manipulations, habit of using the wire requires to be attained to keep it in constant and close contact with the tissue to be divided, because at any point where the wire does not touch and give off its heat to the tissue, it fuses and gives way under the action of the electric current. Those of us who have been accustomed to use the knife will find it advantageous to acquire the mode of manipulation necessary for proper use of the wire. From the very few opportunities I have had of seeing or using the galvano-cautery, I am hardly warranted in expressing an opinion; but I think we require to modify the heat so as to divide the parts more slowly, because a large vessel cut across rapidly by a wire at a white heat will bleed at once as if cut by a knife. The écraseur is another means by which bloodless severance of textures can be effected, and it has even been employed for the amputation of limbs. Its real value, like that of the galvano-cautery, lies in its application to operations where the parts to be divided are so situated that we cannot tie the vessels or command bleeding during section of the parts. Its utility in such cases, more especially in operations on the uterus and tongue, has been longer and more largely tested than galvanic cauterisation, and as compared with our present means of applying the last-named method, it is more simple and more easily managed; but it seems to me that, from the nature of the wound left after use of the écraseur, it is more liable to unhealthy action than that resulting from the cautery; and, if that method could be rendered more manageable, I believe it would gradually supersede the écraseur.

Meanwhile, however, the écraseur is an instrument of great value for the class of cases I have alluded to, and forms another addition to the resources of our art.

Closely allied to the galvano-cautery—a modification of it, in fact—is galvano-puncture or electrolysis. This agency has been used in the treatment of aneurisms beyond the reach of ordinary surgical operations; and, although from the nature of these cases it has not effected any positive cures, it has, in the hands of my hospital colleague Dr. J. Duncan, and others, delayed a fatal issue in cases where external hæmorrhage was threatened, and shown its power as producing coagulation of the blood in the sac.

It is, however, to the uses of galvano-puncture or electrolysis in certain forms of vascular erectile tumours that I wish more especially to direct your attention as a most valuable addition to our means of treating these often formidable growths. I do not speak of it as a general method, you will observe; for there are many forms of nævi and erectile tumours—in truth, a majority of that class of diseases—in which other methods are more rapidly effective.

Galvano-puncture is specially indicated in those cases in which the erectile tumour is deep-seated and covered by healthy, undiscoloured skin. Until a few years ago, our interference in such cases was limited to dissecting off and reflecting the superimposed textures, so as to expose the tumour without touching it with the knife, and then strangulating it by strong ligatures, and, when the growth had sloughed and separated, replacing the flaps of skin; or by ligature of large arterial trunks indirectly connected with the growth, as, for example, ligature of the carotid artery for orbital erectile growths. The former method was attended with grave inconveniences and dangers; and the latter, besides entailing risk, was most uncertain in its effects, as you can readily understand from the nature of the disease. More recently, injections with the perchloride of iron took the place of these methods, and, in a great number of cases, answered very well, but in others a very considerable amount of sloughing took place before the rest of the tumour had been consolidated, and in such cases severe hæmorrhage occurred, and the life of the patient was endangered. In some cases also the injections of perchloride were attended with a rapidly fatal issue, apparently from thrombosis. I must, however, say that I never saw such a result, though I have long used, and continue to use, the perchloride of iron injections, and I can only attribute such accidents to the neglect of tearing up the texture of the tumour before injecting the perchloride.

Contrast of the results of different methods is perhaps the most effectual way of impressing their comparative advantages, and shows what advance our science is making; let me, therefore, bring under your notice the following cases from my own practice. An infant, six weeks old, was sent to my care on account of a deep-seated pulsating erectile tumour, occupying the palm of the hand, and extending up to the wrist. The tumour had been growing rapidly, and at one point the skin was thin and discoloured. I used injection of perchloride of iron, and part consolidated. Again it was used, and the consolidation was followed by inflammation and the separation of a small central slough. From the ulcerated surface, bleeding took place, and though arrested by local application of the perchloride, it returned from time to time, and as the child's life was thus endangered, and the growth seemed rather to increase than diminish, I was forced to amputate in the forearm, when the infant was eight weeks old. She made a very rapid recovery, but with the loss of a hand. I show you here the cast of the hand of an infant affected with deep-seated pulsating erectile tumour very similar to the former. In this case I applied electrolysis during three months while the child was under my care in hospital, and by several applications of the battery the growth began to consolidate and contract, whilst, except at the time of an application, the child suffered no irritation. As it was inconvenient for the mother to remain in hospital, I asked Dr. Connel, of Peebles, who had sent the case to me, to conduct the remainder of the treatment. As the child's parents lived at some distance from Peebles, the applications of electrolysis could only be made at long and irregular intervals. Here is a cast of the hand when the cure was completed; and, when you contrast it with this preparation of the amputated hand of my former case, you will, I think, agree with me that the result is a triumphant vindication of the value of electrolysis in such cases. I have used it also in other cases with advantage, especially in an enormous erectile nævus of the face of a girl. It is of importance that it should not be applied indiscriminately to all cases of nævus or erectile tumours. I think its use should be restricted to cases where the erectile growth is covered to some depth by healthy skin. The needles are coated to a certain length with a non-conducting material, which protects the healthy superimposed texture, whilst the uncovered points passed into the growth act on it at different parts. If needles be applied to a superficial erectile spot, they cauterise and leave more mark than other methods, such as application of nitric acid, perchloride of iron, or iodine. Thus, in treating the large erectile nævus of the face, the electrolysis was only used to the deep-seated portions, while the superficial discoloured marks were treated by applications of perchloride, iodine, etc.

These references to bloodless methods of treating surgical cases remind me that for some time back the medical profession has been trying, like Lady Macbeth, to wash its hands from all stain of blood. "Ecclesia abhorret e sanguine" was the decree of the Council of Tours, with how much truth let history say. "Medicina abhorret e sanguine" is apparently the watchword of expectant medicine; and so, except in the hands of a few hardened heterodox individuals, venesection has become almost obsolete. What has led to this great change? May I put the question to the seniors present, What led you to abandon general depletion? Was it from the dire effects you had seen of its use? Was it change of type in disease? Could it be change of fashion?

It has, I know, been fashionable for some time to decry the practice of general blood-letting, and hence any views to the contrary will probably be considered very heterodox. I do not feel inclined, however, to withhold an opinion which my own experience in the past satisfies me is practically correct. The opponents to general depletion denounce the practice as

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being unscientific, and urge that it is so (1) because it is not in accordance with pathology, and (2) because it diminishes the vital powers of the patient, and thus interferes with Nature's efforts to overcome disease and restore healthy action. They ask us: "Can depletion remove the inflammatory infiltration which has taken place, and which constitutes the most formidable part of the diseased action?" Most decidedly not—and no one would suppose for a moment that it could do so directly; but, by relieving the preceding phenomena of excited action and congestion, it will tend to prevent further infiltration, organic change, and functional disorder, and thus leave less mischief to repair. I hold that general depletion is quite in accordance with the pathology of inflammation, so long as we view that action in its progress as a whole, and do not limit our ideas to one part or to one result of the action. The second objection is in great part pure assertion, and what grain of truth there is in it is drawn from an experience in treating a class of patients whose previous health or habits, or both, render them unfit to bear even moderate depletion, or patients who have been admitted into the hospital when the inflammation (say pneumonia) was far advanced and extensive. Surely, the employment of venesection in improper cases is no good argument against its judicious use. As to the exaggerated pictures sometimes drawn of the slow and imperfect recoveries, the permanent debility, and the wasted and anæmic forms of the victims of blood-letting, I can only in charity suppose that they are sketched by those who have had no opportunity of seeing the practice they condemn, and who, therefore, draw largely on their imaginations to describe what they suppose should be the results. Although I have seen a good deal of the use, and also, I have no hesitation in saying, the abuse of the lancet, when venesection was practised indiscriminately, and when it was customary for people to be bled periodically as a preventive to disease, I cannot recall any of these fearful results; but I can remember many a case where relief from suffering was afforded and cure of acute disease effected by the prompt and judicious use of blood-letting. It should not be forgotten that the continuance of the intense febrile state, which is symptomatic of the local inflammation, is a far greater source of exhaustion of the vital powers than the timeous abstraction of a few ounces of blood.

From the subject of bloodless surgery I might very naturally pass to the subject of arterial lesions and aneurisms, and their treatment in the present day as compared with the past. The subject is undoubtedly inviting, and one of the most important in surgery; but there are two reasons why I think it advisable merely touch on it—first, because there has been so much attention directed to it of late by special series of lectures; and secondly, it is one of my "hobbies," and that kind of equitation does not answer when time is limited. I may, however, briefly state that, though I have successfully employed both flexion and compression in the treatment of true aneurism, and although, as I have pointed out elsewhere, I hold these methods generally advisable in the early stage of aneurism, considered even as a preparation for ligature, and as in many cases effecting a cure, I do not believe either of them will take the place of ligature. The vessels in which it would be most desirable to avoid deligation—viz., the great arteries at the root of the neck—are just those in which efficient compression is not easily secured, and flexion is out of the question; whilst in the arteries of the extremities, my own experience has not impressed me with any great risk if the operation for ligature be carefully performed.

There is one form of aneurism, to the treatment of which I drew attention some years ago:

Traumatic Varicose Aneurism of the Femoral Artery.—In all the cases which I could collate, and they were few, I found the results had been anything but satisfactory. In cases where the direct method had been adopted of opening sac and tying the artery above and below the wounded point, the inevitable interference with the wounded femoral vein led to its obstruction, and gangrene followed; whilst in cases where the femoral had been tied on the Hunterian method, it failed to effect a cure. In the case which led me to consider the subject, I first tried compression and flexion for some time, but without the slightest advantage, and then I decided to tie the femoral above and below the false sac without interfering with or opening of the sac, thus avoiding all interference with the wounded vein, and at the same time preventing retrograde circulation into the sac, and I carried my plan into execution successfully. I see that Mr. Holmes, in his lectures before the College of Surgeons of England, whilst he considers my method the best if operation is to be performed, speaks hopefully of compression as likely to obviate the necessity for operation. But, in the case which I published, compression and flexion combined were carefully and persistently carried out for some time without the slightest effect; and when we consider the communication between the false sac and the artery and vein, and consequently the want of limitation to favour coagulation, I cannot speak so hopefully of compression proving successful. If Mr. Holmes considers the operation I adopted somewhat difficult in execution, what would he say to the latest method of treatment published, where the surgeon, after tying the femoral in Scarpa's triangle without effect, cut out bodily the false sac and the vessels communicating with it as a last resource!

Tumours.—The subject of tumours in the present day has two aspects—a pathological one purely scientific; the other a clinical or practical one. Doubtless a time will come when the labours of pure pathologists in investigating the anatomical structure of tumours will have more evident relation to practice than now; for as yet the bearings of pathological research, and the various classification of tumours founded on it in regard to practice are not marked. It is evident, I think, that, for the practical surgeon, any classification which does not proceed upon a study of the clinical or vital manifestations of the growth in its origin or during its progress can be of little service. However valuable a knowledge of the structure of the growth may be, that can only be ascertained after its removal; whereas the surgeon is naturally desirous of facts and observations which will guide him in the diagnosis and treatment of the tumour whilst it still forms a part of the organism. The attempts which have been made to apply the knowledge of the structure of tumours to diagnosis, by examination of small portions of their solid or fluid constituents removed prior to operation, are very imperfect, and might often mislead. It has happened to me, in several instances, that nothing has been found but blood-discs entire or broken down, or a little granular or amorphous matter, when the structure of the tumour after removal exhibited most marked characters of malignancy; so that, practically, I have little faith in such explorations as an aid to diagnosis. On the other hand, experience derived from the study of the vital manifestations and tendencies which characterise growths as divided into the "simple and malignant," enables the surgeon from experience to judge of the propriety of interfering or abstaining from operation in certain cases. Thus, if, from the history and examination of the case, he satisfies himself that the growth belongs to the simple class, he knows that, from the limitation of such tumours, he can be sure of effecting its complete removal, although its anatomical relations may be intricate and important; whilst, from the absence of constitutional cachexia, the prognosis of the result is favourable. Until a comparatively recent period, it used to be laid down as an axiom, that removal of tumours of the neck situated under the sterno-mastoid muscle should not be attempted; and we were directed to the failure in result when such attempts had been made—complete removal of the growths having been found impossible, and their rapid reproduction being the consequence. In the case of an enormous deep-seated tumour of the neck which was sent to my care from Lancashire twelve years ago, the objections I have alluded to were pressed against interference by the late Professor Syme, and I was referred to cases in which John Bell and Mr. Liston had been forced to leave portions of the tumours owing to their connexions; but I had examined into these cases, and felt no doubt, from their history, that they were both of malignant character, and, in fact, that even in these cases the tumours were all but removed. I pointed out this, as an encouragement for operation, where the tumour was of simple character, and therefore limited in its deep relations; and, relying on the character of the tumour, I decided to remove it, and did so successfully. I suppose no surgeon would now hesitate to operate in such cases; but interference with deep-seated malignant tumours is a very different matter, and, I think, should be avoided. There is another feature in the characteristics of tumours in which I have great faith—viz., that a growth originally of simple character, as evidenced by its originally slow development, consistence, etc., however much it may at a later stage degenerate locally, and manifest many of the symptoms of malignancy, never does become truly malignant, constituting a diathesis, so to speak, as in cancer or encephaloid growths; and that, therefore, we may remove such tumours with every prospect

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of success under circumstances where it would be unwarrantable to interfere were the growth truly malignant. In the huge osteo-fibroma of the bones of the forearm which I removed nearly thirty years ago, you have an instance of what I state. It had at first grown slowly, and without bad effect on the health; but latterly, from the pressure caused by its bulk and consistence, the soft parts had ulcerated; local applications had increased irritation, until at last it assumed a fungating surface, wasting the patient by the pain and discharge. When I saw her she was considered a hopeless case. She was pale; the skin of a yellowish tinge; and so anæmic that she appeared cachectic; and there were enlarged glands in the axilla and above the clavicle. But, trusting to the original character of the growth, I amputated the arm at once, and in less than three weeks she was able to be out; all bad symptoms disappeared, and for many years she continued to enjoy the most perfect health, and, so far as I know, is still alive and well. I point to these cases as examples of the value to the surgeon of the classification of tumours founded on the study of their clinical history and vital manifestations; but at the same time I am far from undervaluing the study of the structural anatomy and development of tumours in its proper place.

It must be allowed that the introduction of anæsthetics has given facilities for surgeons performing operations for the removal of tumours which could hardly have been attempted formerly without great risk, owing to the movements of the patient. My colleague Dr. Watson has now on several occasions excised the entire thyroid body successfully—an operation the feasibility of which had often been discussed formerly, but never accomplished until the present time, so far as I am aware. The success which now attends the performance of ovariotomy is, I believe, also greatly due to the leisurely and careful manner in which the steps of the operation can be accomplished, together with the advances which have been made in the accuracy of ovarian diagnosis. The success which has attended the operations of modern ovariotomists must excite admiration and congratulation on the relief afforded to suffering; but, when we contrast the advantages under which the operation is now performed with the conditions under which it was first performed in this city by John Lizars, we must be struck with the self-reliance and undaunted courage with which that bold surgeon carried out what was then a very formidable operation, in the face of opposition from the principal medical authorities of the time; and I think too little credit has been given him in regard to the work he did and the success he obtained under great disadvantages.

Air-Passages.—In the important department of the injuries and diseases of the air-passages, great advances have been made both in regard to diagnosis and treatment. The use of the laryngoscope in cases of chronic or subacute disease of the larynx, and for enabling us to ascertain how far the symptoms depend on organic changes, or merely on paralysis or spasm affecting the vocal cords from diseased innervation, or for discovering the position of small foreign bodies entangled in the larynx, or of intralaryngeal growths, is an invaluable accession to diagnosis, and in determining the question of operation and plan of procedure in different circumstances.

The operation of tracheotomy has also been extended to a class of cases in which it was formerly considered unsuitable; and new operations, such as the partial or even complete excision of the larynx, have been successfully performed; and in one case by Professor Billroth, an artificial substitute was adopted which enabled the patient to speak and read intelligibly.

Having had a very considerable experience in operations on the air-passages for injury or disease, I desire briefly to draw attention to some practical points. First, as regards injuries. There are some conditions not sufficiently insisted on in surgical works as to their dangers, or the practice to be adopted, where action requires to be prompt. Thus the danger from emphysema of the loose connective tissue of the neck is seldom adverted to; and yet I have seen a patient all but suffocated from this cause from a small oblique wound of the larynx inflicted with a penknife. In that case I had to perform laryngotomy, and was obliged to make numerous incisions to afford relief; when a simple enlargement of the wound, in the first instance, would have allowed the air to escape externally. Again, in tracheotomy for removal of foreign bodies, it is generally considered unnecessary to use a tube after the foreign body has been expelled, but merely to allow the incision to close at once. The consequence is that a good deal of trouble often results, for the wounds in the trachea and the superimposed parts do not correspond, and air and mucus escape into the cellular tissue, sometimes giving rise to considerable emphysematous swelling of the neck, and often leading to deep-seated irritation of the wound. In my own operations after removal of foreign bodies, I insert a tracheotomy-tube, and retain it until the surface of the wound is glazed by the effusion of lymph; and then approximate the margins of the wound by strips of plaster, so as to avoid all risk of confinement of air or mucus in the tissues in the vicinity of the trachea. Another point of importance is the question of exhibiting anæsthetics in operations for removal of foreign bodies. Many years ago, I drew attention to this, and pointed out that when the foreign body was loose in the trachea or bronchus, the exhibition of anæsthetics interfered with the force of the expulsive powers which usually eject the foreign substance; and, as happened in one of my own cases, the foreign body may be carried back by the incoming current of air, occlude the bronchus, and cause collapse of the corresponding lung. In other cases, as when the body is impacted in the bronchus or larynx, anæsthetics are most useful in enabling us to search for and remove the foreign substance. In doubtful cases, the rule should be to open the trachea without using anæsthetics; and if the foreign body be not expelled by the natural forces, then to administer chloroform to enable us to deal with it effectually. When, as in the case I have alluded to, a foreign body, such as a plum-stone, is impacted, and fairly occludes the bronchus, being carried before the inspired air, it follows that, the lung beyond being collapsed, there is no force behind to eject the substance. In such circumstances, it is well to avoid trying too much to displace it by means of bent probes or other instruments, unless the end of the instrument can be passed over and beyond the body, so as to tilt it out or allow air to pass to the lung beyond. Our continued efforts, besides exciting local irritability, are very likely to impact it more thoroughly; and I would therefore counsel the surgeon to abstain from useless efforts, and allow the patient to breathe by the sound lung, and wait the loosening of the foreign body by vital dilatation caused by its presence, when air will gradually pass beyond and expel it.

In hollow or tubular foreign bodies, the case is different; they can be easily removed if we take the proper method—one which I practised some thirteen years ago in the case where this trachea-tube had slipped down and become impacted in the left bronchus. Instead of trying to open the forceps and seize the edges of the tube, I passed the forceps closed into the tube, and then, expanding the blades and maintaining them expanded, the foreign body was withdrawn with the utmost facility.

The propriety of tracheotomy in cases of threatened asphyxia from œdema glottidis, arising from swallowing boiling fluid or inhaling the steam of boiling water, would seem so evident, as affording the only chance for life, that we would scarcely expect any difference of opinion; and yet I find it is by some considered unwarrantable, because the average results of such cases show so few recoveries. Now, in the first place, I doubt if we have statistics so extensive or accurate as to warrant such a conclusion; but allowing that the recoveries are few, we see that the want of success is mainly due to the fact that these injuries implicate other structures, such as the pharynx or œsophagus, or are complicated with the shock and other conditions of general scald. If, however, in such injuries, œdema of the parts about the glottis threatens asphyxia, it is evident that the patient has no chance of life, except by the operation; whilst no one will venture to deny that tracheotomy has, in many such cases, rescued the patient from impending death.

The value of tracheotomy in the acute and chronic affections of the larynx in adults, whether to afford relief from suffocative paroxysms or as a precautionary measure, is now so generally admitted that I need not occupy your time with that; but I desire to draw attention to two classes of cases in which this operation is sometimes performed, as affording temporary relief from suffocative paroxysms or impeded respiration. I mean (1) cases of aneurism or tumours pressing upon the laryngeal nerves, and causing spasms of the glottis; and (2) aneurismal tumours of the aorta or innominata impeding respiration by direct pressure on the trachea at the root of the neck. In the former class of cases, I consider the operation is not only warrantable, but advisable, or even imperative, because it gives relief from impending suffocation,

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and also alleviates conditions which tend to increase the aneurism, or even to hasten its rupture; so that tracheotomy prolongs life with comfort to the patient. In the second class of cases (aneurismal tumours at the root of the neck, pressing directly on the trachea), I cannot see the principle on which the operation is recommended. In such cases, the tumour is lower down than where we can open the trachea; and if we use a tube long enough to pass beyond the aneurism, we are in great risk of rupturing the sac, which generally, in such cases, presses upon, and causes absorption of, the tracheal fibro-cartilages, and projects the mucous membrane. Indeed, as pathological specimens show, the tracheal textures become incorporated, as it were, with the sac, and the aneurism generally thins and tends to ulcerate towards the trachea. Hence I cannot see how an opening in the trachea on the distal side of the impediment can relieve the breathing, whilst there is very evident risk of killing the patient by wounding the projecting and attenuated sac in opening the trachea, or rupturing it in trying to pass the trachea-tube beyond it. Here is a preparation from a case in which I made a very narrow escape from being involved in a most unpleasant predicament. I was asked to see a lady who had long suffered from bronchitis and asthmatic attacks, and in whom laryngeal symptoms seemed to indicate commencing œdema-glottidis. As the medical gentleman informed me that the late Dr. Begbie had been seeing the patient, and, as I understood, the laryngeal symptoms were not very urgent, I suggested that Dr. Begbie should be first asked to see the patient; and, if he considered tracheotomy advisable, I would come and operate. I heard nothing further until, meeting the medical attendant a day or two afterwards, I inquired about the case, and was informed that, after Dr. Begbie had examined the patient generally, he proceeded to examine the throat and mouth by gently depressing the tongue; this caused retching, followed by a fearful gush of arterial blood, which proved instantaneously fatal. If I had operated, the insertion of the tube could scarcely have failed to have ruptured the sac; and I leave you to conceive the situation. I think I have said enough to show that I am decidedly opposed to operation in cases of this latter class. But should anyone be inclined to operate, I would advise the use of a large-sized, bulbous-pointed, soft gum-catheter, with an enlarged opening, to pass beyond the tumour, instead of the metallic tube.

Although from an early period tracheotomy was occasionally resorted to in croup in children, it is only of comparatively recent date that it has been recognised as a warrantable operation in such cases. In this city and in Leith croupous affections used to be very common, and yet the operation of tracheotomy was so rare that I never saw it performed for croup when I was a student; indeed, so great was the prejudice against it, that I have been informed that in 1820 a medical gentleman of high standing in this city, who was anxious to afford a chance of relief to two of his children affected by croup, could not prevail on any of the principal surgeons to perform tracheotomy. At his urgent request, Dr. Bryce, a gentleman in general practice, operated on one of the children, without ultimate success, as both the children died. This strong prejudice against operations in croup arose, I think, from somewhat erroneous views regarding its pathology. In post-mortem examinations, the false membranes extending from the larynx into the trachea and bronchi, and often found in the form of complete tubular casts—a condition so different from the laryngitis of adults,—led to the idea that the trachea was affected in the first instance, or at least simultaneously with the larynx, and the disease was named "cynanche trachealis," in contradistinction to laryngitis. Hence most physicians and surgeons considered it improper to operate when the disease, as they thought, was situated at and beyond the part where the aperture in the trachea could be effected. From what I have noticed of the progressive symptoms of croup, and seen of the state of the diseased parts in cases when children died in the early stage, and especially from the immediate relief from impending suffocation afforded by tracheotomy, even in cases which subsequently proved fatal by extension of the false membrane, I feel satisfied that the disease always commences in the larynx, and only extends downwards as it progresses, and hence I dismiss the objection that the disease is from the first situated too low down for tracheotomy to afford relief. The principal objection to operating in croup is undoubtedly the tendency of the disease to spread downwards after the operation. We owe it to our continental brethren, especially to Trousseau, that tracheotomy in croup has now become an established operation. I must confess that from early teaching I was strongly prejudiced against the practice; but, fortunately for me, it happened that a child was brought to me in the agonies of suffocation, so that I could not but try and relieve it. The relief was immediate and the result successful, and thus I could not deny the like chance to others. I have now performed tracheotomy for simple croup and diphtheritic croup one hundred and three times, and saved thirty-four out of that number, or an average of about one life saved in three cases; and it must be remembered that at first I only operated as a last resort, and even yet I do not see my way to operate quite so early as some French surgeons seem to do. I think, however, that there should be no delay when the character of the breathing and the contracted state of the thoracic parietes show that the lungs are not being distended with air. By operating early, we avoid the risk of œdema, or congestion of the lungs, and of the effects of non-oxygenised blood circulating in the brain.

I think it right, however, to warn my younger brethren that it will require some effort to bear up against discouraging results. I know of no class of cases in which the experience is so painful: an average gives little idea of it. You may have five or six cases in succession, all proving fatal, before you meet with one redeeming success; but then you have the temporary relief almost invariably afforded to the little sufferer; the resuscitations in some cases apparently dead; and if you persevere the average of success will come. Above all, we must recollect that, however disagreeable and unpleasant to ourselves, we are bound to lose sight of that, and give the patient the only chance for life.

In speaking of operations in croup, I used the terms simple and diphtheritic croup; and I did so advisedly, because, whilst the average results of my operations have been as good in the one disease as in the other, I consider them as essentially different diseases, and I do not believe that an extended experience would give the same amount of success in diphtheritic as in simple croup. It has been with no small amazement I have read some of the views recently propagated, that croup and diphtheritic croup are identical. I can hardly conceive two diseases more different, whether we consider them in their causation-symptoms or sequelæ. In one feature, doubtless, there is similarity, because when in diphtheria the air-passages become affected, the presence of the membrane exuded necessarily gives rise to the same physical symptoms as to sound of voice, breathing, and asphyxiating paroxysms, as the false membrane in simple croup does. But in diphtheria the exudations in the larynx or elsewhere are the local expression of a special blood-disease, which may, and often does, destroy life without affecting the air-passages at all; whereas in simple croup the false membrane is the result of a local inflammation. The causes or circumstances in which the two diseases originate are, according to my experience, very different. Ordinary croup almost invariably arises from exposure to cold, or occasionally from some source of local irritation, leading directly to inflammation of the mouth, as dentition. It is most frequent during cold, moist weather, and specially during the prevalence of easterly or north-easterly winds. The late Professor Alison used to say that, according to his observation amongst the poorer classes, the affection most frequently occurred between Saturday night and Monday morning; and he attributed this to the effects of washing the floors of their rooms on the Saturday night after the children were in bed. Diphtheria, on the other hand, prevails at all seasons and during all kinds of weather—sometimes as an epidemic, and then generally coincident with scarlet fever; but always more or less connected with, or influenced by, the effects of sewage emanations or imperfect drainage. Hence we meet with it more frequently amongst the better classes, and in houses with modern accommodations, such as fixed wash-basins and water-closet accommodation in immediate connexion with nurseries or bedrooms.

Diphtheria is undoubtedly infectious both by direct contact of the sputa with a healthy mucous surface, as has been too often proved by members of our profession and by mothers, or by emanations from the affected person, as evidenced by the manner in which it spreads in a family. Simple croup, as I have been accustomed to see it, has no such contagious or infectious character. In dispensary practice, I have frequently seen a child affected with croup lying in a confined room amongst other children; but I never knew the disease to spread as diphtheria does. The peculiar nervous affection, the para-

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lysis which follows diphtheria, has no counterpart in ordinary croup; nor, in cases of simple croup, were we accustomed to see the white leathery pellicle on the tonsils or fauces, though it was a very common disease in Edinburgh and its vicinity. I know that in France the fauces were always examined, and that false membrane or pellicle were considered symptomatic of croup; but that only leads me to believe that the disease in France was always of a different type—diphtheritic, in fact.

Certainly, in this country, croup, as we used to meet with it, is rarer, whilst diphtheritic croup is more frequent, and met with under different circumstances. From 1828 until about twenty-five years later, diphtheria seemed to have ceased, though simple croup was common; but, when nearly a generation had passed away, the disease was unhesitatingly recognised by some who had seen the previous epidemic; and I would refer you to the interesting paper on Diphtheria and its Sequelæ, by the late Dr. Begbie, in his work entitled "Contributions to Practical Medicine," in corroboration of what I say. Considering the two diseases from a surgical point of view, even in successful cases, the constitutional conditions are marked in diphtheria by paralytic complications affecting the pharynx and larynx, by albuminuria and the asthenic state of the patient, and by the tendency of the wound to take on the diphtheritic action. But it is in the fatal cases that I think the distinction between the two forms of disease is most marked by the mode of death. In a case of simple croup, the result is decided within two or three days—indeed, generally in a shorter period—by the false membrane extending beyond the opening and tube. In diphtheria, I have on many occasions lost patients eighteen days or three weeks after the operation, and when the tube had been removed for some time, from asthenia and gradual failure of vital powers, or from paralysis of the pharynx, preventing swallowing, and so leading to imperfect nutrition; and in other cases I have known it prove fatal from sudden failure of the heart's action and syncope.

I drew attention to these differences many years ago in a paper read before the Edinburgh Medico-Chirurgical Society, and subsequently published; and, looking back on large experience in croup and diphtheritic croup, I think the distinctive characters are too marked to allow me to consider the diseases as identical, merely because they possess one feature in common.

The bold operation for complete removal of the larynx for malignant disease, successfully carried out by Professor Billroth, and the adaptation of an artificial substitute, so ingeniously constructed as to enable the patient to read and speak, has not, so far as I am aware, been yet practised in this country, though I understand other successful results have been obtained on the Continent. Looking at what has been done, may we not anticipate a time when operative skill and mechanical ingenuity, proceeding *pari passu*, may reduce the dangers of the operation to a minimum, and advance the powers of the artificial substitute to the maximum; and so enable an unfortunate, ungifted with the power of song, to get rid of his unmusical larynx, and suit himself with one *à la* Mario or Lablache, according to his taste?

Treatment of Wounds and Surgical Dressings.—I could not properly conclude an Address on Surgery in the present day without some remarks on a subject which is attracting so much attention as the treatment of wounds and surgical dressings. The history of surgery contains no stranger chapter than the singular changes which from time to time have taken place in regard to the treatment of wounds. If we go back to the quasi-scientific age, when learned physicians laid down rules for dressing wounds *more canonico*, we find it was considered essential that every wound should undergo certain regular stages—"digestion, mundification, and incarnation,"—and no wound was allowed to heal by first intention. After amputation by the circular method, the cavity of the stump was stuffed with charpie soaked in aromatic spirits, or balsam lotions, to prevent putrescence; and, in flap amputations, the section of the limb and the flap were dressed separately until granulation took place. Into every deep wound tents or leaden tubes were thrust, to keep open a track for discharge to escape. We are at first apt to wonder how or on what principle such treatment could have been adopted, and how, in only a somewhat modified form, it continued to hold its place until the time of Hunter, and, in some places, until a much more recent period. Yet its first beginnings were probably the result of observation of certain cases or forms of wound, and used exceptionally until, in course of time, from mere routine practice it became exaggerated and used in all cases.

Most practical surgeons will admit that, in wounds implicating textures possessing different degrees of vitality and physical conformation (say an amputation), it can hardly be expected that all the divided structures should heal with equal rapidity, or in the same way. Whilst the skin and softer textures generally do so speedily, the denser and less vitalised textures, such as bone and tendon, must undergo changes of slower character; and, situated as these are, deeply in the wound, serous and bloody discharges are liable to collect around them, and, when the soft textures have united throughout by first intention, these bloody or serous discharges, being prevented from escaping, may, and often do, lead to deep-seated irritation and suppuration,—and hence the revived use of drainage-tubing in many cases in the present day. Such considerations probably at first led to the use of tents and the other parts of the system; and the amount of discharge arising from the method of dressing seems only to have served as an argument for the necessity of keeping the wounds open to allow of its escape. Then we must recollect that at that time surgeons acted merely as hands to the learned doctors, and to have ventured to have gone against the canonical authority was to be branded as a quack; and so the men who saw most of the dressing of wounds either kept silent or became the itinerant operators to whom we owe no small debt for the simplification of dressing wounds and of operations.

Even when the simple method of healing wounds was introduced, it was seldom professed openly. It was always ornamented with a judicious touch of the mysterious, or philosophical, as it was called. Perhaps no truer enunciation of the principles of the treatment of wounds has ever been made than that of Paracelsus, who was one of those who ventured to oppose the orthodox physicians: "It is the nature of flesh," says he, "to possess in itself an innate balsam which heals the wounds. . . . Nature hath her own doctor in every limb; wherefore every chirurgeon should know that it is not he, but Nature who heals. What do wounds need? Nothing. . . . . So the surgery of wounds is a mere defensive to prevent Nature suffering from any accident from without, in order that she may proceed unchecked in her operations." Yet Paracelsus thought it necessary to invent a sympathetic powder to recommend this method to the public. Mr. John Bell, in his remarks on wounds, says, "We find no one surgeon in Europe who ventured to unite wounds directly by adhesion, without pretending to have learned from some eastern sage, or to have found out by deep studies in philosophy and alchemy, a sympathetic, or as they often called, a philosophical cure of wounds"; and he is very severe on what he denounces as pretences of philosophy or science, "to make sure of rousing at least one-half of the learned world to combat in their behalf." Perhaps he is too severe in denying them the title of philosophical. If "The proper study of mankind is man," then assuredly on that important study these men had founded their philosophy. They had noticed that patients in general feel rather flattered by something special being done, some little halo of mystery to brighten their sufferings, and give importance. They saw that for one "Good Hezekiah" who meekly submits to so simple an application as a "poultice of figs," they would meet with a dozen Naamans "ready to turn away in rage" if there were not "some great thing" done, or some fuss made about their cases; and so, whilst they treated the wounds simply or left them to Nature, they amused and distracted the attention of their patient by enacting various little incantation scenes or mysteries. Some, like Paracelsus and Coldbatch, applied their sympathetics locally to the wound in the forms of vapour, powder, or constrictive plasters. Others still, of higher philosophical type, like Sir Kenelm Digby, did not trouble themselves to see the patient, merely some blood-stained rag from the wound, or the weapon that inflicted it. On these they bestowed all their care and attention, merely requiring that the patient should keep his wound "clean and cool." They had their failures like others, but their philosophical theory enabled them to account for them. Something had been overlooked in bringing them the bloody rag or weapon, and so "the finer spirits had escaped," and, of course, the failure was an accident, and no fault of the system. Were I the patient, I would decidedly prefer that the surgeon should bestow his attention on the blood-stained rag, leaving the wound "clean and cool," or swathe the knife which had inflicted the wound in any amount of carbolised prepared bandages, rather than he should wrap up and over-

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heat the wound with fold after fold of dressing and greasy cerecloth bandages, compressing the parts and confining the bloody and serous discharges. In a word, I would rather that his incantations were performed on something else than my wound. The truly philosophical views of the adhesive process, taught by John Hunter, gradually led to clearer notions as to the requirements of wounds, and the principles on which their treatment should be conducted; and nowhere were these views more fully and intelligently carried out into practice than in this city, mainly through the influence of the writings of John Bell, and subsequently by the treatises of Liston and Syme on the treatment of incised wounds. The principles laid down were simple: thorough cleansing of the cut surfaces, waiting until all oozing had ceased and the surfaces glazed with lymph, before uniting them finally by sutures. Cold applied for some hours to moderate excited action, then light, dry dressing, and no interference with the wound except what was required to keep it clean. But, at the same time, great attention was paid to the general state of the patient. The results obtained were excellent, and, until recently, this has been the system in use here. But simplicity has sources of failure, for it is apt to lead to carelessness in dressing. We are again in a transition state in regard to the treatment of wounds. The antiseptic method (as it is termed) of my esteemed colleague Professor Lister is being pressed in some quarters, to the exclusion of conditions which I think at least equally, if not more, important in the treatment of wounds and operations. This is not the place, nor is there time, to discuss the theory as to production of putrescence by germs from without, or whether that condition may not also arise from within owing to certain states of the blood and general system; nor yet as to the comparative value of the different antiseptics at present contending for pre-eminence. But some of the statements advanced in favour of the antiseptic system so ignore the success obtained by simple dressing and treatment of wounds, or assert such an amount of infallibility as to the curative powers of the special method, as to require notice. When I read statements to the effect "that the antiseptic method is to be regarded as one of the most important contributions to modern practice, inasmuch as it makes wounds heal by first intention, instead of going through the painful process of granulation and suppuration," I can only regard such statements as arising from want of experience in, or misrepresentation of, the simple method of treating wounds; for, assuredly healing by granulation is neither the object nor yet the general result of that treatment. Suppuration, I believe, is not unknown under the antiseptic method, whilst the average duration of treatment is certainly not lessened. But when I find a German professor and hospital surgeon stating that, after a year and a half's experience of the antiseptic treatment, he is able to guarantee with certainty a perfectly successful result to his operations, such assertion challenges closer examination, demands proof, and forces me to ask the question, How far, apart from other conditions, do different modes of dressing stand in the relation of cause to successful results? The answer to this important question must rest on sufficient data and carefully weighed statistics. It will not suffice to point to some brilliant results in individual cases, because all methods of treatment can produce that kind of proof; nor will it do to state that no deaths from pyæmia have occurred under the system. At one time, that term was never met with in the bills of mortality, and it is rapidly disappearing now. The statistics for proof must indicate the nature of the disease or injury for which the operation was performed, and the cause of death in fatal cases (for deaths still occur), not by a conventional term, but by giving the symptoms during life, and the organic lesions found after death.

With extensive statistics of this kind we would be better able to judge of the comparative advantages of different systems of treatment. At present all is assertion or reference to special cases, or to the not very definite statistics of foreign hospitals, and it is not a little curious that we hear most of the success from abroad. I think sufficient time and scope have been given to the antiseptic system in this country to enable those who use it to furnish statistics such as I have indicated, and thus to enable us to judge more dispassionately of its real merits. In comparing of late the results of my own hospital practice, I have been struck with the success which attended very simple treatment, and this leads me to question our progress in departing from such treatment for more complicated methods. Thus I find that, during a period of three years, out of sixty-three major amputations for disease, there were only three deaths; and of twenty-three cases of excision of joints, only two deaths, at a time when the treatment consisted in thoroughly cleansing the cut surface by pouring tepid water over it, and occasionally applying tincture of iodine, alone or diluted, on the flaps; whilst the dressing consisted merely in laying a veil of lint or thin muslin over the stump. Again, when preparing statistics of my amputations for my published lectures, I found evidence that certain conditions, such as the nature of the disease or injury necessitating the operation, had most important influence on the result; such influence, indeed, as I could not have supposed until the statistics brought it distinctly before me, and my later statistics corroborate my former; so that I cannot accept the statement that any method of dressing, however good, will ever enable us to guarantee success. Whilst I speak of the antiseptic system, meaning the special method, I need hardly say, that all surgeons have for their objects the avoidance of putrescence, though their views may differ as to the best way of attaining their object.

I cannot close without recommending to notice the advantages obtained in treating lacerated wounds and burns of the extremities by continuous immersion in the tepid bath. The avoidance of all meddling with the injured part, and of the agony of the patient caused by changing dressings, is thereby so completely obtained that the method requires only to be fairly tried to be satisfied of its advantages. In the case of burns these advantages are most conspicuous, for the constant moisture keeps the cicatricial tissue pliable, and motion of the parts can be effected gradually, whilst the limb is immersed in the bath. The water may be rendered antiseptic by carbolic or boracic acid should that be considered desirable.

In conclusion, I think the retrospect I have taken shows that when true principles have been disregarded or lost sight of, they have ultimately had their value recognised, and, modified and improved, have become the advances of the present day; and so for the future, I feel confident that all that is true and good in any system will emerge with greater beauty and usefulness that it has been purged of its dross by the tests of observation and candid criticism.

ORIGINAL COMMUNICATIONS.

NOTES OF CERTAIN CASES OF

PROLONGED AND APPARENTLY HOPELESS BLINDNESS IN WHICH SIGHT WAS RESTORED,

IN SOME BY OPERATION, IN OTHERS BY TREATMENT.

By CHARLES BELL TAYLOR, M.D., F.R.C.S.E.,
Surgeon to the Nottingham and Midland Eye Infirmary.

The cases here reported are all cases of recovery from prolonged blindness, and are principally interesting because, from various reasons, they had come to be considered of a hopeless character. Perhaps one of the most striking of these is that of a poor woman who was born blind, and who, after remaining in this condition for half a century, recovered most excellent sight.

Case 1.—Sarah B., aged fifty, of Hathersage, near Sheffield. This poor woman was born blind, and during her early years was subjected to various methods of treatment, including one or two operations, which, so far as I could learn, were attempts at solution for cataract. Her father had taken her to London, York, Liverpool, and elsewhere, in the hope of benefit, and she had also been subjected to a variety of treatment by various unqualified practitioners. She was an only child, and assured me that her father, who was a small tradesman, had completely exhausted his resources in this way. At last all hope was abandoned, and she was sent to the Blind Asylum at York, where she remained for some years, acquiring the usual arts and accomplishments taught in such places. She was afterwards, for some years, maintained in similar institutions; and when she came under my notice in November, 1874, was a parish patient of Mr. Taylor's, of Hathersage, a gentlemen whom I was at that time meeting in consultation, and who had kindly called my attention to this and one or two other interesting eye cases occurring among

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the poor persons under his care in that neighbourhood. Naturally, and as a matter of course, not the slightest hope of benefit from treatment was expected, and I had great difficulty in inducing this poor woman to submit to any. Ultimately, however, the guardians sent her over, at my request, to the Eye Infirmary at Nottingham, and she was placed under my care. On examination I found the pupils closed, and occupied with the remains of lymph, and dense hard calcareous cataracts in both eyes; perception of light, however, was good, and I felt little doubt as to the result if this dense matter which completely blocked the pupils could be safely extracted. I therefore placed her under the influence of ether, and removed the mass, with forceps and sharp hook, from both eyes at one *séance*—the right upwards, by Chiralt's incision, with an iridectomy; the left by Von Graefe's. Perhaps it would have been safer to have operated upon one eye only at once; but I argued that if the one eye succeeded she probably would not have the other operated on; if it failed she certainly would not; so that I was compelled to multiply my chances of success by a double venture. Fortunately, no bad symptoms followed, and at the end of a fortnight she was able to distinguish large objects, as shadows. The pupils were, nevertheless, still partially filled by old debris and newly-effused material, so that I sent her home for six weeks, in order that she might thoroughly recover before attempting any further operative interference. At the end of that time I performed a second iridectomy in each eye, and completely removed all obstructing matter from the pupillary area. A week later she was able to see large objects distinctly, though very intolerant of light; and from that time she went on improving, so far as sight was concerned (although she had repeated attacks of inflammation), until at last I was able to demonstrate to several professional friends that she had recovered perfectly excellent sight, both for near and distant objects.

Case 2 was that of a lady resident in one of the northern counties, who came to Nottingham to consult me in her sixty-fourth year. She had been blind—that is, with bare perception of light—for upwards of thirty years, during which time she had borne two children, one of whom accompanied her. It appeared that when about thirty years of age, this lady, who was in affluent circumstances, had an attack of what was considered slight inflammation in both eyes, which was treated, *secundem artem*, by her usual medical attendant, and subdued after confinement in a dark room for some weeks, leaving, however, considerable impairment of vision. This attack was followed by others; sight deteriorated more and more; until at last she could not see to go about. At this time she was taken to consult an eminent German practitioner, and remained on the Continent some months under his care. Some time after she was again treated by a continental practitioner, and remained abroad for a considerable period. No benefit resulted, however, and she returned home resigned to her fate. Years passed by, during which she consulted specialists in the metropolis and elsewhere without benefit. I hardly know why she came to me at last, but she did so without notice, merely sending a messenger desiring me to visit her at an hotel in this town. On examination I found that she had suffered from repeated attacks of iritis of long standing; that the pupils were reduced to mere points, and blocked with dense masses of lymph. Altogether the case had a very hopeless aspect, and I was discouraged by the fact that none of the gentlemen she had consulted had attempted any operative interference. Nevertheless, as she had perception of light, I proposed to operate, and, receiving her consent, did so on the following morning, under chloroform administered by my friend and colleague Mr. Worth. As I expected, the iris was very rotten, and difficult to extract. By making a double incision, I nevertheless succeed in removing a portion, both upwards and downwards, in each eye. She had no bad symptoms, and at the end of a fortnight was enabled to distinguish large objects as shadows. The capsule of the lens, however, had become converted into a dense leathery mass, and other portions of the artificial pupils which I had made were blocked with adherent iris-pigment. I therefore decided on extracting the lens altogether, which I did on both eyes some weeks later. The left eye seemed to have lost all vital reaction, and became atrophied, with but slight pain or inflammation. The wound in the right eye, however, healed without misadventure, and at last I secured a clear pupil, through which, with an appropriate lens, most excellent sight was restored—indeed, sufficient to enable this lady to read large print, such as is used in good-sized prayer-books; to write an excellent hand, to walk freely abroad unassisted, to recognise her children (two of whom she had never seen), and to perform all the ordinary duties of superintendent of a large and important establishment.

Case 3.—Mr. Robert M., of Draycott, near Nottingham, came under my care in his sixty-seventh year, under the following circumstances:—I had been seeing a patient for the Rev. Lloyd, vicar of Draycott, and in the course of conversation he mentioned to me that he had a case of incurable blindness in his parish; that the gentleman in question had been in this condition for many years, and was habitually led about by a boy employed for the purpose. I was further informed that the case was one of amaurosis complicated with some other disease, and that the patient had long ago consulted distinguished metropolitan surgeons, who were of opinion that nothing could be done for him. Mr. Lloyd was anxious for me to see this gentleman, and I expressed my willingness to do so, although I could not hope to be of any service. The patient at first declined to come to Nottingham, on the ground that his case was incurable, and some months elapsed; ultimately, however, Mr. Lloyd brought him to me, when I found that both pupils were firmly adherent all round, contracted to a point, and blocked by a dense mass of lymph and degenerate calcareous matter; the corneæ were steamy, and in the left eye a fluid vitreous was indicated by tremulous motions of the iris and calcareous matter whenever the eyeball was moved. There was not the slightest perception of light with this eye, and he had difficulty in indicating, in fact was uncertain, of the position of the window on a brilliant day, even with the right eye. He was, however, sensible to the projection of a lamp held a short distance from the globe in a dark room on the right side. He told me that his sight had been failing from boyhood; that he had been in his present helpless condition upwards of forty years; that he understood that he was suffering from amaurosis, and had been treated by the late Messrs. Travers, Laurence, and Weare, who held out no hope of recovery. I was not, of course, warranted, under these circumstances, in offering this patient much encouragement; but I, nevertheless, strongly urged him to let me operate upon the right eye, and take his chance of improvement. He was, however, quite hopeless, and returned home. Some months later, however, he sent word that he would submit to my treatment if I liked to operate for my own satisfaction, but that, as he was assured no benefit would result, he should go to no expense. This I was glad to do, and accordingly removed a large piece of rotten iris, and extracted a calcareous lump of cataract from the right eye, under chloroform administered by my colleague Mr. Worth. The vitreous was fluid. There was much difficulty in removing the iris, and it was necessary to get out the cataractous matter with my wire spoon. Some vitreous escaped during the operation; but the patient had little or no pain on recovery from the anæsthetic sleep, and none was developed subsequently. On removing the bandage at the end of a week, I found the contour of the globe restored, the wound healed, the pupil perfectly black, and was pleased to ascertain that the patient had recovered excellent sight both for reading and distance. The operation was performed in July, 1869, and when this gentleman called upon me four years later, I did not recognise him as the same person. His sight continued good; he spent hours daily in reading and writing; and, unless on special examination, no one would suspect that he had ever suffered from ocular defect. Certainly a more striking contrast to his former blind and helpless condition could not have been wished for.

Case 4.—Miss B., of Lenton, near Nottingham, aged twenty-eight. This apparently hopeless case came under my care in the following manner:—I had performed a slight operation upon the present patient's sister, who visited me for the purpose. During conversation, she mentioned that she had a sister who had been blind for some years, and that she had been twice operated upon by a distinguished surgeon in London. I expressed a wish to see the case, and, after some hesitation, she consented to bring her, on the distinct understanding that, as it was an utterly hopeless case, no expense should be incurred. I found that she had had iridectomy performed in both eyes; that the pupils were blocked with fully-formed cataracts, and perception of light abolished in the left eye. I urged her to submit to operation, and, after consultation with her friends, she consented. I then extracted on the right eye, under chloroform administered by Mr. Joseph White, surgeon, of Nottingham, whose patient she was. The

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operation was completed without misadventure, and she ultimately recovered very good sight, being able to read large print, distinguish persons at a considerable distance, and perform all the duties necessary for the management of a house.

I have notes of similar cases which have from time to time come under my notice during the past twelve years, but I must not weary you with details, although all are interesting. One of these was a blind beggar-man, who used to be led about by a dog at Scarborough, and who recovered excellent sight, both for reading and distance, by the formation of an artificial pupil. Another, a lad named C., aged twenty, from the same place, had been blind all his life from congenital cataract, and recovered very fair vision on extraction. A third case was that of a lady from Darlington, on whom I performed an extraction for cataract, and who recovered excellent sight, without spectacles, being enabled to read the signs across the road, and read small print, with an eye on which she had been blind upwards of forty years.

Another case, that of George A., of Bakewell, Derbyshire, was interesting from the fact that the patient had been discharged as incurable several years ago from the wards of a metropolitan hospital. This man had been injured while blasting rock. He was assured that both eyes were destroyed, and, in fact, one was reduced to a mere stump, and the other was seamed and scarred by the explosion. He had been blind for nearly twenty years, and was very unwilling to submit to any treatment on account of the hopeless character of his case. I managed, however, by three operations to secure him a clear artificial pupil, through which he recovered most excellent sight, and he is now earning his own living as a carrier.

A case somewhat similar, from the nature of the injury, occurred in the person of Robert B., of Alfreton, a man of sixty years of age, whose left eye was cut across the centre, and apparently destroyed, when he was nine years of age, by a blow with a piece of broken pot, and who lost the sight of the right eye about a year before. There was a broad deep scar with adherent iris and damaged lens-matter in the injured eye, and I had little hope of benefiting him by any interference with this eye. Before operating upon the other, however, I decided to do so, and, by a combination of iridectomy with extraction of old capsule, succeeded in restoring sight to the eye on which he had been blind so long. Indeed he could, when I last saw him, count windows on the opposite side of the way, and read newspaper type.

Another similar case to the above was that of Thomas B., of Southwell, whose right eye was apparently destroyed twenty years ago by a blow with a thorn, and who recovered excellent sight for reading and distance by an operation similar to the one above described.

In the title to this paper I have stated that some of the cases were restored by treatment, and I must not omit to mention these, because they strike at the root of the very general belief that amaurosis is incurable, and also because many patients have such a dread of operation that they are prevented from applying for treatment if they think they are likely to be subjected to any surgical procedure. One of these was a soldier named S., aged twenty-eight, who was discharged from the service with bare perception of light three years before I saw him. He was sent to me from Doncaster, and I found, on ophthalmoscopic examination, that both optic discs were atrophied; nevertheless, by the persevering injection of acetate of strychnine he recovered sufficient sight to take a situation as groom with my friend Dr. Forbes, of Eastwood.

This remarkable patient I had the honour of presenting to the members of the British Medical Association at King's College in London, 1874, on which occasion he was examined by several distinguished ophthalmic surgeons, who confirmed my diagnosis. I only regret to add that I lost sight of him on that occasion, and have not seen him since, though I have heard that he lapsed into dissolute habits, and gradually lost his sight again. The other case sent to me from Liverpool is specially interesting, as the patient, Mr. Edward F., was captain of a merchant vessel, a profession requiring exceptionally good sight. After years of comparative blindness he was under similar treatment enabled to read and to resume his very responsible position—one requiring such perfectly distinct vision,—and has since made several voyages to the entire satisfaction of his employers and himself. He continues the treatment, and has not had any return, or even threatening, of the malady which was fast exhausting his resources when he first applied to me.

I have not brought these cases forward in any egotistical spirit. The cases I have recorded are simply a plain statement of facts; they appear to me important, and worthy of notice in a scientific point of view. To restore a fellow-creature to sight must ever rank among the highest and most gratifying of human achievements; and I think the saying that "he who hopes most, believes most, and attempts most, will accomplish most," is illustrated by the results attained. Any way, the cases show the advantage of such institutions as the Nottingham and Midland Eye Infirmary, where I am delighted to see any of my professional brethren, and where we are always glad to receive patients from this county. I also trust that the record of these cases may be the means of inducing some afflicted persons who erroneously suppose that their cases are hopeless to apply to similar institutions for beneficial treatment: that there are many such patients who are curable in our blind asylums and elsewhere throughout the country, I am well assured.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

MIDDLESEX HOSPITAL.

Case 1.—*Large Epithelioma of the Lip, involving the adjacent portion of the Lower Maxilla—Operation—Recovery.*

(Under the care of Mr. GEORGE LAWSON.)

THOMAS A., aged sixty-five, a labourer, was admitted into Forbes ward on March 11, 1874, suffering from a large epithelioma of the lower lip. He had always been a healthy man, and accustomed to smoke a clay pipe, which he usually held in the right corner of his mouth. He stated that the disease commenced about two years before, "as a pimple," at the right angle of the mouth; this ulcerated, and the edges thickened. Gradually but steadily the disease spread; the thick and hard portions increased in area, and then ulcerated. The epithelioma thus continued to grow up to the time of his admission into hospital.

State on Admission.—There is now a thick fleshy epitheliomatous growth involving the whole of the lower lip, and at each angle slightly invading the upper lip. It extends downwards so as to include all the skin of the chin as far as the lower border of the inferior maxilla. Examined within the mouth, the diseased mass is found to be firmly adherent to the corresponding portion of bone of the lower maxilla. On the right side the adhesion extends to the first molar, and on the left as far as the canine. The surface of the disease is nodulated and ulcerated, and discharges an offensive yellow pus. Immediately behind the symphisis of the jaw there is a large gland.

As the man was in constant pain, Mr. Lawson decided to remove the whole of the disease, and give him some relief, even though it should be only temporary.

April 17.—Mr. Lawson excised the whole of the disease, dissecting it off from the lower maxilla, to which it was firmly adherent, and applied very freely the hot iron to the portion of bone affected by the disease, so as to cause a large exfoliation. He then dissected out the enlarged gland behind the symphisis. On making a section of this gland, it was found to be free of disease, and only enlarged from irritation. From this operation the patient progressed very favourably.

After the first effects of the operation were over, he soon began to experience great relief. The surface of bone which had been burnt with the hot iron exfoliated, and was lifted away on June 3, and left a healthy granulating surface. The whole wound is now cicatrised, and on July 12 the patient left the hospital.

Remarks.—Considering the large amount of integument that was excised, it is very remarkable that the deformity is so slight. The mouth is now somewhat contracted, and the exposed portion of the lower maxilla is covered in by a thin cicatricial tissue, whilst the skin immediately surrounding it is adherent to the bone. One reason why the deformity is so little marked is that the jaw is edentulous, and there are consequently no teeth exposed to draw attention to the part.

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For notes of the following cases we are indebted to Mr. Cree, the House-Surgeon.]

Case 2.—Fracture of Skull—Fracture of Ribs—Death.

(Under the care of Mr. DE MORGAN.)

Ellen L., admitted May 6, 1.10 p.m. She fell from a window, about forty feet from the ground, whilst hanging clothes out of window. Breathing in jerky manner; pulse full; conjunctivæ insensible; pupils dilated and fixed; is very restless; crepitation in chest. 2.45 p.m.: Pulse 128; skin cold and clammy. The ribs are fractured on the right side from the axilla downwards. Respirations 36. Tenderness on the right side of chest. Great collapse; pupils dilated, but occasionally contract fully and regularly for a short space. Ribs on fractured side of chest to be strapped. Brandy ℥ij.

7th.—Tossing limbs restlessly about; moaning and muttering incoherently; is somewhat violent when the movements are restrained. Both pupils dilated widely, and very sluggish. Puse 126, very small; respirations 40, spasmodic, and accompanied by râles. Does not answer questions, or put out the tongue when told to do so. There is a large bruise behind, below, and somewhat in front of the left ear, and extending halfway down the sterno-mastoid. 2 p.m.: Pulse 140. Venesection to forty ounces. After venesection, pulse 126. Liq. opi sedativ. ℥xxv.

8th.—After bleeding, the breathing was somewhat relieved, and the patient became much quieter after the opiate. Has been very restless this morning; still moaning; seems much weaker; lungs more clogged with mucus. 2 p.m.: Still very restless, throwing off the clothes.

9th.—4.15 a.m.: Death.

Post-mortem.—Extensive bruising on left side of neck, over chest, and right side of abdomen. A considerable quantity of blood beneath scalp on vertex and left side of head. Removal of the pericranium showed an extensive fracture, with marked depression of a large plate of bone on left side of head. The line of fracture ran through the squamous part of the temporal, the parietal, and occipital bones, crossing over the middle line close to the lambdoidal suture. In the left parietal and temporal region the fracture was starred, two additional lines passing backwards from the boundary line of the whole area, so that on removal of the calvaria the portions involved were separated into four fragments. A mass of black adherent clot was lodged beneath the dura mater, under the line of fracture. After removing the brain and dura mater, the fracture was traced as follows:—On right side of foramen magnum a fracture started, running almost directly backwards to an inch from, and turning slightly to, median line, becoming continuous with the fracture of the vertex. Close to the origin of this fracture it was joined by another starting from the foramen lacerum posterius. On the left side the fracture through the squamous passed through the petrous portion of the temporal bone, terminating at the foramen lacerum. Much blood was effused within the pectoral and intercostal muscles. On the right side the eight upper ribs were fractured—the first at its neck, the second, third, fifth, sixth, and seventh at their angles and just outside the cartilages, the fourth at its middle and close to the cartilages, and the eighth at its angle. On the left side the four upper ribs were fractured, the first and fourth about the neck, and second and third at their angles. On each side there was extensive subpleural ecchymosis. The right scapula was much shattered across the middle of the blade, and the scapular muscles infiltrated with blood. The posterior angle of the left cerebral hemisphere, and the posterior part of the left half of the cerebellum were each the seat of a small laceration. The posterior part of the right lung was lacerated in two or three places. Both lungs much engorged.

Case 3.—Fracture of Skull—Fracture of Ribs—Death.

(Under the care of Mr. HULKE.)

E. L., aged fifty-seven. Admitted April 7, having fallen about twelve feet through a trap door. Is insensible, extremities cold, pulse small, pupils contracted and fixed; respiration jerking, laboured, accompanied by puffing out of the cheeks; contraction of left elbow; convulsed; grinding of teeth and groaning. Both shins and nose are grazed; there is a wound an inch and a half long under chin.

April 8—Still quite unconscious; moaning occasionally; respiration occasionally laboured; chest full of râles; lying with limbs extended, rather rigid, and resists any movement of them. No irregularity of vertex of skull felt. Pulse 92; temperature 100°. 10 p.m.: Pulse 100; temperature 102·2°. Calomel gr. iv., hst. sennæ co. ℥jss. Four leeches behind each ear.

9th.—Still insensible; pupils still somewhat contracted, but right more so than left. The bowels have been freely open. Respiration very shallow and jerky, chiefly abdominal, accompanied by a moaning noise. Rigidity of limbs much less marked; mostly so in left arm. Pulse 128; temperature 103·9°. 2 p.m.: The temperature being over 104°, fifteen ounces of blood taken from right arm with the idea of reducing it. 10 p.m.: Temperature 105°; the pulse cannot be felt. 10.30 p.m.: Death.

Post-mortem.—Rigidity marked. Body well nourished. On reflecting the scalp a quantity of blood was found beneath the pericranium and in the temporal muscle, on removing which a linear fracture was found running across the squamous portion of the temporal bone, parallel to but above zygoma, and extending into zygomatic fossa. On removal of the calvaria, the fracture was traced forwards across the back of the orbital plate of the frontal bone, reaching nearly to optic foramen. Within the orbit and contiguous ethmoidal cells there was a small quantity of blood effused. Beneath the dura mater, in the left temporal region, was a considerable quantity of black clot; the cortical grey matter of the temporo-sphenoid lobe was here lacerated. The left olfactory nerve and adjacent part of the frontal lobe were also reduced to pulp. Eight ribs on the left side were fractured—some in more than one place. There was considerable extravasation beneath and within the pleuræ. Lungs congested. Some fluid blood existed in the abdominal cavity, especially in left lumbar region; the supra-renal capsule was embedded in black clot. No laceration of kidney. Small laceration of quadrate lobe of liver.

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Medical Times and Gazette.

SATURDAY, AUGUST 21, 1875.

THE ADDRESS IN SURGERY TO THE BRITISH MEDICAL ASSOCIATION.

Professor Spence, in commencing his most admirable Address in Surgery, said that he purposed to review the progress of surgery in relation to the past, limiting himself, of course, to some departments of surgery, as it would be simply impossible for him to attempt the whole range of his subject. But he

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thought that it was only by reviewing surgery in this way that it would be possible to estimate what real progress the science has made, and in what that progress consists,—whether in the discovery of something absolutely new, or in the modification and improvement of methods of treatment, the intrinsic value of which had not been recognised, or which had fallen into disuse because a good principle had been carried out in a faulty way. His address, consequently, in tone somewhat resembles the Address in Medicine delivered by Dr. Warburton Begbie, inasmuch as he is led to compare modern with ancient surgery, and to show that some of the more prominent recent changes in surgical practice are revivals of old principles of treatment, though the method of their practical application has been so modified and improved as to constitute real advances in surgery. The first illustration he gives of this is perhaps the most telling,—the now favourite method of treating fractures of the lower extremities by extension by weight and pulley. John Bell, in his great work on Surgery, when speaking of the treatment of fractures, in order to show his readers what to avoid takes them into the "magazines of Scultetus, Hildanus, and Parceus, filled with engines not unworthy of the chambers of the Inquisition," and among the "lumber" contained in the magazine of Hildanus he shows us an apparatus for applying permanent extension, consisting of a weight with circle and strap for hanging from the ankle, and a bed with a surscingle or perineal band of horse-girth for fixing the body to the upper part of the bed. Take the most improved modern weight-and-pulley treatment, and the principle is the same, but the pull of the weight is diffused by means of plaster-strips over a large surface of the limb, instead of acting only on the ankle, and the cord runs over a pulley fixed at the foot of the bed, while by tilting-up the lower end of the bed the weight of the body itself is made to supply the counter-extension, and the perineal band is got rid of—and only very lately got rid of. "In this you have," the Professor observes, "the simplest, least irksome, and most perfect method I know of treating fractures of the thigh, and, if possible, still more useful in treating oblique fractures of the tibia." The improved method of application makes the treatment a marked step in modern surgery, but the principle was recognised, and, not very rudely, carried out in the days of Hildanus, and remained hidden away and forgotten in his "magazine," or only exhibited as "lumber." Professor Spence next shows that refracture and readjustment of a badly united fracture seems to have been a common proceeding amongst Arabian surgeons; and that Abulcasis, who strongly reprobated the practice, yet had himself no hesitation in recommending resection of old fractures; and that here again "we find ourselves coming back to old methods, for among our most recent advances, more especially since subcutaneous and subperiosteal operations have been introduced, resections to remove deformity resulting from anchylosis or badly set fractures have been practised with much advantage," and he quotes Mr. Butcher's case, and a case of his own, of successful refracture and readjustment of old badly-set fracture of the femur. His observations on operations for the cure of ununited fractures, on the advance made in our knowledge of the anatomy and physiology of the periosteum, and the nutrition of bone, and on the value of subperiosteal surgery, especially in the treatment of acute necrosis, will undoubtedly be read with much interest and consideration, and be looked upon as one of the most valuable parts of his able address. In speaking of the manual method of reducing dislocations of the hip, he again shows that this is a revival of a mode of treatment mentioned by Hippocrates and Paulus Ægineta, described by Pouteau, Desprès, Nélaton, and other French surgeons, and especially reintroduced into practice by Drs. Reid and Bigelow, of the United States. In commenting on the subject of "bloodless surgery," the learned Professor speaks of Esmarch's method as an example of a great improvement in carrying out a principle, but decides that it also can only be looked on as a revival, not as new, the principle having been "clearly enunciated by the late Sir Charles Bell." On the special value and the exceptions to the use of this method, Professor Spence's observations are highly practical and noteworthy, as are also his remarks on the écraseur, the galvano-cautery, galvano-puncture, and the use of injections of perchloride of iron.

It is not possible to speak here of all the various departments of surgery of which Professor Spence treats, but we must draw attention to his remarks on the advances made in the diagnosis and treatment of injuries and diseases of the air-passages, and especially to his highly valuable and practical observations on tracheotomy. He stated that he had performed that operation "for simple croup and diphtheritic croup one hundred and three times, and saved thirty-four out of that number," though from early teaching he was strongly prejudiced against the practice, operated at first only as a last resort, and "even now does not see his way to operate so early as some French surgeons seem to do"; but he is of opinion that "there should be no delay when the character of the breathing and the contracted state of the thoracic parietes show that the lungs are not being distended with air. By operating early the risk is avoided of œdema or congestion of the lungs, and of the effects of non-oxygenised blood circulating in the brain." It is interesting and important to learn that his success has been equally great in simple and in diphtheritic croup; and, with respect to an often and recently renewed controversy, that he is a very decided opponent of the view that diphtheria and croup, or simple and diphtheritic croup, are identical. He holds that they are essentially different diseases.

The Professor concluded his address with some observations on surgical dressings and the treatment of wounds. He remarked that, after many and singular changes in the method of treating wounds, we are now again in a transition state with regard to it; and he dwelt on this subject at some length, as might be expected from so eminent a surgical authority in the land of Lister. The truly philosophical views, he observed, of the adhesive process, taught by John Hunter, gradually led to clearer notions as to the requirements of wounds and the principles on which their treatment should be conducted; and nowhere had these principles been more intelligently and fully carried out into practice than in Edinburgh, thanks to the teaching and writings of John Bell, Liston, and Syme. The results obtained had been excellent, and until recently their system had been in use there. But now a change was called for, and the antiseptic method, as it was called, of his esteemed colleague Professor Lister was being pressed, Professor Spence said, in some quarters, to the exclusion of conditions which he thought equally, if not more, important in the treatment of wounds and operations. He would not discuss the germ theory, so called, nor the comparative value of the different antiseptics at present contending for pre-eminence. But some of the statements advanced in favour of the antiseptic system so ignored, he thought, the success obtained by simple dressing and treatment of wounds, or asserted such an amount of infallibility as to the curative powers of the special method, as to require notice. Suppuration is, he believed, not unknown under the antiseptic method, whilst the average duration in treatment was certainly not lessened; and when he found a German professor and hospital surgeon stating that after a year and a half's experience of the antiseptic treatment he was able to guarantee with certainty a perfectly successful result to his operations, such assertion, it seemed to him, challenged closer examination, demanded proof, and forced him to ask the question—How far, apart from other conditions, did different modes

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of dressing stand in the relation of cause to successful results? The answer to this important question must rest on sufficient data and carefully weighed statistics.

He thought sufficient time and scope had been given to the antiseptic system in this country to enable those who used it to furnish the desired statistics, and thus to allow us to judge of its real merits. In comparing of late the results of his own hospital practice, he had been struck with the success which attended very simple treatment, and this led him to question if real progress would be made in departing from such treatment for more complicated methods. Thus he found that during a period of three years, out of sixty-three major amputations for disease there were only three deaths, and of twenty-three cases of excision of joints only two deaths, at a time when the treatment consisted in thoroughly cleansing the cut surface by pouring tepid water over it, and occasionally applying tincture of iodine, alone or diluted, on the flaps, whilst the dressing consisted merely in laying a veil of lint or thin muslin over the stump. He found also that certain conditions, such as the nature of the disease or injury necessitating the operation, had a most important influence on the result—such influence, indeed, as he could not have supposed until the statistics brought it distinctly before him; and his later statistics corroborated his former, so that he could not accept the statement that any method of dressing, however good, would ever enable us to guarantee success. Whilst speaking, he added, of the antiseptic system, meaning the special method, he need hardly say that all surgeons have for their object the avoidance of putrescence, though their views may differ as to the best way of attaining their object.

He strongly recommended the treatment of lacerated wounds and burns of the extremities by continuous immersion in the tepid bath, by which the avoidance of all meddling with the injured part, and of the agony to the patient caused by changes of the dressings, was completely obtained. In burns the advantages of this system are most conspicuous, the constant moisture keeping the cicatricial tissue pliable, and it being possible to effect motion of the parts gradually, while the limb is immersed in the bath.

In conclusion, he observed that he thought the retrospect he had taken showed that "when true principles had been disregarded or lost sight of, they had ultimately had their value recognised, and, modified and improved, had become the advances of the present day; and so for the future he felt confident that all that is true and good in any system will emerge with greater beauty and usefulness for being purged of its dross by the tests of observation and candid criticism."

PRESCRIBING CHEMISTS.

A child of five months, which had been under the care of a local chemist, died at Kensington last week of congestion and inflammation of the lungs. A medical man was only called in a few hours before the little thing died, and an inquest was consequently held. The coroner, Dr. Diplock, in summing up the case for the jury, expressed his regret that chemists were allowed to prescribe for children in the way they systematically did, in complete ignorance of the real nature of their complaints. He had known chemists make the most absurd mistakes not only about the symptoms of patients, but also about their treatment. He instanced one case in which a mustard-plaster to the chest was ordered for a fracture of the skull, and another in which chalk mixture was prescribed for effusion on the brain. The children prescribed for by chemists generally got worse, and when too late the doctor was summoned, to find his services useless, death being inevitable. It was high time that this system should be stopped. The jury returned a verdict in accordance with the facts, and expressed their thanks to the coroner for his remarks, which they, at the same time, endorsed.

With the remarks of Dr. Diplock we also cordially agree. Cases such as the above are becoming far too common, and not only in the interest of the public, but also of the medical profession, a check to the counter practice of chemists and druggists is urgently needed. Among the poor the results of their treatment is in many cases nothing less than disastrous, as anyone who sees much of hospital out-patient practice in London can testify. Children are their especial victims: by their advice infants two or three months old are dosed with various preparations of starch and cornflour, which their stomachs are quite incapable of digesting, and which lay the foundation of the dyspepsias and chronic intestinal catarrhs of which so many die: by their advice all kinds of "teething" powders are administered, as well as "cooling" medicines—generally powders—and drastic purges, for the cure of slight ailments arising from improper feeding, which only require regulation of the diet to remove them. Rickets in their hands becomes "water on the brain," and flatulent dyspepsia "consumption of the bowel." As their diagnosis rests on a few superficial questions, owing partly to their ignorance of anatomy and physiology, as well as of clinical methods, and partly to the qualms of a guilty conscience which do not allow of publicity in their dealings, the early symptoms of serious disease are either overlooked or misapprehended, and it is not until his aid is useless, the malady being past relief, that the qualified practitioner is summoned at the instance of the frightened chemist—to give the certificate. Quite recently the following example of this came to our knowledge. A child was attended illegally by a chemist, who is also the registrar of births and deaths for the district in which he lives. The child got worse, and a medical man was sent for, and, finding the child *in articulo mortis*, and having no previous knowledge of the case, quite rightly refused either to have anything to do with it or to give a certificate. Notwithstanding this, the child was buried. There was no inquest, and the unqualified registrar of births and deaths signed his own certificate. We understand that a communication to the Registrar-General's Office respecting such irregular dealings had no effect, and, from various reasons which do not here concern us, the matter was allowed to drop. Comment is needless on such a state of things.

To return to the special subject of chemists' prescriptions. Those who doubt the existence of so much unqualified practice have only to look around here in London, and notice the number of chemists' shops which they meet with wherever they go. It would be scarcely an exaggeration to say that they are nearly as numerous as public-houses and bakers' shops. To imagine that they can all support themselves by dispensing medical men's prescriptions, is absurd, except in the case of the large houses, which, however, are probably chiefly dependent for their existence on their wholesale trade. Allowing a certain amount of profit on toilet necessaries and patent medicines, there is no doubt that prescribing across the counter and dispensing their own prescriptions are the means adopted to pay the rent and feed their families by numerous pharmaceutical chemists in London and the country. Anyone who doubts this statement need only walk into the first chemist's shop where he is not known, and ask for some medicine for a cough. After a few questions as to whether the cough is irritative, dry, etc., he will be provided with a bottle containing the necessary panacea, and possibly with a box of pills. Nor are the smaller chemists only to blame. Confidential advice may be obtained in the large shops in Oxford-street, as well as in the purlieus of Marylebone or Soho. We could point out one chemist whose name is not on the Medical Register, who openly gives the benefit of his skill to French and Germans. We have heard of the dispenser of a large London hospital who not only sees patients for himself in the dispensary of the hospital, but also distributes his cards,

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with the name of the institution on them, among his friends. It is time that notice should be taken of all these irregular and illegal practices, and that they should be steadily and unflinchingly suppressed. The public are very much at fault by seeking advice from those who are in no way qualified to give it them, and for throwing temptation in the way of men in other respects honourable and upright. The temptation, however, is one which the chemists ought most certainly to resist. The more they do so, the more will medical men entrust to them the dispensing of their prescriptions, and assist them to carry on their legitimate business by their friendly co-operation. As long as the unqualified chemist usurps a function which he has no right to, and for which he has not fitted himself by the necessary study and examinations, there will be a feeling of ill-will and jealousy between two mutually dependent bodies. The only grievance which the chemists can complain of, is that many medical men still dispense their own medicines. For our part, we shall be glad when the practice of pharmacy becomes the exclusive property of the pharmaceutical chemist. "Live and let live" is a good maxim which the medical profession should remember in their dealings with chemists. Encroachment on one side leads to encroachment on the other, though the medical man only assumes an office he is legally entitled to. The whole question which this article embraces is one for the consideration not only of the medical corporations and of the British Medical Association, but also of the Pharmaceutical Society, and it is one which the public at large should think of too.

THE LATE SESSION OF PARLIAMENT.

Now that the Parliamentary Session is closed, and our legislators have dispersed in all directions in search of recreation of mind and body, both alike wearied and worn in the service of the nation, it is time to take note of the work of the Session in so far as it specially affects or concerns our profession.

The Royal College of Surgeons have got their "enabling" Bill, and probably in connexion with this fact very many members of the profession have been reminded of the title of a well-known novel, and have felt a curiosity to ask, "What will they do with it?" The Council of the College have, we believe, very properly and politely, passed votes of thanks to Lord Selborne, Sir John Lubbock, and Dr. Lush for carrying the Bill through the Houses of Parliament; but what next? Shall we now see the completion of the English Conjoint Examining Board? The most pregnant answer to this question is probably the fact that Sir James Paget, the Chairman of the Committee of Reference, is now the President of the College, and that he of all men is little likely to let the matter sleep.

The Pharmacy Bill for Ireland was successfully carried, and has become law.

The Artisans' Dwellings Act became law some weeks ago, and, though "permissive" only, is undoubtedly one of the most valuable and important of all the measures passed during the Session. As our readers are aware, steps have already been taken in London and Liverpool for the commencement of very extensive operations under the Act for the improvement of notoriously overcrowded and unhealthy areas. The working of the Act will be watched with great interest and curiosity, and, if wisely managed, cannot fail to be productive of great good.

The Public Health Act, introduced and carried by the President of the Local Government Board, is almost solely a consolidating Act, but, as such, is of great value in making sanitary work more simple, and sanitary law comparatively comprehensible.

The Sale of Food and Drugs Bill was also passed, and perhaps the best that can be said for it is, that in its passage through Parliament it was made less capable of doing mischief than it was when introduced.

The grievances of the medical officers of the army were forcibly and clearly brought before the House of Commons by Dr. Lush, and Mr. Hardy seems to be earnestly endeavouring to master the subject and desirous to prepare, during the Parliamentary recess, measures to restore the healthy condition of the service, and make it once more contented and popular.

The Rivers Pollution Bill, Mr. Cowper-Temple's Medical Acts Amendment Bill, Mr. Charley's Infanticide Bill, and the Vivisection Bills were withdrawn, or included in the "massacre of the innocents"; but a Royal Commission was appointed to examine into the subject endeavoured to be dealt with by the Vivisection Bills. The Commission has not yet, however, been able to issue any report.

The amount of work that can thus be shown to have been done for "sanitary reform" is certainly large as the result of one Session, if compared with legislation in the same cause during previous administrations; but can hardly be declared very laudable or satisfactory, as regards either quality or quantity, when considered as the work of a Government that declares sanitary reform to be "the great object and need of the day." As, however, the Prime Minister takes sanitary reform—"that phrase so little understood"—to include "most of the civilising influences of humanity," we ought, perhaps, to have added to the above list of measures passed, at least the Friendly Societies Bill and the Chimney Sweepers Bill.

THE WEEK.

TOPICS OF THE DAY.

The Local Government Board for Ireland has issued a report which shows that the Public Health (Ireland) Act, passed in 1874, is producing good results. The whole surface of the country is, for sanitary purposes, divided into districts as nearly as practicable uniform in regard to area and population, each district being served by one or more sanitary officers, whose duty it is to furnish periodical reports on the removal of nuisances, the supply of pure water, the improvement of sewage, and other sanitary operations in their respective districts. It is true that, on the last night of the session, Dr. O'Leary complained that these medical officers were most inadequately paid, but the Solicitor-General for Ireland assured the House that the Act was working very well, and that the low scale of remuneration was not the fault of the Irish Local Board. An abstract of the returns for the month of April last will give some idea of the work done. In Cork city, 3598 houses and yards were examined, and various nuisances abated; in Dublin, 1812 dwellings were cleansed and repaired, and sixty closed; several thousands of tenements were inspected, and many nuisances abolished. At Belmullet, in a recent case of death from small-pox, a wake of the remains was prevented, and the corpse interred within twenty-four hours after death, the house in which the death occurred being subsequently disinfected. In addition to these sanitary precautions, steps have been taken all over the country to exclude pigs and poultry from a permanent residence in dwelling-houses.

The Volunteer Artillery Camp at Shoeburyness has been under the medical charge of Surgeon-Major Sanderson, assisted by Surgeon Quinton, of the Army Medical Department. The general health of the camp has been good, and the sanitary condition perfect. The cases which have come under treatment have been of the usual character—a few cases of fits, and a few trifling casualties. The cases of fits are mostly noted in the "weedy" description of men, who should never have joined the Volunteers: the hard work generally tells its tale upon them; and as soon as they have been treated in hospital

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they are sent home to avoid any serious consequences. The greater portion of the casualties have occurred in the sports, and not whilst the men have been employed on duty.

From the weekly return of births and deaths in London to the 7th inst., it will be found that 2100 of the former were registered, and 1340 of the latter. Allowing for increase of population, the births were 173, and the deaths no less than 404 below the average numbers in the corresponding week of the last ten years. The fatal zymotic cases were—3 from small-pox, 41 from measles, 73 from scarlet fever, 10 from diphtheria, 54 from whooping-cough, 9 from fever, and 132 from diarrhœa; this latter number was no less than 223 below the corrected average in the corresponding week of the last ten years, and was attributable to the influence of the low temperature and the abundant rain which had prevailed in the metropolis.

The yellow fever outbreak on the southern coasts of the United States is this summer confined to Forts Barrancas and Pickers. A few cases have appeared at the latter, but at the former there have been several deaths, with about fifty cases, and much alarm is shown. The remainder of the southern towns and ports, so far as the latest reports have been received, are stated to be free from this fatal malady.

The advocates of cremation, as well as those who urge reform rather than revolution in our mode of disposing of our dead, will each, no doubt, bring forward as a powerful argument in their favour the account just published of a Cornish churchyard. At a vestry meeting at East and West Looe, the chairman, the Rev. H. Mayo, vicar of Talland (which is the burial-place for West Looe), stated that over 8000 bodies had been interred in a little more than half an acre of ground. The usual depth of the graves was four feet and a half, any greater depth being out of the question on account of the friable nature of the soil, which was being continually turned over. The method of determining whether a grave could be dug in any particular spot was to drive a long iron bar down to the requisite depth, thus ascertaining whether any obstacle existed. The repeated burials had raised the soil to such an extent that the church appeared to be in a pit, and the polluted atmosphere rendered the sacred edifice unfit for public service. A horrible slime was constantly oozing from the graves in the higher part of the yard, which ran on to the floor of the belfry, and disinfectants had to be freely used for the safety of the ringers. Fresh primroses gathered and placed in the church for decoration purposes on Easter Sunday, turned almost black by the following evening, owing to the presence of sulphuretted hydrogen in the atmosphere in such quantity as to be highly dangerous to human life. On Ash-Wednesday the air of the church was so fetid that the congregation were unable to remain until the end of the service. Dr. Holland, the Government inspector, has suggested the establishment of a new cemetery, and the formation of a local burial board; but, incredible as it may seem, the ratepayers of the parish have negatived both propositions by a large majority. It is scarcely necessary to add that, under these circumstances, Dr. Holland has deemed it his duty to forward a report on the subject to the Home Secretary.

Some idea of the importance to Indian finance of the revenue derived from the opium trade may be gathered from a return lately obtained by Sir George Balfour, by which it appears that last year the gross receipts in India were £8,324,879. The net receipts for the whole of India were in the same year £6,323,395. The total weight of the opium obtained in the period was 12,716,991 pounds; and the total acreage in which the poppy is cultivated was returned as 521,270 acres. The net receipts from Bengal opium having been on an average of the last five years £4,111,896, it would be necessary, it is stated, to levy an average rate of £7 17s. 9d. per acre to realise the same amount of revenue. Taking the receipts of 1870-71, the figures for which years have been adopted as being a fair average for the extent of cultivation, the rate to be levied would be £6 19s. 4d. per acre.

Who is to blame for the want of a public mortuary in Clerkenwell? The Coroner reports that representations have been repeatedly made to the parochial authorities, through him, by juries over whom he has presided, setting forth the want of such a building; and, on the other hand, the Vestry Clerk of the parish has addressed a letter to the papers, in which he explains that the authorities are not to blame, as the London School Board annexed the late mortuary, and any effort to build another has been met by the most strenuous opposition to every site selected in the parish. We are now informed that the Vestry are in a fair way of obtaining a piece of ground for the purpose in question; meanwhile, the City Commissioners of Sewers have offered the use of their mortuary in Golden-lane, which is only just outside the boundaries of the parish. But the quicker the action taken by the Vestry to meet the requirements of their trust, the sooner will they remove all cause for the recent complaints which have been recorded against them.

Dr. E. Williams, of Clifton, Physician to the Ashleydown Orphan Asylum, reports that the recent outbreak of typhoid fever in that establishment has now almost entirely disappeared, a few convalescent patients only remaining; but of these, two it is feared will succumb to other diseases arising as a result of the fever on very bad constitutions.

It is generally believed that the medical officers to be attached to the *Serapis* on her voyage to India with the Prince of Wales will be Fleet-Surgeon A. Watson, M.D., and Surgeon H. C. Woods, M.D. Surgeon-General Fayrer, M.D., C.S.I., Physician to the Council of India, will be attached to the staff of his Royal Highness, and will be in attendance during the royal progress through the country.

A contemporary has stated, upon good authority, that the forthcoming recess will be anything but a holiday at the War Office. On his return from attendance upon her Majesty at Balmoral, the Secretary of State for War has made up his mind to apply himself to the consideration of all the great questions which affect the well-being of the army, with a determination of completing a series of measures to be presented to Parliament on the opening of the next session. Such being the case, we may fairly assume that the reorganisation of the Army Medical Department will not be lost sight of. Rumour says that the authorities have set their faces against compulsory retirement at sixty years of age. The grounds, we believe, are stated to be the injustice which would thereby be entailed on many of the present senior officers of the Department; but surely it would be possible to make the order prospective instead of retrospective, and if the advantage were remote, it would still have to be looked upon as a step in the right direction.

THE HEALTH OF ENGLISH WATERING-PLACES.

Not the least interesting and valuable information, especially at this season of the year, to be gathered from the quarterly return of the Registrar-General, is that relating to the health of our watering-places during the quarter ending June 30 last. The annual rate of mortality of England for the season was 21·9, but in the following watering-places this rate was exceeded, viz.:—Lyme Regis (22·9), Folkestone (23), Penzance (23), Ilfracombe (23·2), Whitby (24·2), Aberystwith (24·4), Southport (25·2), Bangor (25·8), and Llandudno (28). The excessive mortality in Folkestone, Whitby, Aberystwith, and Southport appears to have been caused by epidemics of whooping-cough and measles. With respect to the high

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rate of mortality at Llandudno, the district medical officer of health states that of the 28 deaths which occurred in the quarter, 9 were of visitors, not one of whom was in a sound state of health on arrival. In the following towns the rate of mortality was below the average:—Hastings and St. Leonard's, 20·6; Deal, 19·8; Dartmouth, Dawlish, Lowestoft, Brighton, 17·8; Yarmouth, Exmouth, Eastbourne, Sidmouth, Herne Bay, Ramsgate, Weymouth, Torquay, 16·5; Scarborough, New Brighton, Dover, 14·6; Southend, Weston-super-Mare, Bognor, and Littlehampton, 12·6. At all the inland town health-resorts the mortality was below the average, being especially low at Buxton, Clifton, Tunbridge Wells, Leamington, and Malvern. It should be stated that the above figures should not be taken as an explicit guide as to the state of public health in the respective towns. In some instances the rate of mortality is considerably raised through excessive mortality among the visitors, consequent on their suffering from advanced incurable disease at the time of arrival. Thus, of the 161 persons who died at Hastings and St. Leonard's, 38 were visitors, 19 of whom died of chest affections. From the report of the local medical officer of health, we are pleased to observe that diseases of the zymotic class have not prevailed to any great extent at Hastings during the past half-year, only 10 deaths having been registered from zymotic diseases, as against 43 in the corresponding period last year.

AN "ARTISAN'S DWELLING."

At an inquest held before Dr. Hardwicke, last week, on the body of a child who died at 7, New-court, Peter's-lane, St. John-street, in the Liberty of St. Sepulchre, a sad account was given of the state of the dwellings of some of our artisans and labourers. Mr. H. Franklin, L.R.C.P. Edin., of St. John-street, said that he found the deceased lying in a room occupied by five living persons. The room was on the ground-floor, and not fit to put a pig in. On entering the place the stench was so bad that it nearly overpowered him. The room was of an irregular form, with no windows at the back nor any ventilation whatever. The ceiling was not more than seven feet in height, and the colour of it quite indescribable; the walls were encrusted with the filth of years, and owing to the neglected state of the flooring, slops, etc., had collected underneath and oozed through with every footstep. This may be taken, we believe, as a fair sample of many dwellings in the same locality. By means of the powers now given by the "Artisans' Dwellings Act" we may hope that such pest-dens as those above described will be speedily replaced by dwellings more suited for human habitation.

THE "JOHN HUNTER" MEMORIAL FUND.

We are requested to state that the subscription-list of the "John Hunter" Memorial Fund will be closed on October 31 next. At present the fund amounts to £80. Further subscriptions (limited to one guinea) are solicited, and will be received by Mr. J. J. Merriman, of 45, Kensington-square, W. As most of our readers will remember, it is intended to expend the amount subscribed in placing a memorial window in the magnificent new parish church at Kensington, now nearly completed.

VALUABLE GIFT TO THE UNIVERSITY OF ABERDEEN.

The *Banffshire Journal* states that Dr. James Taylor, retired Deputy Inspector-General R.N., of Greenskares, Banffshire, has conveyed in trust to the University of Aberdeen his estate of Greenskares, value nearly £400 per annum, for the purpose of founding bursaries in connexion with the University, for young men born in any of the parishes or educated in any of the schools of Banffshire. The bursaries are to be of the annual value of £30, tenable for four years, and to be determined by competition.

SMALL-POX IN INDIA.

The report of Mr. A. C. De Renzy, Sanitary Commissioner, Punjaub, issued on June 15, states that in the Umballa district small-pox is becoming more and more prevalent and fatal. Five hundred and sixty-eight deaths occurred in the week ending May 29; and of these no less than sixty-four were in Peshawur. He significantly remarks that the inhabitants of this city "have a degree of prejudice against vaccination, very unusual amongst the Mussulman population of other portions of the province." Compared with the death-rate for London in the week ending May 8 (23 per mille), the death-rate was 95 at Peshawur, 39 at Lahore, and 51 at Delhi.

COOMBE LYING-IN HOSPITAL, DUBLIN.

The annual meeting of the Board of Guardians and Directors was held on Saturday, August 14, Sir W. Carroll, M.D., in the chair. Pending the completion of the new buildings, the report showed that 411 intern cases had been treated in the Guinness Dispensary building, Brabazon-street, during the past year. The extern cases treated amounted to 19,252. The Hospital had received £215 2s. 7d. from the Hospital Sunday Fund of 1874. Sir Arthur Guinness, Bart., M.P., was aiding largely towards the completion of the new buildings.

CONVICTION UNDER THE PHARMACY ACT.

An oil and colourman named Kempton, residing in the Old Kent-road, was fined 40s. and 23s. costs at the Lambeth Police-court, on the 29th ult., for having sold by retail a certain quantity of oxalic acid, and delivered it to the purchaser in a packet not distinctly labelled with the name of the poison and the name and address of the seller, as provided by the Pharmacy Act of 1868.

THE EDINBURGH MEETING OF THE BRITISH MEDICAL ASSOCIATION.

(*Continued from page* 193.)

Of all the sections worked at this meeting of the Association, the most popular, perhaps, was that on Public Medicine; and this popularity constantly tended to increase rather than to diminish. On the present occasion one of the most interesting debates was on the subject we have so often discussed—What is to be done with the habitual drunkard?

The Control and Treatment of Insane Drinkers.

Dr. A. Peddie, Edinburgh, read a paper on "The Necessity of Legislation for the Control and Treatment of Insane Drinkers." He sketched the history of this question in Scotland, and after paying a high tribute to the memory of Mr. Donald Dalrymple, M.P., expressed the conviction that special legislation unconnected with lunacy law, on the basis of Mr. Dalrymple's Bill, could not be long delayed if the agitation now begun by several branches of an association so powerful as the British Medical were carried vigorously forward. Dr. Peddie then considered the question, Who are insane drinkers? To whom, psychologically, are the titles of dipsomaniacs or oinomaniacs, and, popularly, habitual drunkards, applied? (1) They are those who inherited the propensity to intemperance; (2) those who evinced it as the chief manifestation of some form of cerebral disease; (3) those who are affected with it as a result of injury to the head, severe fever or other wasting bodily ailment, mental shock, heavy grief, reverse of fortune, and indeed causes similar to those anteceding some other insanities; and (4) those who acquire it through a course of vicious indulgence in stimulants. The distinguishing features of the malady, he said, were—total loss of self-respect and self-control under an overwhelming craving for alcoholic drinks, with little or no palatal relish, which must be gratified at any cost, utterly regardless of honour or truth, and, in fact, unaffected by appeals to reason, self-interest, tears of affection, or any suggestions of duty to God or man. After showing that the phase of intemperance requiring legislation was unquestionably an abnormal cerebral condition, occasioning unsoundness of mind, and entitled to rank with other insanities,

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Dr. Peddie remarked on the practical importance of determining the boundary-line between intemperance the vice, and intemperance the disease; and of the latter when combined with mental disorder independent of alcoholism. For the latter, the present laws of lunacy were available; but for the ordinary dipsomaniac there was no help or hope, but certain degradation and ruin to himself, often to those connected with him, and much injury to the general community. In early cases and short fits of periodical drinking at long intervals it might be advantageous in some instances, if declared lawful, to take control of the person in his own dwelling. Legislation, however, was especially requisite for treatment in houses or institutions suited by internal and external machinery for the protection, reformation, and cure of insane drinkers in different grades of society. For the upper and middle classes, homes or retreats would spring up through private enterprise alone, or through associations formed for the purpose; but for the working classes and the poor, properly classified sanatoria should be established tentatively in two or three central districts, supported to some extent at first by Government grants, but which would to a large extent become self-supporting, from board paid by the abler class of inmates or their friends, perhaps by parochial boards for pauper inebriates, from work done on the premises, and from legacies and donations. In these institutions pauper drunkards would be taken care of, and punitive would in a great measure give way to reformatory treatment. For criminal drunkards, reformatories should be established and supported by prison boards, into which persons would be drafted from gaol; and other persons by the direct commitment of magistrates, having power after trial, according to the circumstances of the case, to do so. As to the prospects of cure, he submitted that there had not hitherto been a chance of accomplishing more than mere temporary benefit among the few cases in which there had been any attempt at treatment. Let them, however, obtain sufficient, but carefully guarded, permissive forms, and he believed the result would be very different.

Dr. G. F. Bodington, Kingswinford, followed with a paper "On the Control and Restraint of Habitual Drunkards." The balance of opinion amongst medical men was, he said, largely in favour of some legislative measure for the control and care of habitual drunkards. The leading organs of the medical press held the same opinions. Lawyers told them no precedent existed for such a step; that no such power was known to the law as the power sought to be obtained in this instance, and that to grant such a power would be a violation of constitutional principles. He knew they could not get the measure desired without much opposition both in Parliament and in the constituencies, and they should be prepared for that by showing an overwhelming mass of evidence in its favour. The public were, he contended, not aware of the depth and extent of the evil; for could they but realise, as medical men did, all the horrors and afflictions which drunkards caused to families and society, they would insist without further trouble on remedial measures. Protection to the oppressed and suffering was the principle to be invoked. If the confinement of the drunkard was a hardship, it was but a flea-bite to the evils, wrongs, and oppression which drunkards inflicted on their families and on society at large. The distinction between drunkenness as a vice and as a disease should be cleared up. All drunkenness was a disease, and might be called dipsomania, and he should sink the term which designated it a mere vicious propensity. When fully developed it was an uncontrollable, insatiable, and morbid impulse to drink stimulants, and ran in parallel lines in many respects with insanity.

Sir Robert Christison, after thanking Dr. Peddie and Dr. Bodington for their papers, said he desired to submit a resolution. A well-considered resolution on this subject, brought forward under the auspices of the Association, ought to have great weight. Therefore they should be careful what they said, but at the same time very resolved to carry it out. He moved—"That excessive intemperance is in many cases a symptom of a special form of insanity, which requires special treatment, with a view, first, to the recovery of those affected, and, second, to the protection and advantage of them and of society. That in the present state of the law such treatment is not attainable, and that it is desirable that legal provision should be made to render it attainable." The subject, he said, was one which occupied his attention at a very early stage of his professional career, in consequence of his occupying the chair of medical jurisprudence for ten years. At that time he lived with his brother, who was a member of the Scotch bar. At their common table he used to meet several of the most eminent members of the Scotch bar, and there was not one of these gentlemen who did not scout the idea of putting habitual drunkards under restraint. What they urged was that they could not distinguish between an habitual drunkard who was suffering from disease, and one who was suffering from the effects of vice. But in course of time several of these gentlemen came to see instances of habitual drunkenness in relatives and friends. Gradually conviction stole upon them; and he believed that now among Scotch lawyers generally there was a feeling that some sort of restraint should be placed on habitual drunkards. Recently he had charge of the representation which was being got up by Mr. Dalrymple and Dr. Peddie for presentation to the Home Secretary, and in the course of a day and a half he got that representation signed by the Professors of Metaphysics, of Moral Philosophy, of Political Economy, and, what he considered of more consequence than all these, the Professor of Scotch Law—and not only by him, but by a former Solicitor-General for Scotland, now Dean of the Faculty of Advocates. A great deal had been said in print and in the papers as to the difficulty of distinguishing between habitual drunkenness the result of vice and habitual drunkenness the result of disease. He suspected they must acknowledge that this unfortunate condition was not very often purely the result of disease. He had seen it so, but by far the greater number of cases arose in consequence of the persons having gradually yielded to the vice. They must consequently face this fact—not try to evade it,—and show the Government and the Legislature that the cases in the end were not different; that there was no difference in their features and in the results to the drunkards themselves, to their families, and to society at large. When in the little society to which he had alluded he was asked, How are you to distinguish between moderate excess and such excess as you consider bordering on insanity? his reply was that he was always very cautious about giving definitions. He was once asked in the witness-box to give a definition of insanity or unsoundness of mind. He knew very well that this was but the introduction to a dexterous cross-examination, and he replied that that was a problem on which twelve judges in England had exercised their ingenuity and had failed—that many men had written on the subject and failed; that, therefore, it was not to be expected that he should succeed; but that, if counsel would bring a case before him, he should not only satisfy himself but the learned gentlemen whether it was a case of insanity. His reply to the doubters on the question under discussion was the same—Bring before me a case, and I will tell you whether it shows the disease of drink-craving. It would, he dared say, be often difficult to distinguish, but they could always decide on examination. Then, if they did make a blunder and introduce among drink-cravers a man who was not so bad, was any harm done to him? No, but a great advantage, for they took him in time; no harm was done to his friends, whom he was ruining, and no harm to the public. In fact, it was one of the extraordinary cases where an error could do no harm. He hoped the Association would adopt the resolution, and go forward to the Legislature. They had a righteous cause; and, in his long experience, there never had been any right thing, notwithstanding all difficulties at first, that was not eventually carried in the House of Commons if they could get some zealous member to bring it forward.

Dr. Husband, York, seconded the resolution. As medical men they did not require to be satisfied that there were such persons as habitual drunkards, but the public mind and the Legislature required to be educated on the point. There was no one who had had large opportunities of practice, but must have felt this to be one of the greatest difficulties of his professional life, and more especially when women were the subjects of the vice. He never knew an intelligent medical man who had any doubt as to the propriety of placing such people under restraint. He hoped that on some member of the House of Commons the mantle of Mr. Dalrymple would fall, and that a proper measure would ere long pass. The Council of the Association were, he said, taking steps in the matter, and at next annual meeting it was hoped they would present a full report.

Dr. Morris, Baltimore, as a trustee of an institution for receiving inebriates in America, said Americans were not a people who would bear restraint very well, and it might be supposed that they would be the last in the world to submit to a law of this kind. But in several States there were such laws for the restraint of drunkards—laws apparently stringent, but

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not actually so in operation. When any man or head of a family was known as an habitual drunkard, and any two respectable householders went before a judge and declared that, the man was commited to the inebriate asylum, as it was called, and kept there for a certain term—generally a year. The very fact of the existence of the law was a deterrent to drinkers. He should say, Do not let this bugbear of restraint of personal liberty have any weight with you, for we Americans, who know what liberty is, or at least think we do, do not find it interferes with us. The institution to which he referred took in three kinds of inmates—first, those who paid nothing; second, those who paid a moderate sum, such as the working classes could afford, from 18s. to 25s. a week; then, the educated and wealthier classes, who paid a fair price. The original institution was too near the city, and patients frequently strolled thither and got spirits. Now they had bought a farm five miles from town, and they intended to build a new institution on the cottage system, and to classify the inmates. The institution worked admirably; it was not self-supporting, but they got a small contribution from the State and subscriptions from the public. They could not make an absolute cure under two years, for it required that time before the molecular structure of the brain-tissue, destroyed by habitual drinking, was entirely reconstructed. They had 33 per cent. of cures, and when a reconstructed and rebuilt clerk or merchant left the institution and went about amongst his friends, why the merchants put their hands in their pockets and paid for that reconstruction by subscriptions.

Dr. Joseph Rogers, London, said it continually happened that persons were sent to the poor-houses in England, Ireland, and Scotland, who were suffering simply from the effects of drink. After a few days they recovered, and as soon as they were able to crawl over the door, they demanded and got their liberty. He thought power should be given to enable the authorities to detain such habitual inebriates. He thought they had vastly too many brewers and publicans in the House of Commons. He could not forget that the present Parliament came under the denomination solely and completely of "the publican's Parliament." That was the true explanation why no proper redress could be got from the present Parliament.

Dr. J. C. Reid, Newbiggin, said that one of the evils of the Scotch Lunacy Act of 1843 was to do away with the power which the Scotch had possessed from time immemorial of sending their drunkards to one of the islands of Loch Lomond. All the talk as to restraint of drunkards interfering with the liberty of the subject was nonsense. The liberty of the subject was interferéd with from the date of his birth. One could not be born but an Act of Parliament stepped in and said he must be registered; then he must be vaccinated by order of Parliament; and when he grew older, and wanted to take a sleeping partner into the concern, he could not be married in England after twelve o'clock; and what was worse still, he could not be decently laid away without an Act of Parliament interfering with the liberty of the subject. But the law was too lenient, and would not interfere with the liberty of the subject who was an enemy to himself, to his family, and the public weal. He hoped the time was not far distant when the law in regard to chemists and doctors would be made to apply to publicans. If a chemist sold poison and a person died, he was held responsible; and if a doctor made a mistake, he was held liable in an action for malpractice. Why should the publican be freed from the same liability? Make the publicans responsible, and there would be far fewer unhappy homes.

Dr. Liddell, Whitechapel, London, believed the love of strong drink was engendered very much among certain classes by the miserable condition of their dwellings and by overcrowding.

Dr. A. P. Stewart, London, said that for 300 years the power, originally given by James I., had existed of interfering with the liberty of the subject because he was drunk. That was, the magistrate imprisoned a man for a day or two for being drunk. Let the principle be extended to continued restraint and they would touch the evil.

Dr. Carpenter, Croydon, in reference to the Committee appointed by the Council of the Association to report on the subject, said that Committee would be glad to get all the information possible, and he hoped members would send in all they could.

The President (the Right Hon. Lyon Playfair), said that he had acted on the Committee upon Habitual Drunkards, with his friend Mr. Dalrymple. He entered the Committee in an extremely doubtful state of mind, his feeling being hostile to the proposal; and this he had told Mr. Dalrymple. He then thought they must look chiefly to education and diffusion of knowledge among the people as the means of preventing drunkenness, and that restraint was a very questionable mode of procedure. But he confessed that the evidence brought before the Committee led him to a different conclusion before the labours of the Committee were closed, and he signed the report advocating certain forms of restraint as being necessary in the case of habitual drunkards. It was because the public were not sufficiently educated on this matter, and because they had not shown sufficient interest in it, that the House of Commons was unable at present to legislate. The Association would do great good by the resolution it might adopt, but that was not sufficient. The members must educate the public, and the House of Commons must feel that it would be supported by the public in legislating on the subject. The present mind of the House of Commons was that there were great difficulties connected with the subject, and that they must look these difficulties in the face. But he was afraid the House was like the Highland clergyman of whom Dr. Norman Macleod used to tell, who said that, whenever he saw a difficulty, he looked it fully in the face, and then passed by on the other side. If, however, the public took up the question for themselves, the House of Commons, finding public feeling supporting them, would soon pass a measure.

The resolution was then carried by acclamation.

Finally the meeting concluded on Friday with the usual general distribution of votes of thanks. On our part, we are bound to thank all the officials of the Association, local and general, for their attention and kindness.

FROM ABROAD.

A Century of Operations for Stone.

Prof. Dittel, of Vienna, in the *Wiener Med. Wochenschrift* for June 19, gives a general summary of 100 operations for stone, the abstracts of the cases of which he published in preceding numbers. Of these 100 operations, 65 proved successful and 34 fatal, 1 case still remaining under treatment. There were 54 cases of lithotrity, with 13 deaths (or 24 per cent.), and 46 of lithotomy with 21 deaths (or 45 per cent.). This, he observes, is a high percentage, but he is not deterred from stating it by the fear of being considered unskilful or unlucky. There are, indeed, some set-offs to be made before the true percentage can be stated. Thus, of the 13 lithotrity fatal cases, 2 died of pneumonia, 1 of aneurism of the aorta, 1 from the perforation of a suppurating diverticulum of the bladder unconnected with the operation, 4 from marasmus (in which state the patients were at the time of the operation), and 5 from nephritis either connected or unconnected with the operation. Whether this operation should be performed upon patients in a state of marasmus may be disputed; but in Prof. Dittel's opinion it is justifiable in some cases as a palliative for the relief of dreadful suffering—just as morphia is administered in hopeless phthisis. At all events, death in the first four of the above cases was independent of the operation, which reduces the mortality due to the operation to 9 cases in 54, or 16 per cent. Of the 21 fatal cases of lithotomy, 1 died from pyæmia consequent on suppuration of the tibialis posticus muscle, 1 from perforation of a suppurating diverticulum, 1 from excessive anæmia, 1 from marasmus, 2 from hæmorrhage of the median artery of the prostate, 7 from diphtheritis of the wound, 5 from chronic Bright's disease, 2 from acute nephritis, and 1 from unknown causes. The first two deaths arose from unforeseen complications, and in the next two cases the operation was performed from mere compassion, as a means of merely relieving intense suffering for the time, which it completely succeeded in doing. Abstracting these four cases, the mortality remains 17, or 36 per cent. As to operating in cases of Bright's disease, Prof. Dittel states that he recommends this because in some cases the disease becomes arrested, and at others greatly delayed in its progress. In one remarkable case the patient underwent, with the best results, two operations by lithotrity and one by lithotomy.

Of the 100 patients, 97 were males and 3 females, all the latter being cured by means of lithotrity. The ages of the

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patients were as follows :—8 between three and seven years, 6 between ten and twenty, 13 between twenty and thirty, 9 between thirty and forty, 11 between forty and fifty, 31 between fifty and sixty, 17 between sixty and seventy, and 2 between seventy and seventy-six. In 3 the age was unknown. As to the composition of the calculi, 21 were pure phosphates, 6 oxalates, and the others uric acid nucleus with phosphatic—and rarely oxalate—external layers. As confirmatory of the usually unfavourable prognosis attending oxalate calculi, the five lithotomy operations for these all proved fatal, the sixth case recovering after lithotrity.

Considerable enlargement of the prostate adds to the danger of lithotomy by necessitating a longer incision, and if the posterior commissure also contains much parenchyma, it has also to be made deeper. The posterior commissure may, however, remain in cases of enlarged prostate as in the normal condition, and then the incision has to be long, but not deep. When the median operation, which Prof. Dittel always employs, is executed in such a case profuse parenchymatous hæmorrhage is avoided. In lithotrity the enlarged prostate renders the introduction and manipulation of instruments more difficult, as well as the removal of the detritus. In six of the cases great bilateral hypertrophy existed, and four of these were operated upon by lithotrity, two by cystotomy, a death occurring after each operation. Unfortunately, prostatic hypertrophy leads to an enlargement of the *sinus* of the prostate, and this may become filled with immovable detritus or by the wedging in of a fragment. As a general rule this is either dislodged by the urine, or it can be forced back into the bladder by a large catheter or ramasseur; but when the whole sinus becomes thus obstructed, and the detritus cannot be dislodged, intense reaction is set up, whether retention of urine is present or not. In such a case median incision is called for, and this was executed in four out of the seven cases in which considerable fragments became thus wedged in. Seven such cases in fifty-four lithotomy operations, Prof. Dittel admits to be a large number of examples of such an occurrence, and he does not recollect any other operator reporting so many. In five other cases also he had to resort to lithotomy after lithotrity; in three on account of the impatience of the subjects, once because of the hardness of the stone, and once because of its size. Of these nine double operations, five were attended with recovery and four proved fatal.

A slight degree of cystitis or catarrhal and calculous pyelitis should not contraindicate either operation; but among these cases there were three examples of a more advanced stage of these affections, which recovered under lithotrity. But three cases of suppurating pyelitis died after lithotrity, and one after lithotomy. With regard to cystitis alone, experience shows that it becomes ameliorated after each sitting, while if it has never been present it is induced by the first sitting to disappear again after subsequent sittings. The explanation is, that the diseased bladder is gradually freed from the presence of calculi and the accompanying catarrh, while the healthy bladder, that had become accustomed to the contact of a smooth stone, is irritated after the first sitting by the innumerable spicula and points produced. Urine of a bloody colour, which sometimes appears after a first sitting, should cause no uneasiness, for all but large stones must be seized hold of while in contact with the mucous membrane, some of the superficial vessels becoming ruptured; and the occurrence of such bleeding does not justify the suspicion of the mucous membrane having been grasped. In lithotrity, Prof. Dittel only employs anæsthetics exceptionally, in very sensitive persons. Thus, in fifty-seven operations he only used it eleven times.

Prof. Dittel states the following as contraindications to lithotrity:—1. A urethra which is either too narrow for the instruments in use or has become so in consequence of a narrow, long, hard stricture. Even after the widening of this has taken place, the secondary dilatation existing behind it will always remain a considerable cause for the accumulation of detritus. 2. Hypertrophy of the prostate, with intense vesical catarrh. 3. Acute cystitis and pyelitis. 4. An advanced degree of parenchymatous disease of the kidney. 5. A very hard stone that resists energetic attempts at lithotripsy. 6. A very large stone in a sensitive bladder, which, applied closely to the calculus, causes intense suffering. 7. Childhood below the age of twelve or fourteen. Beyond these extreme circumstances the choice of the operation is much a matter of personal consideration and trust in one's own dexterity,—it generally happening that in proportion as he acquires more dexterity in it, the operator finds that the circle of the application of lithotrity expands.

Chloral as a Surgical Dressing.

In the last number of the *Journal de Thérapeutique* (July 25), Prof. Marc Sée, of the St. Eugénie, advances some remarkable evidence in favour of the great value of chloral as a dressing, employed in the proportion of 1 per cent. in water. He first employed it in a case of diphtheritis of the vulva, and the success was so great that he has since used it in numbers of cases during nearly a year, without ever being disappointed. He has applied it in wounds of bad aspect, disinclined to cicatrise, in contused wounds accompanied by much detachment of soft parts, and actual or threatened mortification, or abundant suppuration. He has injected it into the centres of abscesses and sinuses connected with bone, and has also used it in dressing simple wounds, whether accidental or surgical. In all these cases the result was most satisfactory, without any accident whatever calling for the suspension of the chloral occurring. In patients whose wounds on their entrance were complicated with erysipelas or diffused phlegmon, two or three days' use of the chloral has sufficed to arrest the progress of such complications. After cleansing the wound and its vicinity by means of a little charpie (avoiding the use of sponges) dipped in the solution (and when the wound is deep and irregular, filling it with this, so that it may gain access to the most remote corners) he covers the whole surface with pledgets of charpie thoroughly imbibed with the choral, and having covered these with oiled silk, envelopes the whole in a thick layer of wadding, and applies a roller somewhat tightly. The chloral is pleasant to the smell, soils neither the fingers nor the bedding, is not too volatile, and causes no pain on application. It has been of great service in several cases of ozæna without necrosis, and it would be difficult to mention all the applications of which it is susceptible. Whenever fetidity has to be destroyed, fermentation, putrefaction, or the production of vibriones, etc., to be arrested, it fulfils the indication with certainty and inoffensiveness. Its moderate price, also, is a matter of importance in hospital administration, as a kilogramme is to be had for twelve or fifteen francs; and as a litre at 1 per cent. contains ten grammes, the price of which is from twelve to fifteen centimes, next to water itself it is the cheapest article that can be employed.

At a recent meeting of the Société de Thérapeutique (*Bullet. de Thérap.*, July 30), M. Créquy strongly recommended chloral as an injection in ozæna, in the proportion of two parts to 250 of water. He places a caoutchouc tube in the vessel containing the solution, and, raising this above the patient's head, allows the fluid to pass into the nose by syphon action. Several members of the Society testified to the utility of the solution as an application in scrofulous and fetid ulcers, in the eschars produced by decubitus, etc.

Reduction of Dislocation of the Shoulder.

M. Revillout, in the *Gazette des Hôpitaux* for July 31, gives an account of the mode which M. Panas adopts for the easy accomplishment of this. M. Panas believes that almost all these dislocations are produced by a rotation of the humerus; and as the result of numerous experiments he found that it is very easy to lacerate by a movement of rotation a capsular ligament which would resist a direct traction of 600 kilogrammes. Generally, also, the tendon of the subscapularis is ruptured in the dislocation forwards. For the easy reduction of this dislocation it is of importance to keep the arm rotated outwards. For, in fact, once beyond the button-hole laceration of the capsule, the head of the bone, when carried inwards, lies supported on the inner lip of the laceration; so that if reduction be attempted in this position, the head being separated from the glenoid cavity by a more or less broad ligamentous bridle, it cannot succeed unless by rupturing this bridle, which it is not always easy to do. When, however, muscular resistance having been overcome by a sufficient extension sufficiently prolonged, the head of the bone is brought by rotation outwards to the middle of the rupture, it suffices to push it with the hand to effect reduction—if it has not become self-adjusted without any noise. Preparatory to this movement of rotation, M. Panas causes traction to be made at the arm above the elbow, instead of at the wrist. In this way the flexed forearm is in readiness to be carried outwards at the appropriate moment. Much force is not required for extension, provided the muscular relaxation is patiently

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waited for. M. Panas has succeeded in this manner in somewhat old dislocations, providing a sufficient time had not elapsed to give rise to an altered formation of the articular cavity.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are lists of candidates who have passed the recent examinations:—

FIRST M.B. EXAMINATION (ENTIRE).

First Division.—Benham, Frederick Lucas, University College; Dunbar, James John Macwhirter, St. George's Hospital; Gadsby, John Topham, University College; Goodchild, Francis, St. George's Hospital; Hayward, Thomas Ernest, St. Bartholomew's Hospital; Henderson, George Courtenay, University College; Lyddon, Richard, St. Bartholomew's Hospital; Miller, Richard Shalders, University College; Nicholson, John Francis, St. Thomas's Hospital; Prowse, Arthur Bancks, Liverpool School of Medicine and St. Mary's; Pye, Walter, St. Bartholomew's Hospital; Taylor, Harold Gilbertson, King's College; Willcocks, Frederick, King's College.

Second Division.—Blamey, James, University College; Bond, James William, University College; Bott, Henry Septimus, University College; Bury, Judson Sykes, University College; Cattle, Charles Henry, Leeds School of Medicine; Claremont, Claude Clarke, University College; Collins, William Edward, St. George's Hospital; Davy, Henry, Guy's Hospital; Garbutt, John Gilliott, M.A., St. Mary's Hospital; Gristock, William, University College; Horrocks, Peter, Guy's Hospital; Hudson, James, University College; Hunter, Christian Bernard, University College; James, Alfred, University College; Joll, Boyd Burnett, University College; Lloyd, David, University College; Lubbock, Montagu, Guy's Hospital; Mears, William Pope, London Hospital; Mortimer, John, University College; Nicholson, William Rumney, University College; Paddison, Edmund Howard, Guy's Hospital; Sedgefield, Arthur Robert Wyatt, King's College; Shain, William Frederick, Liverpool School of Medicine; Silcock, Arthur Quarry, University College; Stevenson, Leader Henry, Guy's Hospital; Thomas, John Raglan, St. Bartholomew's Hospital; Watson, Charles John, University College; Weiss, Hubert Foveaux, St. Bartholomew's Hospital; Wiglesworth, Joseph, Liverpool School of Medicine; Wilkinson, Arthur Thomas, B.A., B.Sc., Owens College School of Medicine.

EXCLUDING PHYSIOLOGY.

First Division.—**Lowe, Howard Griffiths, Queen's College, Birmingham; Plumbe, Samuel Thomson, St. Bartholomew's Hospital.**

Second Division.—**Beevor, Charles Edward, University College; Blake, William Henry, University College; Drysdale, Alfred Edgar, University College and Liverpool Infirmary; Roeckel, Waldemar Joseph, St. Bartholomew's Hospital; Smith, Herbert Urmsen, St. Thomas's Hospital.**

PHYSIOLOGY ONLY.

First Division.—**Cross, Francis Richardson, King's College.**

Second Division.—**Bigger, Samuel Ferguson, Liverpool Royal Infirmary; Champneys, Henry Laurence, Guy's Hospital; Finch, Alfred, Guy's Hospital; Hellier, John Benjamin, Leeds School of Medicine; Smith, Thomas Bower, University College.**

FIRST B.SC. EXAMINATION.

First Division.—Baylis, Frederick, Epsom College; Best, John Henry, University College; Bredin, Richard, Liverpool Royal Infirmary School of Medicine, and private study; Brooke, Henry Ambrose Grundy, B.A., Owens College; Brown, George, Owens College; Bulley, Reginald Hargreaves, Owens College; Clark, James Edmund, B.A., Heidelberg University; Dalgarno, Charles, private study; Dixon, Alexander Campbell, private study; Elsden, James Vincent, private study; Evans, John William, University College; Frames, George Charles, Royal School of Mines; Freeman, George Augustus, St. John's College, Battersea, and private study; Gladman, Frederick John, B.A., private study; Harrison, Cecil Reeves, University College; Heap, Hargreaves, St. Mark's College, Chelsea, and private study; Hewitt, William, Royal School of Mines; Hughes, George Burgess, Wesleyan College, Taunton; Humpidge, Thomas Samuel, Royal School of Mines; Jackson, Alfred Henrick, Owens College; Jones, William Wansbrough, Magdalen College, Oxford; Ledward, Archibald Prentice, Owens College; Lucas, Arthur Henry Shakespeare, New Kingswood School; McAlpine, Archibald, Royal College of Science, Dublin; McKenzie, John Logan, private study; Mortimer, James, B.A., University College, London, and University of Edinburgh; Noble, William James, Keble College, Oxford; Park, John Oliver, private study; Parkes, Louis Coltman, University College; Pearce, Walter, St. Mary's Hospital; Quelch, John Joseph, New College, Eastbourne; Robertson, David, LL.B., private study; Ross, David, B.A., private study; Spicer, Robert Henry Scanes, private study; Spratling, William Joseph, private study, and Royal School of Chemistry; Sugden, Edward Holdsworth, B.A., Owens and Headingley Colleges; Thompson, Silvanus Phillips, B.A., private study; Tovey, Albert Edward, private study; Tunzelmann, George William Von, University College; Wainwright, Edward Harley, University College; Whitby, Robert, B.A., private study; Willis, Ambrose Robinson, Royal School of Mines.

Second Division.—Anderson, Daniel Elie, B.A., Royal College of Mauritius, and University College; Bailey, George Herbert, private study; Enright, James, private study; Fawcett, William, private study; Miller, John Aaron, B.A., private study; Outhwaite, William, private study; Procter, Charles James, Owens College; Spencer, James, private study; Stewart, John Huston, Royal College of Science, and private study; Trafford, William Carey, University College.

UNIVERSITY OF EDINBURGH.—List of candidates who received the degrees of Doctor of Medicine, Bachelor of Medicine, and Master in Surgery, respectively, on Monday, August 2:—

Doctor of Medicine.—**Anderson, Francis Henry, Jamaica, M.B. and C.M., 1866 (received the degree on November 2, 1874); *Black, John Robert, Scotland, M.B. and C.M., 1872; Blackshaw, Thomas Wilkinson, England, M.B. and C.M., 1872; Downie, Kenneth Mackenzie, Scotland, M.B. and C.M., 1866; Edwards, David Richard, Wales, M.B. and C.M., 1871; England, Richard Edward, England, M.B. and C.M., 1871; Flint, Edward, England, M.B. and C.M., 1870; Henderson, John Brodie, Scotland, M.B. and C.M., 1870; †Imlach, Francis, England, M.B., 1872; Inkster, Samuel M'Aulay, Shetland, M.B. and C.M., 1873; Jackson, Thomas Scoresby, England, M.B. and C.M., 1870; Lediard, Henry Ambrose, England, M.B., 1870; *Livesay, William, England, M.B. and C.M., 1871; †Major, Herbert Coddington, Jersey, M.B. and C.M., 1871; Ransom, Frederick Parlett Fisher, England, M.B. and C.M., 1873; †Stirling, William, Scotland, Baxter Scholar in Natural Science, 1870, Falconer Fellow, 1871, M.B. and C.M., with First Class Honours, and D.Sc. and Ettles Prizeman, 1872; Walker, John Burnley, England, M.B. and C.M., 1873; Williamson, James Mann, England, M.B. and C.M., 1872.**

* Commended for their dissertations.

† Those who have obtained prizes for their dissertations—Gold medals.

Bachelor of Medicine and Master in Surgery.—**Alexander, Alexander, Scotland; Aubin, Ernest, Jersey; Baldwin, Edmund St. George, Canada; Barlow, John, England; Barrs, Alfred George, England; Brown, John James Graham, Scotland; Brown, Samuel, Scotland; Browne, Thomas Sinclair, Barbadoes; ‡ Cheyne, William Watson, Scotland; Chisholm, Edwin Millidge, Scotland; Chown, Joseph Waterfield, England; Clark, Thomas M'Rae, Demerara; Clarke, John Henry, England; Cotterill, Joseph Montagu, England; Crabb, James (M.A. Aberdeen), Scotland; Crowdy, Frederic Hamilton, Newfoundland; Davey, Charles James, England; Evans, William Thomas, England; Ferens-Oliver, John, England; Garton, William, England; Gillies, Walter, England; Glasier, Charles, England; Glendinning, George, Scotland (received the degrees on November 28, 1874); Gonsalves, Manuel Martinho, Demerara; Hamilton, John Rogerson, Scotland; Helme, James Milner, England; Hogg, Robert Brown, Scotland; Holmes, James, Berwick; Jack, David Morton, Scotland; Janisch, Bertram, St. Helena; Johnson, John Frederick, Ireland; Johnstone, John James, Scotland; Jones, Abraham Emrys, Wales; §Jones, Edward Owen, Wales; §Kirkwood, George, Scotland; Laing, Henry William, Scotland; Lamb, William, India; Lunan, Charles Smith, Scotland; §Macleod, Neil, England; M'Liesh, Norman (M.A. Edin.), Scotland; Marchbank, John, Scotland; Murray, Alexander Dalton, Scotland; Nankivell, Frank, England; Oswald, Henry Robert, India; Renny, Archibald William, Peru; Richardson, Richard Isaac, Scotland; Roy, Charles Smart, Scotland; Ryan, Charles Snodgrass, Australia; Sanderson, Charles Edward, India; Sherburn, John, England; Simpson, Magnus Retzius, Scotland; Smith, George Daniel, England; Smith, John, England; Smith, Otto Wien, Scotland; Spence, Thomas Fair Hetherington (M.A. Edin.), Scotland; Stephenson, George Skelton, England; Stewart, William, Scotland; Stone, Herbert Stanley (B.A. New Brunswick), New Brunswick; Symons, Mark Johnston, Scotland; Tunstall, Alfred Croudson, England; ‡Turnbull, Adam Robert, Scotland; Underwood, George Richardson, Scotland; Vause, Arthur John, England; Vereker-Bindon, William John, Cape of Good Hope; §Watkins, Arnold Hirst, England; Watson, Alfred Hardy, England; Watson, Thomas Henry, England; Watters, George Thomas Brown, Scotland; Wearing, Richard, England; Wilson, James Hamilton, England.**

‡ Indicates that the candidate has passed the examinations with First Class Honours.

§ Indicates that the candidate has passed the examination with Second Class Honours.

Bachelor of Medicine.—**Aitchison, James, England; Carey, Ernest Gilbert, India; Carey, William, India; Cox, Joshua John, Ireland; Crichton, George (M.A. St. Andrews), Scotland; Eames, James Compton, England; Fraser, Thomas, Scotland; Furley, William Grant, Scotland (received the degree on April 21, 1875); Garson, John George, Orkney; Harker, Thomas, England; Hill, Robert Bryden, England (received the degree on April 21, 1875); Jameson, George Herbert, England; M'Naught, James, England; Morison, James Rutherford, England; Morris, Walter Cameron, Barbadoes; Wilson, Thomas Duddingston (M.A. Edin.), Scotland.**

The Ettles Prize **for 1875 has been awarded to Adam Robert Turnbull, M.B., C.M.**

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 12:—

Price, Arthur, Surrey Villas, Thornton Heath, Croydon.
Stephens, Charles, Upper Parliament-street, Liverpool.

The following gentlemen also on the same day passed their primary professional examination:—

Bain, David Stuart Erskine, Charing-cross Hospital.
Todd, John, University College.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CURWEN, CECIL, M.R.C.S.—Junior House-Surgeon to the Royal Free Hospital, Gray's-inn-road.

DOBIE, WM. M., M.D.—Physician to the Chester Infirmary.

HAMILTON, FRANCIS G., M.R.C.S.—Senior House-Surgeon to the Royal Free Hospital, Gray's-inn-road.

HODSON, ALGERNON, M.R.C.S.—Junior House-Surgeon to the Royal Free Hospital, Gray's-inn-road.

RALFE, CHARLES HENRY, M.B.—Teacher of Physiological Chemistry at St. George's Hospital Medical School.

SMITH, JAMES OUSTON, L.R.C.P. Edin., M.R.C.S. Eng.—Medical Officer for St. Chad's District of Atcham Union.

NAVAL APPOINTMENTS.

ADMIRALTY.—Duncan M'N. Johnston, Staff-Surgeon, to the *Pembroke*.

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BIRTHS.

SHIRTLIFF.—On August 15, at Kingston-on-Thames, the wife of E. M. Shirtliff, M.R.C.S., of a son.

SPAULL.—On August 16, at 2, Vale-place, Hammersmith, the wife of Barnard E. Spaull, M.R.C.S. Eng., L.S.A., of a son (Frederick John).

STAINES.—On August 12, at 37, Southampton-row, W.C., the wife of J. F. Staines, L.R.C.P., of a daughter.

WARD.—On August 15, at Saltburn, Twickenham-common, the wife of Martindale C. Ward, M.D., of a daughter.

WEBER.—On August 13, at 10, Grosvenor-street, W., the wife of Herma nn Weber, M.D., of a son.

MARRIAGES.

CAMERON—OATTS.—On June 2, at Nowhatta, Jessore, Bengal, Lewis Cameron, M.D., Surgeon Indian Army, to Annie Mina, eldest daughter of H. Oatts, Esq.

MEISSNER—LUMGAIR.—On August 17, at 2, Forres-street, Edinburgh, William Henrich Meissner, Esq., 8, St. John's-terrace, Regent's-park, N.W., to Anna Simpson Beveridge, elder daughter of George Lumgair, M.D., L.M., Largo, Fife.

PRINGLE—SMITH.—On August 17, at Nolton Chapel of Ease, Bridgend, Glamorganshire, Henry Turnbull Pringle, M.D., Medical Superintendent of the Glamorgan County Asylum, to Jessie Isabella, only daughter of the late Thomas George Smith, Esq., of Bridgend.

DEATHS.

FULLFORD, WILLIAM HUGO, youngest son of the late William Fullford, M.R.C.S., at Lorrimore-road, Kennington-park, S.E., after a short illness, on August 8, aged 16.

GANGE, ALBERT WILLIAM, M.D., of The Poplars, Cunningham-place, London, and Park Lodge, Hythe, Kent, second son of the late Major Gange, of Dover, at Hythe, on August 14, aged 54.

JOHNSON, CAVENDISH, Surgeon-Major H.M. Indian Army (Retired List), at 24, Southwick-street, Hyde-park, W., on August 14.

LOMAS, AIMEE ROSANNA, elder daughter of William Lomas, M.D., M.R.C.P., at 99, Gower-street, on August 15, aged 17 months.

PARKINSON, CHARLES BROWN, M.R.C.S. Eng., L.S.A., on August 10, at Wimborne, Minster, Dorset, aged 63.

TURNER, LUCRETIA ANNE, eldest daughter of the late Thomas Turner, M.D., of 31, Curzon-street, Mayfair, at 14, Dorset-square, N.W., on August 14.

WEBB, THOMAS ERNEST, M.R.C.S. Eng., on August 10, at 1, Waterloo, Kilburn, aged 73.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOURNEMOUTH GENERAL DISPENSARY.—Resident Medical Officer and Secretary. Applications, with testimonials, to the President, on or before August 31.

BURY UNION.—Medical Officer for the Radcliffe District.

DAVENTRY UNION.—Medical Officer for the Workhouse and the First District.

DUDLEY DISPENSARY.—Resident Medical Officer at Michaelmas.

HAY UNION.—Medical Officer for the Herefordshire District.

KEYNSHAM UNION.—Medical Officer for the Keynsham District.

LEEK UNION.—Medical Officer for the Norton District.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

ORMSKIRK UNION.—Medical Officer for the Second District.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Must be duly qualified. Applications, with testimonials, to William Beer, Assistant-Secretary, on or before September 5.

ROYSTON UNION.—Medical Officer for No. 5 District. Applications on or before September 6.

UCKFIELD UNION.—Medical Officer for the Maresfield District.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Second Assistant Medical Officer. Candidates must possess both a medical and a surgical degree, and be unmarried. Applications, with testimonials, to Dr. Parsey, at the Asylum, Hatton, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Wimborne and Cranborne Union.—The First District is vacant; area 19,385; population 4754; salary £85 per annum. The Second District is vacant; area 16,441; population 5156; salary £95 per annum.

Westbury and Whorwellsdown Union.—The First District is vacant; area 7367; population 5699; salary £76 per annum. Also the Workhouse; salary £45 per annum.

APPOINTMENTS.

Amersham Union.—Benjamin A. Brickwell, M.R.C.S. Eng., L.S.A., to the Amersham District and the Workhouse.

Hendon Union.—James Troutbeck, M.B. Edin., L.R.C.S.E., to the Stanmore District.

Keynsham Union.—John Lodge, M.R.C.S. Eng., L.S.A., to the Keynsham District.

Maldon Union.—Arthur Lattey, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A., to the Southminster District.

Ormskirk Union.—George A. Woods, M.R.C.S. Eng., L.R.C.P. Edin., L.S.A., to the Second District. George S. Kenyon, L.R.C.P. Edin., L.F.P. & S. Glasg., to the Fourth District.

Pembroke Union.—David P. Saer, L.R.C.P. Edin., L.R.C.S. Edin., L.S.A., to the First District.

Portsea Island Union.—David W. Williams, M.D. St. And., L.R.C.P. Lond., M.R.C.S. Eng., to the Workhouse.

Stow-on-the-Wold Union.—Frederick E. Pearse, L.R.C.P. Edin., M.R.C.S. Eng., to the Workhouse and the Loughborough District.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—The library was closed on Monday last, the 16th inst., and will be re-opened on Thursday, September 16.

THE Kent County Ophthalmic Hospital, Maidstone, has been presented with ten framed engravings by Messrs. Henry Graves and Co., of Pall-mall, and Mr. Thomas Hyde Hills, of Oxford-street. Seven of the engravings are from pictures by the late Sir Edwin Landseer.

IT is reported that Dr. William Stevenson, F.R.C.S. Edin., Physician to the Edinburgh Royal Hospital for Sick Children, has been appointed to the Chair of Midwifery and Diseases of Women and Children in the University of Aberdeen, which was vacant through the death of Dr. Andrew Inglis.

THE Royal Infirmary for Children and Women, Waterloo-road, S.E., which was founded in 1810, and is the oldest hospital for children in London, has just been closed for four months for additions and improvements. A new storey will be added, by which the Infirmary will gain twenty-five beds, raising the total number to more than fifty; and the out-patient accommodation will be much increased. The plans are by Mr. Barry, the architect of the new wards of the Children's Hospital, Great Ormond-street. We are glad to learn that the greater part of the funds necessary to accomplish what is desired has been already subscribed.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

J. Todd, Newtown-street.—The Cantor Lectures by Dr. B. W. Richardson are published in crown 8vo, price 1s., by Macmillan and Co., London.

Dr. J. M. Minor, New York.—Letter (with enclosure) received.

P. T. W.—The tale is, that the gentleman who was waited upon with his surgeon's bill for the purpose of being paid, after cogitating for some time over its contents, desired the young man who called with it to tell his master that the medicine he would pay for, but he should return the visits!

C. C. Folger.—The practice of anæsthesia in ancient surgery is referred to by Middleton, the old dramatist, 1657, thus:—

> "I'll imitate the pities of old surgeons
> To this lost limb, who, ere they show their art,
> Cast one asleep, then cut the diseased part."

R. J., Cumberland.—"The drug he gave me, which he said was precious and cordial to me, have I not found it murd'rous to the senses?"—*Shakespeare.*

Hector.—Sir Humphry Davy, in his posthumous work, "Consolations in Travel, or the Last Days of a Philosopher," says: "There is nothing more difficult than a good definition of chemistry, for it is scarcely possible to express in a few words the abstracted view of an infinite variety of facts. I will give you a definition which will have the merit of novelty, and which is probably general in its application—*Chemistry relates to those operations by which the intimate nature of bodies is changed, or by which they acquire new properties.* This definition will not only apply to the effects of mixture, but to the phenomena of electricity; and, in short, to all changes which do not merely depend upon the motion or division of masses of matter."

Veritas.—The population of Victoria, Australia, on March 31 last was 810,422, of whom 440,140 were males.

Vaccination.—The Registrar-General for Scotland again, in his report issued on the 14th inst., repeats his opinion (frequently expressed in former reports) that the period of six months, during which newly-born children may be permitted to remain unvaccinated without rendering their parents or guardians liable to penalty, should be abridged.

A Subscriber.—1. January 3, 1874. 2. The letter from Jenner to Cline, who assured him that if he came to London he would earn £10,000 a year, was to the following effect:—"Shall I," he says, "who even in the morning of my days sought the lowly and sequestered paths of life in the valley, and not the mountain, shall I, now my evening is fast approaching, hold myself up as an object for fortune and for fame? Admitting it as a certainty that I obtain both, what stock should I add to my little fund of happiness? And as for fame, what is it? A gilded butt, for ever pierced with the arrows of malignancy."

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M. S., Yorkshire.—"On the Effect of Certain Faults of Vision on Painting," a lecture delivered at the Royal Institution, October, 1872, by Dr. Liebreich, Ophthalmic Surgeon to St. Thomas's Hospital.

J. J., Douglas.—An instance of a person being so severely scorched by the sun's rays as to require medical attendance occurred during the almost tropical heat of the summer of 1859 in London, when a youth who had been exposed to the sun naked for some time while bathing, was admitted into St. George's Hospital with the whole of the skin of his back burned in the first degree, and large bullæ raised upon the scapulæ. He recovered.

J. G. T.—In the Army Medical Museum at Netley there is a preparation of a jejunum which was supposed to have been perforated in three places by a musket-ball. It was taken from a private of the 80th Regiment, who was shot through the abdomen at Ferozeshah in 1845, and who died from cholera in 1851.

COMMUNICATIONS have been received from—

Dr. Barety, Nice; Mr. J. Todd, Newtown Stewart; Mr. R. W. Creely, Twickenham; Mr. James Spence, Edinburgh; Mr. Nicholson, Carlisle Castle; Mr. G. Meadows, Hastings; Mr. Borchert, Netley; Mr. R. H. Smith, Bridgend; Mr. Forster, Little Hampton; The Secretary of the Army Medical School, Netley; Mr. R. W. Creely, Twickenham; Mr. E. Nicholson, Carlisle; The Secretary of the Apothecaries' Hall, London; The Registrar-General, Edinburgh; Mr. Wheatley, London; The Secretary of the Quekett Microscopical Club; Dr. Sparks, London; Dr. W. A. Johnson, London; Mr. J. Merriman, London; Dr. T. Chambers, London; The Secretary of the Local Government Board; Dr. C. Bell Taylor, Nottingham; Mr. J. W. Moore, Dublin; Dr. Hatchard, Hastings; Dr. Peacock, London; Dr. R. Young, Hong-Kong; Mr. John Ernest, Shrewsbury; Dr. Prince, London; Professor Huxley, Edinburgh; Mr. B. J. Vernon, London.

BOOKS AND PAMPHLETS RECEIVED—

Child's Second Report on the Sanitary Condition of Oxford—The Royal Tiger of Bengal: his Life and Death, by J. Fayrer, M.D.—Report of the Royal Westminster Ophthalmic Hospital—By-laws, Rules, and Regulations of the College of Physicians and Surgeons of Lower Canada.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iren—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Le Pays—Belfast News-Letter—Amateur World—Chemist and Druggist—Durham County Advertiser—Students' Journal and Hospital Gazette—Canada Lancet—American Supplement to the Obstetrical Journal of Great Britain and Ireland—Chicago Medical Journal.

APPOINTMENTS FOR THE WEEK.

August 21. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

23. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

24. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

25. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

26. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

27. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Quekett Microscopical Club, 8 p.m. Mr. W. Cole, "Remarks on a Parasite of the Humble Bee (*Sphærularia bombi*)."

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 14.

BIRTHS.

Births of Boys, 1212; Girls, 1183; Total, 2395.
Average of 10 corresponding years 1865-74, 2118·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	783	700	1483
Average of the ten years 1865-74	812·9	769·3	1582·2
Average corrected to increased population	...	...	1693
Deaths of people aged 80 and upwards	...	...	34

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	13	...	4	...	1	...	23
North	751729	1	9	18	4	16	...	2	...	27
Central ...	334369	...	3	7	...	6	...	1	3	11
East	639111	...	16	16	...	8	1	4	1	46
South	967692	...	6	33	3	16	...	7	2	40
Total	3254260	1	36	87	7	50	1	15	6	147

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·736 in.
Mean temperature	65·2°
Highest point of thermometer	78·9°
Lowest point of thermometer	57·5°
Mean dew-point temperature	60·4°
General direction of wind	S.W.
Whole amount of rain in the week	0·21 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 14, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1876.)	Births Registered during the week ending Aug. 14.	Deaths Registered during the week ending Aug. 14.	Temperature of Air (Fahr.): Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.): Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2395	1483	78·9	57·5	65·2	18·44	0·21	0·53
Portsmouth ...	122632	27·3	85	43	...	...	...	...	...	...
Norwich	82842	11·1	47	27	...	...	...	...	...	...
Bristol	196186	44·1	119	94	77·2	52·3	63·4	17·44	0·99	2·51
Wolverhampton ...	71718	21·1	69	26	75·7	55·3	62·9	17·17	1·53	3·89
Birmingham ...	366325	43·6	295	192	75·5	56·3	64·4	18·00	1·49	3·78
Leicester	109830	34·3	86	84	76·8	56·2	64·0	17·78	1·09	2·77
Nottingham ...	92251	46·2	63	56	74·9	54·6	61·5	16·39	3·08	7·83
Liverpool	516063	99·1	344	245	71·1	55·3	61·6	16·45	1·53	3·89
Manchester ...	356626	83·1	270	166	75·5	53·0	63·3	17·39	1·67	4·24
Salford	135720	26·3	114	85	73·9	52·0	61·8	16·56	1·68	4·27
Oldham	87437	18·7	70	38	...	...	...	...	...	...
Bradford	168305	23·3	120	71	72·0	54·8	59·5	15·28	1·95	4·95
Leeds	285118	13·2	189	152	71·0	54·0	59·8	15·45	1·48	3·76
Sheffield	267881	13·6	197	123	75·0	54·0	60·6	15·90	1·13	2·87
Hull	133932	36·8	107	80	74·0	54·0	61·1	16·17	1·28	3·25
Sunderland ...	106342	32·2	81	37	79·0	53·0	60·2	15·67	2·14	5·44
Newcastle-on-Tyne	137665	25·6	96	95	70·0	50·0	57·8	14·34	3·08	7·83
Edinburgh	211626	50·5	114	73	...	...	...	...	...	...
Glasgow	534564	88·6	345	270	...	...	...	...	...	...
Dublin	314666	31·3	176	111	74·3	48·2	62·1	16·73	1·38	3·51
Total of 21 Towns in United Kingdom	7742889	37·0	5382	3551	79·0	48·2	61·8	16·56	1·61	4·09

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·74 in. The lowest was 29·58 in. on Thursday afternoon, and the highest 29·98 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

NOTES ON THE INVERTEBRATA

FOR THE

USE OF STUDENTS OF ZOOLOGY.

BEING AN OUTLINE OF A COURSE OF LECTURES DELIVERED FROM THE CHAIR OF NATURAL HISTORY IN THE UNIVERSITY OF EDINBURGH.

By THOMAS H. HUXLEY, LL.D., Sec. R.S.

(*Concluded from page* 204.)

In the series of air-breathing Arthropods, no forms absolutely devoid of limbs are known, though the appendages are reduced to two pairs in the *Pentastomida*.

The *Arachnida* and the *Peripatidea* represent the air-breathing Arthropods which have pediform gnathites.

Among the *Arachnida*, the *Arthrogastra* (Scorpions and pseudo-Scorpions) present an extraordinarily close resemblance to the *Merostomata* among the *Crustacea*. In the body of a Scorpion there is a small carapace, or cephalo-thoracic shield, followed by twelve free somites, and the pointed movable piece (*telson*) which contains the poison gland, and overhangs the anus. The genital apertures are situated in the sternum of the first of the twelve free somites, while that of the second possesses a pair of peculiar short brush-like organs—the *pectines*. The other free somites have no appendages.

Six pairs of appendages are attached to the cephalo-thorax. Of these, the most anterior are the *cheliceræ*, situated on each side of the large labrum, and in front of the mouth; the next pair are the *pedipalpi*, which resemble a lobster's claws; behind these come four pairs of ambulatory limbs.

The mouth is situated between the labrum in front, the bases of the pedipalpi and those of the first two pairs of ambulatory limbs, at the sides and behind; just as in *Limulus*, the mouth lies between the labrum and the basal joints of the third, fourth, and fifth limbs, which answer to the mandibles and first and second maxillæ of the higher *Crustacea*. If this comparison is just, there is one pair of præ-oral appendages, which exist in *Limulus*, wanting in the Scorpion; and the difference between the two may be represented thus:

Limulus.	Antennule.	Antenna.	Mandible.	Maxilla 1.	Maxilla 2.
Scorpio.		Chelicera.	Pedipalpus.	Leg 1.	Leg 2.

If this is the right way of looking at the matter, and if the eyes-bearing part of the head may be regarded as a somite, then the body of the Scorpion, like that of a Malacostracous Crustacean, will consist of twenty somites and a telson. But no trace of the supposed missing antennary appendage has been met with in the embryonic condition, so that the alternative possibility that the mouth is situated one somite further forward in the Scorpion than in the Crustacean must be borne in mind.

It is very interesting that Metschnikoff has found rudiments of limbs on those somites of the embryo Scorpion on which the stigmata are situated.

The *Araneina* (Spiders) have the same fundamental structure as the *Arthrogastra*, but the part of the body which answers to the free somites in *Scorpio*, is tumid and undivided. In the *Acarina* (Mites and Ticks), the hinder part of the body has the same character, but the cheliceræ, the pedipalpi, and the labrum, become more or less completely fused into the so-called *rostrum*.

The *Pycnogonida* are usually regarded as aberrant *Arachnida*, but they differ from all *Arachnida* in the number of their appendages. The adult has four pairs of enormously elongated ambulatory limbs, in front of which are three pairs of short appendages, the anterior of which are chelate, while the posterior are more or less rudimentary. Between the anterior pair is a rostrum, in which the mouth terminates. The embryo emerges from the egg as a larva provided with a rostrum, and with three pairs of appendages which represent the short anterior three pairs in the adult.(a) The four pairs of great limbs of the adult are produced by outgrowths from a subsequent posterior elongation of the body.

The comparison of the embryos of the *Pycnogonida* with those of the *Acarina*, especially such as leave the egg with three pairs of appendages, appears to me to leave little doubt that the rostrum of the larval *Pycnogonum* is formed, as in the Mites, by the coalesced representatives of the cheliceræ and pedipalpi. If so, the seven other pairs of limbs are, by three pairs, in excess of the number found in any Arachnidan. On the other hand, the hexapod larva of the *Pycnogonida* differs from the hexapod *Nauplius* of the Crustacea, inasmuch as one, if not two pairs, of appendages of the *Nauplius* always represent antennæ.

The fact that the embryo Scorpion has six pairs of rudimentary appendages, attached to as many of the somites which follow the cephalothorax, of which one pair only remain (as the pectines) in the adult, leads me to suspect that the *Pycnogonida* may represent a much modified early Arachnidan form, from which the *Arthrogastra*, *Araneidea*, and *Acaridea* have branched off.

The rostrum of the *Tardigrada* is so like that of the *Acaridea*, that one is tempted to regard them as modified mites. While the parasitic *Pentastomida* are probably related to the *Acaridea*, as the *Epizoa* are to the *Copepoda*.

The oral aperture in the *Arachnida* is always small, and usually leads into a suctorial pharynx. Very often the stomach gives off long cæcal processes which may extend far into the legs. Salivary glands, a distinct liver, and urinary (Malpighian) glands open into the alimentary tract. In the *Arthrogastra* and *Araneidea* there is a many-chambered heart in the dorsal region of the abdomen, and a well-developed arterial system. The respiratory organs are pulmonary sacs alone (*Scorpionidæ*); pulmonary sacs and tracheæ combined (*Araneidea*); or tracheæ alone, as in all other *Arachnida* which have distinct respiratory organs. The visual organs are always simple eyes; special organs of hearing and smell are not known. The sexes are distinct, except in the *Tardigrada*, which are hermaphrodite. The newly-hatched young resemble the adult, except in some *Acaridea*, and in the *Tardigrada* and *Pentastomida*. Agamogenesis is not known to take place among the *Arachnida*.

The Peripatidea.—The genus *Peripatus* (b) contains vermiform animals with segmented bodies, with a pair of long cephalic tentacles, and from fourteen to thirty-three pairs of jointed ambulatory limbs, each terminated by two claws. They have the curious habit of spinning a web when handled or irritated. This web is formed of fine filaments of a viscid matter, which is projected from the tips of two oral papillæ.

The alimentary canal commences by an ovoid muscular pharynx. The œsophagus, continued from this, gradually dilates into a wide and long stomach, from which a very short intestine is continued to the anus, situated at the posterior end of the body. There are no Malpighian cæca. Two very large ramified tubular glands, which secrete the viscid matter mentioned above, lie at the sides of the alimentary canal, and open on the oral papillæ. There is a vessel along the middle line of the dorsal body-wall.

The numerous pores, or *stigmata*, from which the tracheæ take their origin, are scattered all over the surface of the body, one row being median and ventral. Each stigma is the outward termination of a short wide tube, which, at its opposite end, branches out into a pencil of fine tracheæ, which rarely divide, and are distributed in great abundance to the viscera. An imperfect spiral thickening is visible in the walls of the tracheæ.

The nervous system consists of an œsophageal ring with dorsal ganglionic enlargements, and of two completely distinct cords, which run thence to the posterior end of the body. The muscles are not striated.

The sexes are distinct. The ovary is small, divided by a median septum into two lobes, and lies beneath the alimentary canal. The oviduct, at first single, divides into two branches, which are long, and, posteriorly, present uterine dilatations. They then unite, and terminate by a short vagina on the ventral aspect of the rectum. The testes are ovate bodies, each with a cæcal appendage. The long and coiled vasa deferentia unite into a common duct, which opens in the same position as the female generative aperture. The ova are developed within the uterine dilatations of the oviducts.

In the earliest condition observed, the embryo is very like that of a Scorpion, but is folded upon itself, so that the ventral aspects of the anterior and posterior halves of the body are turned towards one another. As in the Scorpion, there is a pair

(a) A. Dohrn, "Untersuchungen ueber Bau und Entwickelung der Arthropoden." Erster Heft. 1870.

(b) The determination of the true nature of this animal is due to Mr. Moseley, one of the naturalists of the *Challenger* Expedition.—See his excellent memoir on *Peripatus capensis* (*Philosophical Transactions*, 1874).

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of large procephalic lobes, succeeded by a series of segments, from the sides of which, processes—the rudiments of the limbs—bud out. The procephalic lobes give rise to a kind of hood, the lateral angles of which extend over the bases of the first pair of limbs, and join with those of the second pair, which are the oral papillæ of the adult. The first pair of limbs thus become enclosed within the hood (the margins of which form the suctorial lip of the adult), and, developing two chitinous claws upon their extremities, like those of the other limbs, they are converted into the jaws of the adult animal.

It is remarkable that the antennæ are developed from the anterior part of the procephalic lobes; while the cheliceræ of the Scorpion appear at the posterior margin of these lobes, in a position corresponding with that of the first pair of limbs, or jaws, of *Peripatus*.

The Myriapoda.—In these, the Centipedes and Millipedes, the most anterior segment of the body constitutes the head. It bears the eyes (which are usually simple ocelli, but sometimes are compound eyes), a pair of antennæ, and two pairs of manducatory organs, between which the aperture of the mouth is situated. In one division of the group, the *Chilognatha*, the succeeding appendages are ordinary locomotive limbs. But, in the *Chilopoda*, the two pairs of limbs which are attached to the segment (representing at least two somites) which follows the head are converted into accessory jaws, the second pair being the great curved poison-claws of the *Scolopendræ*. The segments of the body of the *Chilognatha* behind the first five or six bear two pairs of limbs, so that each probably represents two somites. The alimentary canal is straight and simple, like that of an insect larva. It is provided with Malpighian tubules, and large salivary glands open into the mouth.

The heart is many-chambered, and the respiratory organs are tracheæ, like those of insects, and, like them, open by stigmata on the lateral or ventral surface of the body, or rarely (*Scutigera*) in the median dorsal line.

The reproductive organs are tubular, and those of the females are provided with receptacula seminis. In the *Chilopoda*, the reproductive apertures are situated at the hinder end of the body; but, in the *Chilognatha*, they open on the bases of the second or third pair of limbs. The male copulatory organs, however, are situated in the seventh somite behind the head, or at the extremity of the body.

Metschnikoff(c) has recently shown that in the *Chilognatha* the impregnated ovum undergoes complete yelk-division; that the embryo is, from the first, sharply folded, so that the ventral faces of the anterior and posterior halves of the body are closely applied to one another; that only two pairs of appendages are converted into jaws; and that before the hexapod larva leaves the egg, the rudiments of several pairs of legs are developed behind the functional three pairs. A chitinous cuticula is early thrown off from the embryo, and, in some species, developes a median tooth-like process, which serves to burst the vitelline membrane. There is no amnion analogous to that of Insects.

The development of the *Chilopoda* has not yet been thoroughly worked out.

The Insecta.—In this immense and varied group of the *Arthropoda* there is a singular uniformity of fundamental structure.

The three somites, which immediately succeed the head, constitute the thorax; they are termed the *prothorax*, *mesothorax*, and *metathorax*, and bear the ambulatory limbs; and when wings exist, they are attached either to the mesothorax or the metathorax, or to both. The somites which succeed the thorax are called abdominal, and bear no ambulatory limbs in the adult. The full number of these somites is eleven.

The head is always provided with four pairs of movable appendages, of which three—the mandibles and two pairs of maxillæ—lie at the sides of the mouth, which is covered in front by a labrum.

The remaining pair of appendages are attached in front of the mouth, and are the antennæ. The eyes are always immovable.

The mandibles and maxillæ are so similar to those of many Malacostracous *Crustacea* in their structure, in their relation to the mouth, and in their nervous supply, that they may be regarded as homologous. In this case the same difficulty arises as in the comparison of the correspnding parts in the *Arachnida* and the *Crustacea*. Instead of two pairs of antennary organs, there is only one. If it is a legitimate supposition that the eyes indicate a somite, and that one pair of antennæ is suppressed, the body of the insect, like that of the Scorpion and of the *Malacostraca*, will consist of twenty somites, of which six are cephalic, three thoracic, and eleven abdominal.

In the *Thysanura*, *Orthoptera*, *Neuroptera*, and *Coleoptera*, the mandibles and maxillæ are adapted for crushing and cutting, and these insects are said to be mandibulate.

In the *Hymenoptera*, the mandibles and maxillæ are still adapted for cutting and crushing, but the second pair of maxillæ coalesce, become elongated, and give rise to a suctorial apparatus.

In the *Hemiptera*, the labrum, mandibles, and first maxillæ are converted into elongated and sharp piercing styles, while the united second maxillæ constitute a fleshy lower lip. The same kind of modification, whereby the mouth becomes a *haustellum*, goes still further in the *Diptera*.

In the *Lepidoptera*, the very perfect *haustellum* is formed in a different manner. The labrum, the mandibles, and the second maxillæ are rudimentary, except that the palpi of the last are large; but the first pair of maxillæ are immensely elongated; each is grooved longitudinally; and a sucking-tube is constituted by the junction of the edges of the two.

Insects differ very widely from one another in the degree in which the newly-hatched young approaches the condition of the adult. In the *Thysanura*, the *Orthoptera*, and the *Hemiptera*, the young is an active hexapod creature, which differs from the adult in size, in the absence of wings and of marked sexual characters, but gradually and insensibly assumes the features of the adult as it grows older. Such insects are said to be *Ametabola*, or without metamorphosis. On the other hand, the *Neuroptera*, the *Hymenoptera*, the *Diptera*, the *Coleoptera*, and the *Lepidoptera* are *Metabola*, or undergo a metamorphosis in the entomological sense of the word; that is to say, the insect, when it leaves the egg, is a *larva*, or grub, very different in structure and in mode of life from the adult. As such, it increases to its full size, without notable change, and without developing wings, and then, enshrouded within its last shed skin, passes, as a *pupa*, into a resting state, during which the wings are developed, and the insect puts on its adult or *imago* form.

The alimentary canal of insects is usually divided into an œsophagus, frequently provided with a crop-like dilatation, and followed by a thick-walled muscular gizzard; a large and glandular stomach (*ventriculus*), an elongated small intestine, and a large intestine terminating in a rectum. Salivary glands are often largely developed; and peculiar tubular glands (the *vasa Malpighii*), which eliminate the urinary secretion, open at the junction between the ventriculus and the small intestine. There is no distinct liver.

A many-chambered heart lies on the dorsal side of the abdomen, in a pericardial sinus. The arterial trunks are short, and the blood, for the most part, circulates through lacunæ.

Respiration is effected by tracheæ, which send their minute ramifications into every tissue, and take their origin in stigmata, usually provided with valvular apertures, and capable of being opened and shut by appropriate muscles. The chitinous lining membrane of the tracheæ is thickened spirally. Sometimes the tracheæ are dilated into large air-vesicles. Many aquatic insects, in their larval state, are provided, instead of stigmata, with *tracheal branchiæ*. These are lateral processes of the body full of tracheal ramifications, by which the air contained in the water is filtered off into the tracheal system.

The eyes may be compound or simple. Auditory organs have, as yet, been certainly made out only in some Crickets and Locusts. They are found at the sides of the abdomen in the former case, and in the forelegs in the latter. All insects are normally dioecious, and the genital apertures are situated near the end of the abdomen. The males are provided with a penis, the females with a receptaculum seminis. The eggs are enclosed in a strong vitelline membrane before impregnation, and hence there is a *micropyle*—a single or multiple perforation in that membrane—to allow of the entrance of the spermatozoa.

Agamogenesis takes place in many insects either by the development of an ordinary ovum without fecundation (*Lepidoptera*, drone eggs of Bees); or by that of a *pseudovum* developed in a sexless form (*Aphis*); or by a sort of internal budding in larvæ (*Cecidomyia*).

(c) "Embryologie der doppeltfüssigen Myriapoden (*Chilognatha*)."—*Zeitschrift für Wiss. Zoologie*, 1874.

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THE LUMLEIAN LECTURES: ON LIFE AND ON VITAL ACTION IN HEALTH AND DISEASE.

DELIVERED AT THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

By LIONEL S. BEALE, M.B., F.R.S.,
Physician to King's College Hospital.

LECTURE III.

(*Concluded from page 176.*)

THE HIGHEST FORM OF VITAL ACTION—BIOPLASM OF NERVE.

I VENTURE to think, therefore, that we may entirely dismiss from our minds every vestige of the notion that the action of any nervous apparatus is mechanical, or that any part of it can be formed by physics or chemistry. I beg you to utterly refuse to accept the notion that mental action is a form of physico-chemical change, on the ground that neither the structure, nor the mode of growth, nor the mode of development, nor the action of the very simplest nerve apparatus in nature can be adequately explained at this time, and because the simplest changes in the simplest living forms in existence cannot be accounted for by physics.

Let us then pass on to the consideration of the action of the nervous system, particularly with reference to the part played by the bioplasm in the construction and action of that most wonderful apparatus.

As far as I am able to learn, there is, in *every* nervous action, something behind that part of the process which is plausibly considered to be physical. Before the simplest reflex act can be completed there must be a nerve-current, and the latter cannot be set free unless some chemical change occur. The matter undergoing this chemical change must be *formed*, and its particles must have been so arranged that the changes ending in the development of the nerve-current may occur,—but here we arrive at the bioplasm and its active forces and powers.

I am not one of those who regard the nerve force as some mysterious and very peculiar form of energy, and am quite ready to accept the view that the current that passes along the nerve-fibre is electricity, or something very closely allied or related to it. I can conceive that many of the phenomena of the nervous system are a consequence of nutritive acts, and that the latter are, in their turn, controlled and regulated by nerve action. I was, in fact, the first to describe the distribution of nerves to capillaries, and to point out that these form the afferent part of a self-regulating nerve apparatus connected with the distribution of blood. I showed how, when nutrition was too active, or when the capillaries were unduly distended with blood, an impression might be produced upon the *afferent* nerve-fibres of the capillaries, and by these and the fibres with which they were continuous, transmitted to the nerve-centre. The immediate consequence would be a disturbance of the nerve-current traversing the *efferent* nerve-fibres which are distributed to the circular muscular fibres of the artery. These immediately become shortened to a certain definite extent, mainly determined by the intensity of the impression upon the afferent fibres. Thus the diameter of the vessel is temporarily lessened, and the flow of blood to the capillary vessels being reduced, the supply of nutrient material distributed to the tissues is, for a time, lowered. As the nutritive balance is restored by the agency of the same apparatus, the constriction of the arteries is relaxed to a certain extent, and the blood supply becomes equalised. This is only a part of those wonderful and extensive arrangements existing in connexion with man and the higher animals for the purpose of regulating the supply of nutrient material, equalising temperature, and generally preserving the balance with reference to the results of many conflicting actions, notwithstanding great irregularity in the supply of nutrient matter, and of substances concerned in necessary chemical change, and the most striking and rapid alterations in temperature, moisture, and other external circumstances. There is, one may say, always a tendency to the derangement of the complex phenomena of the higher organisms, but this tendency is compensated by the most elaborate and beautiful arrangements, of which the self-regulating nerve "mechanism," in connexion with the distribution of the blood in the capillaries, is one of the most remarkable.

We must not forget that all the nerves and nerve-centres, and other tissues of which this so-called "mechanism" is constituted, were gradually formed by living matter, and that the action of this apparatus is due to the action of the bioplasm in connexion with it; for when the latter is deranged the action of the "mechanism" is disturbed; if it ceases for a time the action is suspended, and if the bioplasm dies the "mechanism" is destroyed. *Vitality*, therefore, comes into play in the construction of the apparatus out of bioplasm, and in the preparation of the substances, by chemical change in which the nerve-current is established. The nerve-current, whatever may be its exact nature, results from changes in matter formed by bioplasm. But the actual nature of the nerve-current is only a very small part, and by no means the most important part, of the great question of the general nature of nerve-action. The nerve-current may be the same form or mode of force in all creatures, the different results effected by it in different animals being due rather to differences in the construction and arrangement of the nerve apparatus of the organism, than to differences in the current which the nerves transmit. But the development and arrangement of the nerves is entirely dependent upon bioplasm. It has been shown that whenever nerve-fibres are being formed bioplasm exists in large quantity, just as in the case of other textures undergoing development. There is no reason to suppose that the part of the fibre which transmits the nerve-current is a very exceptional form of tissue, or that the active part of the nerves of one of the lower animals is very different in chemical composition from that of man. It is even conceivable that some human nerves might be replaced by those of animals, and action proceed as before.

Whether the bioplasm which takes part in the development of nerve-fibres, and which is found in connexion with the active part of all nerve-fibres, at every period of life, is concerned in receiving impressions, or whether this office is performed by the fine nerve-fibre only, is a question of great interest and well worth the most careful consideration.

I have shown that in all sensitive organs, and among the peripheral ramifications of all nerves, bioplasm particles are very numerous. In the retina, more than one layer consists almost entirely of bioplasm particles and the delicate nerve-fibres connected with them. In connexion with the nerves of the sensitive part of the cochlea they are very numerous. Many more are found upon the peripheral ramifications of the nerves of the gustatory than upon those of the tactile papillæ of the tongue. In the tactile corpuscles, in the tactile papillæ connected with mucous membrane which are very numerous and well developed about the lips of serpents and many fishes, these masses of bioplasm exist in immense number. In short, in connexion with all nerves forming the terminal expansions which constitute the essential part of sensitive nerve organs, these masses of bioplasm are numerous; and it is a fact of not less importance, with reference to the question of the function of these particles, to bear in mind that numbers are found in connexion with the ultimate ramifications of motor nerves distributed to some muscular fibres which are highly active, like those of the diaphragm and tongue. In the case of some muscles, the terminal nerve-fibre is, at certain points, highly convoluted; and here we find the masses of bioplasm very numerous, and situated very near to one another. All these facts support the inference that these masses of bioplasm are intimately connected with the action of the nerve-fibre as well as being concerned in its formation.

But, on the other hand, there are very few upon the finest ramifications of nerve-fibres in the serous membranes which become extremely sensitive in disease. It might, therefore, be argued that the pain results rather from pressure upon, or stretching of, the finest nerve-fibres in the intervals between the bioplasts, than from any direct pressure or other influence upon the bioplasts themselves. Again, in the *imago* state of many insects, the finest ramifications of the nerve-fibres exhibit very few bioplasts in their course. I have traced excessively fine fibres and networks of fibres in the intervals between the layer of cells which form the inner surface of the skin of the blow-fly; in connexion with which I could discover minute bioplasts only at considerable intervals. The same remark holds good to a less extent with regard to the distribution of nerves to the involuntary muscles.

At the same time it must, however, be born in mind that nowhere are the peripheral ramifications of nerve fibres *destitute of bioplasm*. If this were so, they would probably deteriorate, and no new ones could be formed. Probably one-hundredth of an inch is the greatest length of peripheral

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nerve-fibre in the higher animals which intervenes between two bioplasts.

Upon the whole, then, I conclude that although the bioplasm is necessary to the peripheral expansion of nerves, it is not the material which is in all cases absolutely essential for the reception of impressions and their conveyance to distant parts. I think, however, there is little doubt that the bioplasm of peripheral nerves developes nerve-currents, feeble perhaps as compared with those set free by central nerve-cells, but yet of sufficient intensity to influence the nerve-centre. This view is supported by the fact that small central nerve-cells found in many of the ganglia are, as regards size, shape, and general characters, very like the masses of bioplasm attached to the peripheral ramification of nerves—indeed, in many of the lower animals no difference whatever can be detected between the peripheral and central part of the nerve apparatus.

Besides developing feeble nerve-currents, the peripheral nerve-bioplasm is concerned, as has been already remarked, in the formation and renovation of the nerve-fibres. This change is constantly proceeding in all nerve-organs. New nerve-fibres of extreme delicacy are being continually formed. Old ones as continually waste, leaving behind a small proportion of connective tissue, which we find in all nerve-organs, and which increases as age advances, even to such an extent as to render it a matter of great difficulty to demonstrate the excessively delicate and almost structureless nerve-fibres embedded in the mass of fibrous material.

There is yet another important change in which these bioplasm particles, so numerous in connexion with the peripheral expansion of nerves, probably take part, and this is the development of heat. I have elsewhere adduced many arguments which seem to me to render it almost certain that the growth of bioplasm generally is associated with a rise in the temperature of the body. Is it not possible that, under certain circumstances, the mode of force developed in the matter of the nerve-bioplasm may be changed, heat being rapidly produced instead of nerve-force? The suggestion at once occurs, whether the explanation of such exceptional cases of high temperature as that brought by Mr. John Teale before the Clinical Society a short time since, will not probably be found to have something to do with the phenomena of nerve-bioplasm. In this case a temperature of 122° was reached on several occasions, and one above 112° was maintained for several days, without any of the symptoms usually associated with febrile disorders in which the body-heat rises.

Bioplasm of the Brain.

Let me now pass on to the last part of my theme, and endeavour to ascertain whether the most wonderful phenomena in nature, namely, those connected with the operation of mind, have their origin in bioplasm. The only instrument concerned in thought attains its highest state of development in man. Not only is man's brain, as compared with that of a lower animal, actually very large in proportion to the body, but the difference will be found to be really much greater than it appears to be. The size of a nerve-centre is, as is well known, by no means determined by the size of the animal. Varied combinations of rapidly executed movements will necessitate a brain of a size very large in proportion to that of the animal, and hence, as a rule, the brains of very small animals are enormous. The smaller the species, the greater will be the weight of brain in proportion to body-weight. Now, man's muscular movements are by no means so varied or so powerful in proportion to the amount of muscular tissue, or so rapidly executed, as those of many of the lower animals, which easily beat us as to the rapidity with which they execute complex movements. We are also behind many animals as regards the sense of touch, as well as regards the great power and precision with which the voluntary muscle of many animals act in running, leaping, climbing, and other movements. The size of man's brain, therefore, is not due to those circumstances which determine the large size in proportion to the body of the brain of the mouse or of the tom-tit, for example. Man, indeed, can only be placed at the summit of the scale of being in certain particulars, but in these he stands alone; no lower creature approaches him, or can be compared with him. In man, the action of every tissue and organ seems subordinate to that of the higher parts of his nervous system, which constitute an instrument remarkable not less for the complexity and subtlety of its delicate actions than for the capacity exhibited by it alone for improvement after its development as an organ may be regarded as complete; and not only so, but the degree of perfection it may attain as an instrument is determined to a great extent by the will of him to whom it belongs. In the formation and action of this organ, bioplasm is all-important, and exists in greatest amount in that part which, upon other grounds, we know is concerned in mental action.

The very highest form of bioplasm or living matter in the world is that which, as I believe, is concerned in mind, and this attains its highest state of activity not until the age when that part of the nervous apparatus concerned in mental operations has attained a high degree of elaboration. This period cannot be assigned with precision, for it differs in different races and in different individuals, but it is never reached until some time after growth has ceased, and every tissue and organ is fully developed. But it is certainly very remarkable that, as far as I am aware, those parts of man's brain concerned in the manifestation of his highest mental faculties constitute the only structures in nature which continue to improve for many years after the rest of the organism has attained its highest state of development. So also these, above all structures, are remarkable for continuing to improve, although many tissues of the body may have been, for some time, undergoing deterioration and decay.

The anatomical elements which constitute the grey matter of man's brain are well known: large angular cells, with fibres radiating from them, the longest fibre passing upwards towards the surface, near which it divides and subdivides into multitudes of the finest and most delicate threads, which form, with fibres from other cells and other parts, an inextricable interlacement. In this situation, no doubt, all the operations of the mind are performed. But to explain what happens in connexion with the structures demonstrated, when the instrument is in active work, is no easy task. From a knowledge of the arrangement and action of the structure, we ought to be able to form some conception, however rough, of what happens when an idea is formed and when it is expressed so as to be rendered evident to others. The facts of the case seem to demand a means by which the mind may act upon the elaborate system of nerve-fibres already referred to. We seem to require an instrument, and the means of acting upon different parts of the instrument as we may will.

It is not easy to conceive by what means the angular cells, which form such prominent objects in the grey matter, could will. That these are concerned in the formation of the fibres is certain, and it is possible that in them nerve-currents may originate, but it is very doubtful whether the bioplasm of these cells is the bioplasm concerned in thought. There are other bioplasm-particles, and in enormous numbers, though they do not constitute such prominent objects as the angular or caudate cells. These are little spherical particles of bioplasm, many of which are smaller than a red blood-corpuscle, and are probably connected by communicating fibres of great delicacy. These bodies are situated near the surface of the grey matter among the ultimate subdivisions of the excessively delicate nerve-fibres. It is to be remarked that in this situation the supply of arterial blood is more abundant than in any other part of the nervous system, and the particles of bioplasm in question being naked and unenclosed in any cell-wall at any period of life, are just such as we should expect would undergo rapid change. These are, I believe, the active agents which, by their movements, may act upon the delicate nerve-threads which ramify on all sides in very close proximity to them. When we examine these particles of bioplasm after death they are spherical; but are we not justified in assuming that during life they may change in form, at least as much as a mucus-corpuscle or an amœba? The slightest alteration in form would influence the current traversing the nerve-fibres that were close to them. These delicate bioplasts are, I believe, during the waking state continually undergoing changes in form. That in some situations they increase in number cannot be doubted, and it seems likely that collections might increase in extent even long after the formation of the brain had been completed. What is very remarkable is, that these bioplasts retain their primitive characters throughout life.

I dare say few persons will be persuaded to believe that the bioplasts concerned in the highest mental acts of man are bodies not more complex than the lymph-corpuscle or the white blood-corpuscle; but, as I have before remarked, all evidence is in favour of the view, that exalted function is not dependent either upon complexity of constitution or upon

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quantity of material. There are no differential characters to be demonstrated between different forms of living matter having widely different endowments, by which the peculiarities may be accounted for. There may be difference in power not dependent upon differences as regards matter and its forces. May we venture to conclude that *mind* is the form of *vital* power which, stirring in these particles of bioplasm, causes the movement of the matter of which they consist, and that thus the elaborate mechanism slowly constructed and gradually brought to perfection is influenced? If this be so, mind is the highest form of vital power which exists in nature, by which particles of matter are caused to move in a definite manner for a definite purpose.

I have endeavoured, Mr. President and gentlemen, in these lectures, to give a brief sketch of the phenomena peculiar to living matter in health and disease. It would be wiser, perhaps, in the present state of knowledge to be content with the study of phenomena, and not to speculate upon the causes of things; but ought I, in face of the facts, to resist the temptation of postulating a power, the existence of which I cannot hope to demonstrate, or may I venture to refer all the wonderful changes I have described to *vitality*—a power that works in living things only?

Let me, in conclusion, heartily thank all for their kindness in patiently listening to a discussion which, however interesting to some, must have seemed tiresome to not a few.

ORIGINAL COMMUNICATIONS.

CASE OF CHRONIC LEAD-POISONING IN A BALLET-DANCER,

THE RESULT OF USING FLAKE-WHITE AS A COSMETIC.

By GEORGE JOHNSON, M.D., F.R.S.,
Professor of Medicine in King's College, Physician to King's College Hospital.

Elizabeth R., aged twenty-two, married, was admitted into Twining ward on June 25, with well-marked symptoms of poisoning by lead. She states that four months ago her hands and arms began to be weak and unsteady in their movements. She found it difficult to write, and, in consequence of weakness of her legs, she could not walk so well as usual. She lost flesh. After a time she had pains in the abdomen, and constipation, and she had a coppery taste in the mouth when she first awoke in the morning. The weakness of the hands and arms continued to increase, and she noticed that the muscles of the thumbs and forearms were wasting. A few days before her admission the weakness of the hands and arms suddenly increased, so that she had very little power to grasp an object, and she was unable to extend the fingers.

On admission she is found very anæmic. The muscles of the forearms and of the thumbs are much wasted, the wasting being greater in the right arm and hand than in the left. There is complete wrist-drop on the right side, incomplete on the left. She is unable to extend the fingers of either hand. She can flex the forearms on the upper, and raise both arms above her head. There is some weakness and flabbiness of the muscles of the legs. There is a blue line at the edge of the gums.

Here was an unquestionable case of chronic poisoning by lead. Then the question arose, What was the source of the poison? She has worked as a milliner, her chief occupation being that of trimming hats. It did not seem probable that in doing this work she could have been exposed to the poison of lead. Then it came out that she, being the wife of a scene-shifter at Drury-lane Theatre, also acts as a ballet-dancer, going on the stage four or five nights a week; and as a preparation for this she has been in the habit of powdering her face with flake-white. This flake-white is mainly composed of carbonate of lead. My son analysed a portion of the powder which the patient had been accustomed to use, and he found it to consist of carbonate of lead, with a minute quantity of chalk. The symptoms present in this unfortunate woman are thus completely explained. When powdered white lead is applied to the skin of the face, it is partly absorbed through the skin, while some is inhaled through the mouth and nostrils, and thus it enters the circulation and pervades the whole system.

Our patient tells us that a friend of hers, who is also a ballet-dancer, is suffering from the same symptoms as herself. There is nothing new in this: symptoms of chronic poisoning by lead have often been traced to the use of powdered white lead as a cosmetic, and also to the habitual employment of hair-dyes containing lead. It would be well that all persons employing cosmetic powders should be informed that flake-white contains a poisonous compound of lead.

The sources of poisoning by lead are very numerous, and sometimes difficult to trace. Some time since I had under my care in the hospital a portmanteau-maker, who had repeatedly suffered from symptoms of chronic lead-poisoning. Our search for the poison was for some time unsuccessful, but at length it came out that he was in the habit of working much with a material called "American overland cloth." He procured some of this for our inspection. It consists of canvas covered rather thickly with a white coating, the surface of which is glazed and coloured black. This white coating was found by the late Professor Miller to be a mixture of chalk and carbonate of lead. When the cloth was cut, the white coating formed a cloud of dust. This man worked with this material in his own living- and sleeping-room, sometimes, as he admitted, eating his meals without washing the dust from his hands. In addition, he was in the habit of using the fragments of cloth as fuel for melting his glue, as a result of which some of the lead probably became volatilised, and entered the system through the lungs. Having thus traced the poison to its source, we were able to instruct the man how in future to avoid it.

ANÆMIA IN TROPICAL CLIMATES.

By JOHN SULLIVAN, M.D., M.R.C.P. Lond., etc.

That condition of the blood known as anæmia is at the foundation of nearly all diseases in tropical climates. It constitutes a pathological state, often of great danger, amongst individuals of all races, sexes, and ages. It may appear under all shades and degrees, from a slight anæmia, not inconsistent with health, but rather of a conservative character, to one of a most profoundly dangerous tendency.

In the tropics the causes which produce an anæmic state of the blood are more varied and intense. In the European who settles down here the physiological conditions which retained his blood in its normal condition are broken. He is no longer in need of a blood so rich as before, of a respiration so active; he does not require to generate so large a quantity of caloric, so necessary in order to resist the effects of a climate more or less severe; all he requires is to accommodate himself to his new climate, and to endeavour to live there anyhow. Hence all previous conditions of health, which in a tropical climate would now be a source of danger, become greatly modified. The consequent changes effected in the function of respiration and digestion tend to alter the composition of the blood. So that while the physiological action of the heart and lungs diminishes—a fact which explains why in the tropics we meet with so few acute affections of these organs,—certain functions are increased to excess, as those of the skin and liver. From this increase of the functional activity of the liver results the frequency of its lesions; from a check to the function of transpiration, originate various morbid states which react rather upon the abdominal than upon the thoracic viscera.

The exaggerated flow of the secretions contributes to induce gradually a state of anæmia, which, when it does not exceed a certain limit, would appear to be rather beneficial, by allowing the organism the better to accommodate itself to the influence of climate. But the depressing influences of a tropical climate appear to favour the transition of a physiological state of anæmia by slow degrees to a state which constitutes disease. This influence maintains or exaggerates that condition, which is a necessary consequence of all diseases, whether chronic or acute.

If a state of anæmia is more frequent in the negro race, notwithstanding its great power of resistance against climatic influences, this is principally owing to the inferiority of his diet and of his hygienic condition. Rice, which contains little nourishment, even when taken in large quantities, is the favourite food of the East Indian coolie.

Amongst the white race, the later periods of childhood appear to me more disposed to anæmia than the earlier ones. In the tropics the child is generally strong and healthy,

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although a little pale; his flesh is firm, but as he grows up he is unable to resist external influences,—he becomes anæmic. Rarely does the second period of childhood carry out the flattering promise made by the first.

The female sex of all races is more disposed to anæmia. Chlorosis with menorrhagia is of frequent occurrence. All losses of blood, from whatever source they may arise, predispose to anæmia; it often follows an attack of bleeding piles, so common in the West Indies. All serious diseases, endemic or otherwise, intermittent or eruptive fevers, hepatic disease, dysentery or chronic diarrhœa, are sure to be followed by this condition in a form more or less serious.

Anæmia impresses its particular mark upon the countenances of each individual race. In white females who live principally within doors, chloro-anæmia presents the same appearance as in temperate climates. The white man or creole takes upon him a pale yellowish colour. In the negro and East Indian the dark colour loses its brilliancy and smoothness; it assumes a greenish tinge, and the infiltrated parts appear semi-transparent; the skin begins to look a dirty yellowish-black, and the dirty white of the palms of the hands blends with the colour of the surrounding integuments.

When anæmia is of a formidable nature, the expression of the patient, of whatever race he may be, is truly appalling. The mucous membranes are then very pale; the conjunctivæ bluish; the eyelids of a milky white; the tongue pale and dirty; the lips become so colourless that you cannot easily detect their limits, so completely is their shade lost in that of the surrounding skin.

When the alteration in the blood is still more profound, the disturbance in the circulation becomes more marked. On auscultation of the heart, a *bruit de souffle* is heard extending to the carotids; strong cardiac pulsations as though the heart was hypertrophied; pulsation in carotids visible. The pulse at wrist, from rapid and compressible, becomes full and slow. The disturbance in the function of respiration becomes more marked; from being oppressed, it becomes short, painful, accompanied by sibilant rhonchus, and at the lower part of the chest by mucous rhonchus, owing to pulmonary œdema.

The patient complains of frontal headache, noises in ears, confused sounds, throbbings of the temples, sense of suffocation on the least movement, frightful beatings of the heart. These different symptoms proceed from hydræmia—a watery state of the blood, a serous plethora.

To this state of blood are owing the different kinds of dropsy. These cannot be attributed to mechanical obstacles, compression of the vessels, or to visceral tumours; for in most cases no one viscus is affected. The liver and spleen are in a normal condition, or may be slightly hypertrophied. The œdema and ascites are owing to the superabundance of serum, which fills up and distends the bloodvessels. The face becomes slightly tumefied, especially the upper eyelid. The œdema, which occupies the site of the malleoli and disappears in the horizontal position, soon becomes permanent, ascends and occupies the whole lower extremities. The scrotum may also become infiltrated, and distension of the umbilicus take place, which in the negro is generally very prominent. The epigastric region is stretched and tympanitic; the abdomen more or less ascitic. Sometimes in fatal cases there is effusion into the pleura. If serous effusions are frequent, hæmorrhages are of rare occurrence in anæmia—a circumstance due to the state of the blood, which does not allow local congestion to be formed. Nevertheless, accidental hæmorrhages in anæmic subjects are to be dreaded, from the difficulty of stopping them, and because they greatly aggravate the condition of the patient. In capital operations upon such subjects, it is surprising what a number of ligatures are required.

The troubles of menstruation are intimately connected with this state of anæmia—a form of menorrhagic chlorosis. Now the characters of chlorosis have preceded the menorrhagia, which is a consequence, not a cause, of this morbid state. At the menstrual period, more or less advanced, the flow becomes more abundant and lasts longer, is more watery, often of a dirty colour, and scarcely discolouring the linen. It happens more frequently that chloro-anæmia, far from increasing the menstrual flow, will retard its appearance or greatly modify its return. The menses gradually diminish, become irregular, are accompanied by hysteralgia, become pale and watery, and end in complete suppression. Menorrhagia, dysmenorrhœa, and amenorrhœa are often complicated with leucorrhœa, which aggravates all the disorders of the digestive organs, and, consequently, the chloro-anæmic condition; and thus becomes established the morbid pathological chain in which the system is held bound.

The symptoms of confirmed dyspepsia soon become more pronounced. The appetite falls off, or entirely fails. The patient appears to have neither the strength nor desire to take food. Thirst great; urine scanty, with thick sediment; a constipated state of bowels is followed by diarrhœa, which contributes to exhaust the patient. To these symptoms are often added nausea and vomiting, and pains more or less severe at the pit of the stomach. These pains are often accompanied by an extraordinary perversion of taste. As they are more frequently met with in the negro, the affection has been designated "African cachexy." However, I have repeatedly observed it among the whites and creoles.

As in temperate climates, chloro-anæmia is often accompanied by visceralgia, and determines those vicious and depraved longings of the appetite. In the tropics the symptoms are more strongly marked, from the depressing effects of the climate, and the comparatively weak resistance of the individual subject to anæmia. The farther we remove from the equator, the less frequent do we find this stomach affection. Visceralgia and perversion of appetite are intimately connected with anæmia; that which primarily was an effect, becomes a cause of disease in its turn: hence the gratification of a taste for earth, sand, coals, etc., aggravates the chloro-anæmic state, and produces a cachexia of the worst kind, with effusions in the serous and cellular tissues. Earth appears to be the favourite choice: neither threats nor punishment will deter them from gratifying this horrid taste. I have known a young coolie rise from his death-bed, drag himself along the ground, and scrape the earth with his nails, in order to gratify for the last time his disgusting craving.

Disorders of the nervous system usually accompany a state of anæmia: they may assume the form of intense and continued headache, or a great tendency towards sleep, or wandering pains over the muscles of the chest and abdomen, owing to intercosto-lumbo-abdominal neuralgia; at other times, formication in the soles of the feet, or a sensation of cold in the lower extremities.

Patients who have gradually passed through the different stages of anæmia, fall at last into a state of marasmus. They become extremely feeble and emaciated, and troubled with a dry cough; the skin becomes harsh and dry; perspiration, so active in the tropics, becomes suspended; the urine muddy and scanty. The unfortunate beings are so sensitive to the impression of cold, that you may see them drag themselves slowly, and with difficulty lay themselves down to bask under the rays of a burning sun for hours together, perfectly immovable; the face is swollen; the lower extremities œdematous; ascites considerable; palpitation of the heart violent; the least exertion produces attacks of dyspnœa. Death is often produced from serous effusion in the pleura or pericardium, or under the arachnoid membrane; or it may occur from the effect of serous effusions in the viscera, either the consequence of colliquative diarrhœa or of pernicious fever.

The prognosis of an affection so varied in its forms and so alarming in its results is seldom favourable. The progress of anæmia is sometimes slow, at others rapid. When it succeeds to an attack of hæmorrhage, or to some acute disease, the system may become restored to health; but when anæmia is chronic, and slow from its commencement, it seldom disappears of itself in tropical climates, and may last for a lifetime, having resisted all modes of treatment. When diarrhœa accompanies anæmia, the ascites and other effusions will disappear for a time, to return when the diarrhœa ceases; such a state may go on for months, nay, for years, to terminate in death.

Anæmia generally goes hand in hand in the dance of death with malarious fever. Diarrhœa, a disease peculiar to the West Indies, follows in the train; it is the last disturbing element in all chronic and acute diseases, and when connected with anæmia it hastens the fatal termination.

In tropical regions all debilitating causes predispose to marsh fever, a fever which is always to be dreaded when complicated with other morbid states of the system. Anæmia is a fit soil for the development of malaria in all its various manifestations. These attacks of malaria, when complicated, are far from being regular, affect the various and capricious forms of "masked" fevers, which frequently disguise the pernicious element. What is the difference of anæmia from general causes and that from malaria? The symptoms are about the same if we may except that in the ascites which follows

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malarious cachexia, paracentesis is never required with a view of affording relief, as would be in cases of ascites consequent upon anæmia.

In both cases it is to the changes in the composition of the blood that we must refer the effusions into the cellular tissues and the serous cavities. When the malarious influence prevails we may detect occasionally some hypertrophy in the liver or spleen, although the latter, instead of being enlarged, becomes often reduced to a small tongue-like form. In either case the treatment is the same. We must not confound chloro-anæmia with that form of cachexia which follows dysentery and diarrhœa. That which distinguishes the latter is the dryness of the tissues, the former is the tendency to infiltrations and to serous effusions.

In dysenteric cachexia, the abdomen, the anterior walls of which are extremely thin, assumes an empty form, which allows the anterior spinous processes to project, the hand to feel the vertebral column, and even feel the pulsation of the aorta. Generally there is no collection of fluid; the malleoli are slightly infiltrated.

Dysenteric cachexia differs from the cachexia of malaria or from anæmia, in that it is a dry cachexia, and does not deposit serum under the skin. In cases of chloro-anæmia a superficial observer may be misled. It may be mistaken for an organic affection of the heart, or we might refer the dyspnœa, palpitations, and infiltration to some cardiac lesions; but the history of the case, auscultation of the heart and large vessels, will soon remove all doubt. The evidence to be derived from autopsy in cases of anæmia is both valuable and instructive, as it confirms our opinion respecting the nature of the disease, and of its treatment.

In post-mortem cases we find serum effused in the cavities of the pleura, pericardium, and the ventricles of the brain, which presents no kind of lesion. The lungs are shrunken, pale, and almost white; tubercles may sometimes be traced in their upper part. This may account for the hard dry cough which exists in the advanced stage of anæmic cachexia. The heart is pale, shrunken, and bathed in serum, and sometimes slightly hypertrophied in proportion to the violence of the pulsations observed during life. The cellular, mucous, and muscular tissues are pale as if washed out. The peritoneum always contains a large quantity of serum. The stomach is soft and discoloured; the intestines pale and almost transparent.

The liver is anæmic, often normal in size, but dry, yellowish, rather streaked like marble. The gall-bladder is small and contracted, and the bile which it contains in small quantity is watery, of a clear yellow colour. This appearance of the liver will vary according as the anæmia has been complicated with chronic diarrhœa or with malaria. In the former case the liver is always diminished in size, and presents the character of chronic atrophy. In the second case, the liver, spleen, and mesenteric glands are more or less enlarged, but exceptions are occasionally found.

The state of the blood is profoundly altered; it is watery and discoloured. That which we find in the bloodvessels resembles a dirty red-coloured serum. In the clot of an anæmic subject we find an inflammatory, buffy coat. This is entirely owing to the excess in proportion of the fibrine over the red globules, and does not at all imply a state of phlegmasia. This diminution of the red globules is the true type of anæmia—the well-defined starting-point of a long series of morbid conditions.

Hydræmia is generally a consequence of a deficiency of red globules, with which it is generally associated.

There are cases of spontaneous chloro-anæmia where the quantity of water is evidently in excess of the red globules. This is a state called hydræmia. A state of serous plethora is considered by many eminent physicians as the character of anæmia in general.

There is a state of hydræmia where the blood has parted with its albumen—an alteration attended with the most grave consequences; productive of transudations of serum through the serous and cellular tissues.

In a normal state the proportion of albumen is as 79 to 1000, which is reduced as low as 55. In proportion as the albumen in the blood diminishes, there is an equivalent increase of the salts and of water. Now, as the blood is poor in albumen and becomes watery, this is a condition favourable for exosmosis. The water charged with saline matter transudes more freely, and as it passes through the tissues it carries with it a quantity of albumen. Now, this liquid is identical with that in dropsical effusions; hence, blood deprived of its albumen constitutes a morbid tendency to transudations of serum to dropsies. Dropsy, once formed, contributes to deprive the blood of its albumen, so that it becomes in its turn an aggravating source of increased dropsy.

In the anæmia peculiar to the tropics, the waste of albumen occasioned by diarrhœa and by serous infiltrations robs the blood of its plastic material.

The deficiency of red globules is followed by a deficiency of albumen. This is followed by a state of hydræmia, which gradually degenerates into a state of cachexia.

This anæmia is often complicated with marsh malaria. Now, this miasma acts, like other poisons, on some particular gland, and, through that, on the blood. The spleen does not act in its usual complete and organic forms; it forms in such cases but a small quantity of white and red globules.

Anæmia may sometimes be improved, if not cured, by therapeutic means, although the depressing influence of climate tends to aggravate the anæmic condition; still, a great deal may be done, if taken at the onset, by nourishing diet, tonics, wine, iron, quinine, gentian, and cold sea-baths, exercise, etc. The patient may probably be restored to a state of anæmia compatible with a condition of health in hot climates. Rarely, if ever, can the patient be got to go beyond this state.

The treatment of anæmia is much the same as when it occurs in temperate climates, keeping in view the complications peculiar to the tropics, as diarrhœa, marsh fever, etc. I would recommend the European not to fight against the influences of climate, but fly to a temperate one as soon as possible, and not defer his departure until a state of cachexia declares itself by serous effusions often incurable, as anæmia in tropical regions will often resist all the most approved methods of treatment.

Havana.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES OF STONE UNDER THE CARE OF MR. BRYANT.

The following eight cases complete a short series, several of which were published in our "Hospital Reports" a few weeks ago.

Case 1 is that of a stone in the female bladder submitted to treatment by crushing. Case 2 is one of two stones in the prostate, which were removed through a fistulous opening near the anus after the fistula had been incised in the usual way. Cases 3 and 4 are instances of stone in the male urethra, one of which was successfully, the other unsuccessfully, treated by incision behind the prostate. In the latter case the stone had slipped back into the bladder, and was ultimately got rid of by the lithotrite. Case 5 is an instructive but unsatisfactory case of vesical calculus, probably of long duration, but which could not be detected in the usual way during life. Death occurred a few hours after the administration of chloroform from abscess of the kidney. Cases 6, 7, and 8 are good ordinary cases of vesical calculus in adult males cured by the use of the lithotrite.

Case 1.—*Calculus Vesicæ in a Female—Lithotrity—Recovery.*

[Reported by Mr. Stuart.]

Eliza J., aged five years, was admitted under Mr. Bryant's care into Guy's Hospital on August 2, 1869, with a stone in her bladder. She had had symptoms for six months; pain after micturition and the passage of blood being the chief symptoms.

On August 7, Mr. Bryant measured the stone, and found it one inch and a quarter in diameter; he consequently crushed it. A second operation was performed on the 18th, and a complete cure resulted; a large quantity of detritus was passed. The stone was of lithic acid. Had the stone been less than one inch Mr. Bryant would have removed it by rapid dilatation.

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Case 2.—Fistula in Ano—Prostatic Calculus—Opening up of Old Cicatrix after Lithotomy—Improved.

[Reported by Mr. W. Brown.]

Charles H., a fireman, aged thirty-three, was admitted into Job ward on May 28, 1873. He had, when two years and a half old, been in the hospital under Mr. Cock for stone in the bladder. When twenty years old he was admitted into accident ward, having lost three fingers of his left hand; last year he was again in the hospital under Mr. Durham for perineal abscess; he left quite well. A month afterwards he noticed that he had a small lump on the left side of the anal orifice, which, after walking, increased in size and became very tender. He poulticed it, and it soon subsided; he never had any difficulty in passing water or motions. On admission there was found a hard lump about the size of a shilling situated on the left side of anal orifice; it was not inflamed or tender.

May 12.—A director was introduced through a small opening in the lump, the index finger was passed into the rectum, and it was found there was an internal opening; the parts were divided with a bistoury; a piece of lint was then introduced into the incision. There was a good deal of discharge afterwards, but he felt otherwise very comfortable. He got up on the 26th, and left the hospital on the 29th.

The patient was readmitted on June 18 with a sore in front of the anus, which was very painful, and from which there was a discharge. A No. 5 catheter was passed and kept in. He was ordered Dover's powder and some citrate of potash.

June 20.—A No. 7 catheter was passed, and retained until the 30th, when a No. 9 was used. The pain was less, as also was the discharge.

July 12.—Another abscess on the right side of the anus was forming, which became painful, and burst on the 15th, discharging a great deal.

22nd.—A No. 10 catheter was used; the patient's water passed through the perineum.

August 7.—The patient being under the influence of chloroform, the fistula was incised, and on probing the sinus a stone was felt. With the fingers, two calculi were removed from the prostate, one the size of a marble, the other the size of a pea. There was no further pain, the wound healing up.

14th.—A small amount of urine passed through the lower opening, and on the 18th he left the hospital.

A week later he reported himself as being quite well.

Case 3.—Calculus in Urethra—Extravasation of Urine—Incision—Extraction of Stone—Recovery.

[Reported by Mr. W. Brown.]

Alfred I., aged eleven years, was admitted into Job ward on May 5, 1873. He had been quite well up to two or three months previous to admission, when he noticed that he had considerable difficulty in passing water; he never noticed a sudden stoppage, but the urine only "dripped" away when he was brought to the hospital. The under surface of the penis was very much inflamed and tender. A calculus could be felt just behind the scrotum. He was at once put under the influence of chloroform, and the House-Surgeon cut down upon it, and removed a calculus, about the size of a pea, broken into two or three pieces.

9th.—Was very feverish. Temperature 103°. A little urine passed through the opening, and continued to do so in small quantities until the 24th, when the wound had nearly granulated up.

29th.—The patient went out, the opening having nearly closed up.

Case 4.—Calculus in Urethra, afterwards in Bladder—Lithotrity—Relieved.

[Reported by Mr. H. Davy.]

Alfred T., a clerk, aged fifteen, was admitted into Job ward on January 7, 1875. His family history showed that his grandfather, on his father's side, had suffered from stone, and one brother, when two years old, had died of stone. He had had eleven brothers, two of whom, beside the above, had also died young. Three months before admission, he felt a difficulty in passing water, followed by pain, first on the left, and afterwards on the right side. He consulted a medical man, who gave him some medicine which relieved him; but, from time to time, he felt pain, and on Christmas evening, whilst making water, he suddenly felt something move, and the stream stopped, dreadful pain accompanying it. Hot flannels were applied, and the next day his medical man gave him medicine, and he felt better. He passed some blood in his water the next day, and felt pain whilst doing so, but since then had experienced no pain until a day or two before admission. He was examined at Guy's Hospital for stone, but none could be found. The day before admission he had had great pain, and could not pass water. His medical man passed an elastic catheter and a silver one, but could not draw off any water. He was brought to the hospital; an elastic catheter was passed, and some quantity of urine drawn off. The next day he was admitted as a patient; a silver catheter was then passed, and a stone felt in the urethra. As it was in front of the triangular ligament, the boy was put under the influence of chloroform, and the urethra was cut into for about an inch. It was attempted to extract the stone with forceps, but it slipped back, as it was thought, into the bladder. A sound was then passed into the bladder, but, as no stone could be found, the operation was not continued.

January 12.—He had slept well, and felt comfortable, passing water without difficulty.

14th.—He had felt the stone a little the previous day, and a sound was introduced, a stone being at one detected.

19th.—Chloroform having been given, a small old-fashioned lithotrite was passed per urethram into bladder. The stone was seized, but sufficient force could not be used to crush it. A larger lithotrite was afterwards applied, and the stone was crushed four times.

20th.—He passed a little *débris*; temperature 100·4°.

21st.—More *débris* passed.

25th.—He felt well, having passed enough *débris* to fill half a teaspoon. The passage of fragments gave no pain.

28th.—*Débris* had ceased to pass, and he felt perfectly well. He left the hospital the following day.

Case 5.—Calculus Vesicæ—Examination under Chloroform—Death in Eight Hours—Obliteration of Right Ureter—Suppurating Kidney.

[Reported by Mr. C. J. Symonds.]

H. G. G., a pale little boy, three years old, was admitted into Lydia ward on October 16, 1873, having a stone in his bladder. His prepuce was also rather long, but there were no adhesions. Twelve months previously it was noticed that he strained when making water. This continued for eleven months, when it was found that his water came from him as he ran about, and that it gave him pain when he made it. He was also very restless at night. The urine was not thick, nor had any blood ever been seen in it. The child had measles four months previous to admission, which left him with a sore mouth.

October 22.—The boy had been sick during the night, vomiting what he took to eat. He was placed under the influence of chloroform, and sounded, but no stone could be found. He was then taken back to bed, where he became very restless, seeming to strain very much, as if he wanted to pass a motion. He was put in a chair by the fire, when he seemed more comfortable. He was put back into bed again, when his restlessness returned; but about nine in the evening he became quiet. The nurse noticing that he breathed heavily, sent for the House-Surgeon, who found the pupil of his eye much enlarged. The child sank gradually, and died at twenty minutes to ten—about seven hours and a half after the examination under chloroform in the theatre.

At the post-mortem examination there was found an abscess in his right kidney, with suppuration and extravasation of blood. The ureter was obstructed, and its upper part, together with the pelvis of the kidney, were much dilated. The other kidney was healthy. A loose uric acid stone, about the size of a Barcelona nut, was found in the bladder.

Case 6.—Calculus Vesicæ—Lithotrity—Recovery.

[Reported by Mr. Stuart.]

John W., aged fifty-two, was admitted into Guy's Hospital on July 22, 1869, with stone in the bladder. He had had symptoms for about two years. For ten months he had passed blood after micturition. Six months ago he went into a provincial hospital, where the stone was crushed, and he was discharged as cured. The symptoms, however, soon returned.

On admission, he has irritable bladder, pain after micturition, and an intermittent flow of urine. His water contains blood.

On August 3, Mr. Bryant seized a stone three-quarters of an inch in diameter, and crushed it. Much detritus passed during the next few days.

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On the 11th the operation was repeated, and again on the 18th.

The man felt so much relieved by these operations that he left the hospital on account of some home trouble, and did not return till September 20, when Mr. Bryant operated upon him twice at a week's interval, and he left without a trace of stone, or any of its symptoms.

Case 7.—Stone in the Bladder—Lithotrity—Recovery.

[Reported by Mr. MULCH.]

James H., aged twenty, was admitted into Guy's Hospital, under Mr. Bryant's care, on November 4, 1870, with a stone in his bladder. He was a healthy man, and there was no gouty history in his family. His first symptoms were given as occurring nine months previously—pain after micturition and irritable bladder being the chief. Three months ago he passed gravel with some clots of blood. His symptoms have gradually become worse.

On admission a stone was readily felt. He was kept in bed, and alkalies were given with a view of getting the bladder into a less irritable condition, and in ten days the bladder could retain eight or ten ounces of urine. Mr. Bryant consequently performed the operation of lithotrity, the stone being one inch in diameter; he crushed it six times during the sitting. Much *débris* passed during the next few days, and a week later the operation was repeated. A third was performed after another week, and after this a complete recovery ensued.

Case 8.—Calculus Vesicæ—Lithotrity—Recovery.

[Reported by Mr. W. P. REYNOLDS.]

Julian P., an hotel-keeper, aged fifty-six, was admitted into Job ward on October 15, 1874. The patient was a Jersey man by birth, but had lived principally in France. He was a married man without children. Early in life he had been a sailor, and when twenty-one years old suffered from yellow fever in New Orleans. He had a chancre and gonorrhœa twice, but never had sore throat, rash, or pains in his bones. He has been temperate, drinking only red and white wine. He lost the sight of his right eye seven years before from a gunshot which had never been extracted. His father had died of some affection of the chest, and one brother and a sister had committed suicide by cutting their throats. In the spring of 1872, after some exposure to cold, the patient felt a pricking, burning pain at the end of his penis, accompanied by sudden retention. Violent pain was then experienced along the groin up to the left kidney, there never being any on the right side; this was accompanied by pallor, coldness of skin, and profuse perspiration. Warm fomentations were applied with benefit, but he was more completely relieved by the passage of a No. 7 catheter, when his bladder was emptied. A year before admission, after another exposure to cold, he again had retention, and this was relieved by the passage of a No. 7 catheter. He was then sounded for stone, and again a little later, but none could be detected. He was ordered to pass a bougie twice a day, which he did. Whenever he lay down in bed he could always pass his water; but as soon as he got up he was unable to do so without having passed a bougie some time previously. For six weeks, after having sat down he felt great pain along the course of the urethra on getting up again. He gradually got worse, and was recommended to go to Guy's Hospital, where he was admitted.

October 15.—A sound was passed, and a stone readily detected.

19th.—Lithotrity was performed. The first time the stone was seized in the short diameter (half an inch); the second time in the long (an inch); there were nine crushes. The stone was apparently not of the mulberry formation—readily giving way. He was ordered to pass all his water through muslin. The following night was passed without much pain, and he voided his water without any difficulty; no stone, nor any portions, came away. The urine contained blood.

21st.—Eighteen pieces of crushed stone were passed, phosphatic in appearance.

22nd.—Two more pieces came away. Lithotrity was again performed, with eleven crushes.

23rd.—Between twenty and thirty pieces of stone were passed. He passed a good night, but complained of a large-sized piece blocking up the way, and he was unable to pass the bougie. He was able to hold his urine for one hour and a half. It was very offensive.

26th.—Several good-sized pieces had been passed. The lithotrite was used again, but there seemed some little difficulty in getting the instrument into the bladder, and a small quantity of blood appeared at the orifice of the meatus urinarius. When in the bladder, no stone, nor any portion of one, could be detected. Warm spirit and water was ordered. He slept well, but complained of pain for some little time after micturition. The stone previously passed was found to be phosphatic.

31st.—He was able to hold his water for two hours and a half; he was much easier. The urine contained mucus and pus.

November 3.—The patient was able to go out; no stone could be detected, either with the lithotrite or sound. He had a sharp attack of diarrhœa, and was ordered Dover's powder, which checked it quickly.

From this date the lithotrite was passed several times, but no stone could be found; and he left the hospital on the 10th quite relieved and free from pain.

May 10, 1875.—Still quite well.

THE BIRMINGHAM EYE HOSPITAL.

AN IMPROVED METHOD OF TREATING CERTAIN CASES OF CATARACT REQUIRING EXTRACTION.

In some ophthalmic works which treat of the cure of senile cataract, the presence of a deep-set eye is given as a reason for the selection of depression or reclination in preference to the operation of extraction; and we imagine no surgeon of experience in such cases will deny that a deep-set eye occasions some embarrassment in the execution of the section of the cornea with a Gräfe's or Beer's knife, and especially where anæsthetics are dispensed with.

In a case recently operated upon at the Birmingham Eye Hospital, Mr. Vose Solomon improvised a simple and effective method of overcoming the difficulty under consideration, by making with a pair of sharp straight scissors a perpendicular incision through the substance of the lower lid, of about three-eighths of an inch in length, and one-sixth from the outer commissure. Steady continuous pressure, by means of a small sponge, restrained the bleeding within innocent limits.

The front of the eye having been now made easy of access to the knife, the section of the cornea was completed with ease, and the lens safely delivered without accident. No anæsthetic was employed. The lid was not sutured, but dressed with cerate instead of dry rag, and two turns of a narrow domett roller. The patient, a collier, of sixty-eight years, recovered without a single painful or unfavourable symptom, and was discharged cured on the fourteenth day after operation with a clear black pupil, good vision, and perfect cicatrisation of the tarsal cartilage.

The above plan is to be preferred to any that affects traumatically the condition of the outer commissure, from the impossibility of abnormal narrowing of the palpebral aperture, or inversion of the lid being produced by its performance,—accidents of no mean importance.

Mr. Solomon considers the operation of "reclination" has fallen into undeserved neglect, and that, as a consequence, eyes are destroyed which would have a good chance of vision if it had been selected for performance instead of extraction. He advises a resort to it where there is extensive fatty degeneration of the cornea and other tissues, and in subjects in whom the arterial system has become seriously spoilt by atheroma; also in those who are affected by tertiary syphilis of old date. In the last two pathological conditions, intraocular hæmorrhage is the accident to be dreaded after the removal of the lens, or even, as he has known it, immediately after completion of the corneal section; in the first, death of the flap within eighteen hours of the conclusion of the operation.

ARREST OF PALPITATIONS OF THE HEART.—A correspondent in the *Union Méd.*, August 21, calls attention to the fact that palpitations, when not depending upon organic disease, may be almost immediately arrested by bending the head downwards and allowing the arms to hang pendent. The effect is even still more rapidly produced by holding the breath for a few seconds while the body is in this bent position.

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Medical Times and Gazette.

SATURDAY, AUGUST 28, 1875.

THE FUNCTIONS OF THE BRAIN.

Those who learnt their physiology ten or a dozen years ago, imbibed very different notions about the cerebrum and its various functions from those which are seeking to find acceptance to-day. Apart from the knowledge that the corpus striatum probably had motor, and the optic thalamus sensory functions, that the corpora quadrigemina were probably the principal nervous centres for the sense of sight and the movements of the iris, and that the office of the cerebellum was especially that of regulating and combining muscular movements, all that could be said or written about the cerebral hemispheres—those great masses of white and grey matter which lie above the basal ganglia—was that they appear to be the organs in and through which the mind acts in all those operations which have immediate relation to external and sensible things. There was at that time no attempt to localise function in certain parts of the cortex cerebri, nor to frame any other than the most general hypotheses as to its use. In the year 1869, Dr. Carpenter, one of our most distinguished writers on physiology, speaks as follows:—"The anatomical relations of the cerebrum to the other encephalic centres clearly demonstrate that it is not one of the essential or fundamental portions of the nervous system, but a superadded organ, receiving all its impulses to action from the part below, and operating on the body at large through them."(a) According to this view, the cerebrum proper was merely a collection of ganglionic cells and nerve fibres, all parts of which resemble one another in function, and which, in some inconceivable way, were able, after the receipt of impressions from peripheral parts, or under the dictates of the will, to act on the ganglia at their base, so as to produce the most delicately balanced and harmonious movements of groups of muscles of very different and even antagonistic action.

A suspicion that this view was not wholly correct began to gain ground after the discovery by Broca, in 1861, that not only does aphasia generally accompany left hemiplegia, but that it may be connected with a lesion of the surface of the third left frontal convolution. But it was not until 1870, when Hitzig and Fritsch published their first paper, and proved conclusively that electrisation of the brain cortex at certain parts is followed by definite muscular movements, that it began to be seen clearly that, unless the facts can be otherwise explained, the old view must certainly be modified, and that we must admit that all parts of the cortical substance have not the same merely psychical function, but that there is an intimate connexion between definite muscular movements and certain processes which have their origin in definite areas of the surface of the convolution. Hitzig's experiments were instigated by observing the movements of the eyes in man which he produced by passing a constant galvanic current through the posterior surface of the head. He was thus led to doubt the statements of all previous authorities as to the insusceptibility of the cerebrum to electrical excitation. In this country the study of unilateral convulsions, beginning in one or more muscular groups and then extending to others, had led Dr. Hughlings-Jackson to the idea (even with a small number of necropsies) that these must be due to lesions of the cerebrum, and probably to lesions of the convolutions; and, as he clearly proves in his papers on "Partial Convulsion from Brain Disease," now publishing in this journal (p. 573, May 29), he so expressed himself as early as 1866. His essay on "The Study of Convulsions"(b) gave occasion to the well-known experiments which Dr. Ferrier published in 1873, on the localisation of the functions of the brain, which not only largely corroborated the results of Hitzig and Fritsch, but which, by their extent and by their essential accuracy, have more than any others helped to revolutionise our views of cerebral physiology, and to stimulate further investigation of its mysteries.

Having thus briefly sketched the history of the localisation of the functions of the brain up to its most recent developments, we propose, in the remainder of this article, to consider, more in detail, the results which have been arrived at, and the various objections which have been raised to them by other observers; for new facts and new theories must always meet with opposition and searching criticism before they can take their place among accepted truths, or annihilate long-cherished hypotheses.

The experimental results obtained by the electrisation of the brain were so striking, and so contradictory of all previous ones, that their immediate acceptance could not be expected, nor have they as yet gained universal adherence. Before entering on the objections raised against them by various experimenters, we will briefly describe in general terms the undoubted and unchallengeable facts which Hitzig and Ferrier have made out.

The application of the two poles or electrodes, either of a weak constant galvanic battery or of an induction coil of feeble strength, to definite regions of the surface of the brain of a partially narcotised mammal, after removal of the dura mater, produces movements of groups of muscles on the opposite side of the body. The whole surface of the hemispheres is not equally susceptible of irritation. In monkeys, the antero-frontal, with the inferior frontal and orbital convolutions, give no definite results on electrisation, and the same is true of the occipital lobes. The parts from which muscular movements can be initiated lie between the fissure of Sylvius and the posterior termination of the superior frontal convolution on the convolutions bounding the crucial fissure, which is probably the homologue of the fissure of Rolando in man. Within this region a number of well-defined areæ have been discovered,

(a) "Principles of Human Physiology," sixth edition, p. 582.

(b) *St. Andrews Medical Graduates' Transactions*, vol. iii., 1870.

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from each of which contraction of a definite group of muscles can be produced by electrisation. Each of these is very nearly constant in its position in the same species of animal, and corresponds to similar areæ on the homologous regions of other species, except that, according to the habits of the animal, the areæ for certain muscles are more highly differentiated—*e.g.*, those for the tail in dogs, and the paws in cats. To these areæ the term "centre" has been applied both by Hitzig and Ferrier, and we believe there is no essential disagreement between them with regard to the position of the greater number of such "centres," the chief difference, as we pointed out in an abstract of Hitzig's researches last year, arising from the fact that Hitzig, using the constant current, finds a smaller extent of convolution electrically excitable than Ferrier with the induced current, and he therefore claims the existence of fewer centres than Ferrier. Such, in a few words, are the acknowledged results which can be obtained by electrisation of the cortex of the brain. We now come to the difficulties which have been raised against their interpretation, and on the solution of which the future of the new cerebral physiology depends. We have already stated that Hitzig and Ferrier both regard the areæ which respond to electrical irritation as cortical centres of voluntary motion, from which electrisation is able to initiate muscular movements, in the same way that the will does in the normal state of the animal. On the other hand, it has been objected that the effects obtained are not due to the existence of any so-called "centres," but simply to the conduction of the currents to the ganglia at the base of the hemispheres.

The grounds for these objections depend on a number of experiments made in this country by Dr. Burdon-Sanderson,(c) by H. Braun(d) and Prof. L. Hermann(e) in Germany, and by E. Dupuy(f) and MM. Carville and Duret(g) in France. The objections of the French observers do not seem to us worthy of much consideration, for Messrs. Carville and Duret completely deny the excitability of the cortical substance of the hemispheres, while Dupuy was unable to obtain constant results, or to reproduce several of the phenomena described by Hitzig and Ferrier; and both of them unhesitatingly ascribe all the movements to conduction to the basal ganglia.

Drs. Sanderson and Braun, however, while admitting the fact that localised movement follows localised electrisation of the cortical substance, deny that any "centres" exist in it at all; for they found that if they removed the grey substance of a convolution which represented a centre, and then applied the electrodes to the underlying white substance, the same movements were produced as before, with a similar intensity of current, the positions of the active spots being quite as strictly localised as at the surface, and bearing the same relations to one another. Hermann's experiments were similar in character, only that he destroyed the so-called centre—that for the hind leg, to which he confined his attention—by various caustics, and even by the actual cautery, and removed the burnt tissue with a knife to the depth of a centimetre, without affecting the results of electrisation. He therefore concludes that since the phenomena of motion are producible after the surface has been destroyed, we must assume conduction of the current to a deeply seated centre; and that, therefore, the necessity for believing in the superficial motor centre vanishes. To these objections, which at first sight appear seriously to endanger the theory of cortical centres, there are several replies. In the first place, the experiments of J. J. Putnam may be adduced in support of it, though we are not inclined to lay great stress on his results. He found that if a thin flap of cortical substance, containing a supposed centre for nearly or quite uncomplicated movements, were made with a sharp knife, and if the flap were left *in situ*, and irritated with a weak induced current, the previous movements did not occur; and that although, if the flap were turned up, the same movements could be produced by slightly increasing the strength of the current, yet that they could be excited with its original strength if the flap was readjusted and the electrodes applied to its surface as before. The most powerful arguments, however, in favour of cortical centres are those adduced by the original experimenters—Hitzig and Ferrier. The first of these which we shall bring forward occurs in Hitzig's earliest paper on the Electrical Irritability of the Cerebrum (page 27). After pointing out how accurately localised the different areæ for different muscles are, and what different effects are produced by slight alterations in the position of the electrodes, he goes on to show that these effects admit of only two possible explanations—either the irritation is, so to speak, absorbed by the ganglion cells in the immediate neighbourhood of the electrodes, and converted by them into muscular movement; or else it is just at these points that irritable nerve fibres approach specially near to the surface, so as to be in a peculiarly favourable situation for irritation.

"Now, since," says Hitzig, "no other reason can be discovered why these nerve-fibres should specially approach the ganglion cells at those parts, unless it be to fulfil their destiny (*Schicksal*) and enter them, we can, of course, assume that it is just *these* ganglion masses which are destined to produce organic stimuli for *these* nerve-fibres."

In the second place, Dr. Ferrier points out(h) that because the same localised movements can be obtained by stimulating the medullary cone of fibres passing from the corpus striatum to the hemispheres as are produced by the stimulation of the cortex itself, it does not follow that there are no centres in the cortex. When the electrodes are applied to the surface of the brain at a point where a "centre" has been removed, we are only setting up the same process in the medullary nerves which travel from the cortex downwards, as would be produced by any functional activity of the grey matter of the hemispheres corresponding to these fibres. It is, in fact, very much the same process which occurs when we "tap" a telegraph wire somewhere between two stations, connect it with an instrument, and then send messages from the latter instead of from the terminus. This analogy may seem far-fetched and over-strained, but at any rate it will be conceded that muscular movements can be produced identical, to all appearance, with those caused by the direct action of the will, by simply pinching a motor nerve a long way either from the brain or the spinal cord. Anyone can try the experiment for themselves any day on the lumbar nerves of a decapitated frog. In this case it would be impossible to deny the existence of motor centres, and yet they are evidently not essential to the production of muscular movements. There is very little doubt that the motor fibres which are distributed to the various muscles of the body pass through the corpus striatum only; they do not end there, and it is difficult to see why they should go further unless they had a definite connexion with the higher centres of the will. Dr. Ferrier puts it very well when he says that "in the corpus striatum all the movements are integrated which are differentiated in the hemispheres." Another argument in favour of "cortical centres" is afforded by the results of anæsthetics on the electrical irritability of the cortex and the corpus striatum respectively; for complete anæsthesia prevents the production of all movements on irritation of the cortex, while they still follow stimulation of the corpus striatum; and this fact proves that something more than mere conduction is involved, and, as Dr. Ferrier remarks, "rather favours the idea that the movements are dependent upon the

(c) *Proceedings of the Royal Society*, No. 153, p. 368.
(d) *Eckhard's Beitr. zur Anat. u. Physiol.*, vii., 2 S.A.
(e) *Pflüger's Archiv*, Heft ii., 1875.
(f) *Revue des Sciences Méd.*, t. iii., p. 493.
(g) *Gazette Médicale de Paris*, Jan. 10, 1874.

(h) "On the Localisation of the Functions of the Brain," *British Medical Journal*, December 19, 1874.

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excitation of centres in the hemispheres which have lost a function that they formerly possessed."

The last argument which we shall bring forward on this side of the question is that derived from pathological research. Unfortunately the evidence derived from this source is at present only scanty, and partly contradictory. Cases have been observed in which considerable lesions of the cortical substance of the brain have been produced by tumours and mechanical injuries, without those alterations in the motor functions which we should expect, according to the theory of "cortical centres." On the other hand, we must remember that it is only quite lately that such cases have been investigated with the care and precision which are absolutely essential in such inquiries, and yet that already, in several instances, the lesions found post-mortem have corresponded with very remarkable accuracy to the regions which localised electrisation of the brain of monkeys and the implication of certain groups of muscles during life, had led their observers to expect *à priori*. We may here refer again to the cases reported by Dr. Hughlings-Jackson in this journal within the last few months, as also to a remarkable case described by Hitzig,(i) in which, during the formation of a small abscess of the brain, that followed a gunshot wound of the head during the Franco-Prussian war, *bilateral* convulsions occurred in the muscles around the mouth and nose, and in those of the tongue, without loss of consciousness. After death, the abscess, which was only about two centimetres in diameter, was found to occupy that part of the anterior parietal convolution (*Vorderen centralwindung*), which in the monkey lies between the "centres," for the movements of the mouth and the tongue, which are also *bilaterally* excitable from these "centres."

Space will not allow us to enter more minutely into the consideration of the arguments for and against the existence of cortical centres. We have endeavoured to lay the main facts broadly before our readers, so as to enable them to form some kind of opinion on the subject for themselves. Good authorities do not even yet consider that the question is decided. Some, like Külz,(k) not only accept the idea of motor centres in the cortex of the brain, but even look forward to the discovery in the same parts of centres for the control of the secreting organs—for example, the salivary glands; while others, like Samt,(l) basing their dissent on the uncertain effects of pathological lesions, deny that we can at present assert of any spot of the cortex of the human brain that it is absolutely necessary for a single definite movement.

We must here leave the subject for the present, and we have only to state, in conclusion, that we have omitted all mention of the various "extirpation" experiments which have been made by Fournié and Nothnagel, in consequence of their incompleteness and of the indefiniteness of their results; and that we have similarly avoided any discussion of theories which have been founded on the supposed existence of "centres" for various movements and functions in the cortex of the hemispheres, and especially the very admirable theory of aphasia propounded by Dr. Broadbent and Dr. Ferrier, because it seems to us better to wait until we have a settled agreement upon the main facts, lest we should build a superstructure on a basis of uncertainty.

(i) *Untersuchungen uber Dasgehirn*, 1874, No. iv.
(k) *Centralblatt Med. Wiss.*, 1875, No. 26.
(l) *Archiv für Psych. u. Nervenkrankheiten*, 1874, p. 201.

THE "DISPENSARIES" OF IRRESPONSIBLE AND UNQUALIFIED PRACTITIONERS.

THE attention of the public has of late, in an unusual degree, been directed—and directed with an unusual degree of effect—to the dangers attendant on unqualified medical practice. In our numbers for July 17 and 24 we reported the proceedings of an inquest upon the body of Emma Jane Plain, an infant nine months old, who had received "medical treatment" at a "provident dispensary" in Copenhagen-street, Islington; and it will be remembered that though the jury returned a verdict of "Death from natural causes," they further pointed out that the advice and medicine received "were given by an irresponsible and unqualified medical practitioner," and they added the opinion that "dispensaries under the management of unqualified practitioners are fraught with danger to the community." A question put by Mr. C. Lewis, in the House of Commons, elicited the fact that the attention of Mr. Cross, the Home Secretary, had been called to the verdict of the jury in this case, and Mr. Cross, remarking that the question raised by Mr. C. Lewis, "whether absolutely unqualified practitioners ought to be allowed to administer medicine?" was "one which came within the province of the Lord President of the Council," promised that he "would call his noble friend's attention to it." On July 31 we reported in our pages the proceedings of another inquest held on the body of a child in its last illness at another so-called provident dispensary in Bethnal-green-road, the "proprietor" of which was an unqualified man named Henry Beardmore Smyth. At the inquest Mr. Smyth stated that up to a recent period he had retained the services of "a properly qualified medical man, Dr. McGill, who did half the prescribing, and the remainder was done by himself, as assistants would do"; but he had been obliged to dismiss Dr. McGill. The position of Dr. McGill was a highly flattering one. Medical practitioners do, unfortunately, sometimes employ unqualified assistants, but in this case the qualified medical man was reported as having held the dignified position of assistant and subordinate to the unqualified "proprietor" of the "provident dispensary." In this instance, again, the jury returned a verdict of "Death from natural causes"; and, like the Islington jury, added that they "desired to call attention to the fact that deceased received medical treatment at the Bethnal-green Dispensary, where medicines were administered by an irresponsible and unqualified practitioner, and that a dispensary under the management of irresponsible persons must be fraught with danger to the community." It might, perhaps, have been expected that this public expression of opinion would have put an end to this "provident dispensary," but it appears that Mr. Smyth still carries it on; and the unhappy, but not unnatural, result is that the coroner has again been called on to inquire into the circumstances attending the death of one of his patients. In the present instance the deceased was the infant child of a painter named Cavalier, residing in Bethnal-green. Some four weeks ago the child was taken ill with diarrhœa, and being under the impression that the dispensary at 201, Bethnal-green-road was conducted by a qualified medical man, the father took his child there, where it was attended by Mr. Smyth, and continued under his care for three weeks. The diarrhœa ceased after the first week, but the child continued to waste. The father then took it to the North-Eastern Hospital for Children, where it was received as an in-patient, but died a few hours after admission. Mr. Smyth, who was present at the inquiry, stated, in answer to the Coroner, that he was connected with the establishment in question, but was not now the proprietor, as he had transferred it as a going concern to Mr. Batteson, a qualified practitioner, of Bow-road. Mr. Smyth prescribed for the child, but he could not say from what disease it was suffering; he believed it had diseased bowels. In reply to Mr. George Brown, who watched the case on behalf of the British Medical Defence Association, Mr. Smyth said that he had never attended medical lectures or hospital practice, but he had studied medicine privately. He was formerly a pupil of Mr. Batteson. Mr. Batteson did not attend the dis-

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pensary regularly, but he had been there two or three times since assuming the proprietorship. Mr. Needham, Acting House-Surgeon to the North-Eastern Hospital for Children, said that he had made a post-mortem examination of the deceased, and found every organ healthy. The body was extremely emaciated, and he believed death was due to starvation. The child might have been either improperly or insufficiently fed. The jury, having deliberated in private, returned a verdict in accordance with the medical testimony, and expressed their opinion that Mr. Smyth had acted improperly, being unqualified, in prescribing for the deceased. Mr. Smyth is reported to have replied to this that he only did what assistants to medical men are in the habit of doing. It is undoubtedly satisfactory to find that juries are ready to mark so clearly their sense of the danger of medical practice by "irresponsible and unqualified practitioners," but we fear that the evil which these cases illustrate cannot be prevented without help from our legislators. The Medical Act forbids, under penalty, the wilful and false use of the name or title of a "Physician, Doctor of Medicine, Licentiate in Medicine and Surgery, Bachelor of Medicine, Surgeon, General Practitioner, or Apothecary, or any name, title, addition, or description" implying that the person using it is a registered person under the Act, or that he is recognised by law as a medical man; and this is well understood by men like Mr. Ker, of the Copenhagen-street Dispensary, and Mr. Smyth, of the Bethnal-green-road Dispensary. They carefully avoid, therefore, the use of any such titles; it would be illegal and dangerous, and, what is more, it would be unnecessary for their purposes. They have only to open a "dispensary," or "provident dispensary," and to announce fixed hours of attendance and terms, and it is but too certain that the public will, in very large numbers, assume that a "dispensary" must, of course, be attended by properly qualified medical men. The use of such titles for dwelling-houses or establishments belonging to unqualified persons seems to be as successfully deceptive as the false use of medical titles personally; and being successful in its purpose—that of obtaining payment for medical advice and attendance under false pretences—it is sure to be somewhat extensively followed, to the serious detriment of the public and the profession. It is, therefore, to be hoped that the Lord President of the Council will seriously consider whether the law should not be so amended as to make such practices, and indeed any other as yet unprohibited method of obtaining money for medical attendance under false pretensions, illegal. The British Medical Defence Association deserve some credit for the way in which, through their energetic secretary Mr. George Brown, they have aided in the exposure of these cases; and as the law at present stands, public exposure seems to be the only way in which good can be done.

TOTAL EXCISION OF THE LARYNX.

On July 21 last, Professor von Langenbeck, of Berlin, performed the above operation on a man aged fifty-seven, with cancerous infiltration of the whole upper portion of the larynx above the ventricles, involving also the epiglottis and the hyoid bone, as well as the base of the tongue. The first symptoms of hoarseness and dyspnœa began four years ago. In November, 1874, he came into the Surgical Clinic with severe dyspnœa, cyanosis, and symptoms of impending suffocation, and the diagnosis of carcinoma was made. As the patient refused to have the larynx removed at that time, tracheotomy only was performed, and he went out relieved in January. In July, 1875, he returned, still wearing the canula, but unable to swallow anything except liquid food. The larynx was swollen, broadened, and hard externally, and at the back of the tongue an uneven lobulated growth could be both seen and felt. His strength and general condition were favourable. The tracheal opening in the neck was, before the operation, continued downwards, and the trachea above the opening plugged with an air-bag, so as to prevent any downflow of blood into the bronchi. The patient was then narcotised by chloroform administered through a canula, and was kept completely unconscious for two hours. Langenbeck made a horizontal incision two centimetres above the hyoid bone, and extending from one sterno-mastoid muscle to the other, and bisected it by a vertical incision. The skin was then thrown back in two flaps, and the larynx dissected out, beginning from above and working downwards, so that the trachea just below the cricoid cartilage was the last part separated. The whole larynx, with the epiglottis, the hyoid bone, and the posterior third of the tongue, as well as the anterior and lateral portions of the pharynx, with the pharyngo-palatine arches, and a small piece of the œsophagus, were then removed.

The following muscles were divided, without reckoning the small laryngeal muscles:—The sterno-hyoid and -thyroid, the omo-hyoid and mylo-hyoid, the digastric, genio-hyoid, stylo-hyoid and stylo-glossi, the stylo-pharyngei, and the glosso- and pharyngo-palatine. Forty-one arteries were ligatured, including both external carotids, which were each doubly ligatured and divided between the ligatures; and both hypoglossal and lingual nerves were cut through. Both submaxillary glands were also removed. Langenbeck lays great stress on the operation being conducted from above downwards, as it enables the surgeon to lay bare the greater number of vessels, and to ligature them before they are cut, and so spare as much bleeding as possible. The preparatory plugging of the trachea is also all-important.

The excised portion of the larynx and tongue measured eleven centimetres in length, and the piece of tongue three centimetres, the incision being carried in front of the circumvallate papillæ.

After the operation, the immense wound was simply closed by compresses soaked in a one-third per cent. solution of salicylic acid, and no attempt was made to bring the skin together with sutures. The patient's condition on July 22, the day after the operation, was remarkably good (pulse 100), and he was able to take abundance of liquid nourishment through a tube passed into the œsophagus. On July 28 his progress was still good, and he had no fever. A two per cent. solution of boro-salicylic acid was being used to swab the pharynx and diminish the abundant purulent secretion from the surface of the wound.

This is the fourth case of excision of the larynx. Billroth, of Vienna, in 1873, was the first to perform the operation; he was followed by Heine, of Prague; and in 1874, Dr. Moriz Schmidt, of Frankfort-on-the-Maine, removed the greater portion of the larynx of a man of thirty-six for carcinoma. The patient died five days afterwards. In case his patient goes on well, Professor Langenbeck intends to wait until the wound has completely cicatrised before he attempts to adapt an artificial larynx.

THE WEEK.

TOPICS OF THE DAY.

The sympathy evinced by the Royal Family in furthering the interests of our public hospitals and charitable institutions is so well known that the following instance of consideration on the part of his Royal Highness the Prince of Wales will not be received with any surprise. The Royal Infirmary for the Diseases of Women and Children, situated in the Waterloo-road, of which the Prince of Wales is patron, is built on a plot of land the property of the Duchy of Cornwall. Up to a short time ago this was held by the Council of the institution on a thirty-five years' lease, at a ground-rent

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of £40 per annum. The Committee recently purchased the lease for a sum of £800, and then communicated with his Royal Highness, who, on the representations of that body, generously sold them the freehold of the property for £1000—certainly not more than about a third of its market value,—and the authorities have consequently determined to commence enlarging the capabilities of the Hospital at once.

An action has been brought, at the suit of the War Office, against the guardians of the Tipperary Union for refusing to close up a cesspit close to the barracks, which the military authorities consider a nuisance. It would scarcely be believed that, at a recent meeting of the board of guardians, it was resolved to defend the action to the last; but we can only imagine that the Tipperary magnates were guided to this conclusion by the recent reports of the insanitary condition of the head-quarters of the War Office itself, perhaps justly considering that the Secretary of State for War should place his own house in order before objecting to his neighbour's premises. The present is by no means the first occasion upon which a whisper has reached us of the want of sanitary precautions in the large block of buildings constituting the office of the Secretary of State for War in Pall-mall; and the fact is the more extraordinary when it is remembered that there is an appointment, with a by no means inconsiderable salary, of sanitary adviser to the head of the War Office. The present War Office is only a collection of old dwelling-houses, originally built without any view to forming one establishment, but which are now, for the convenience of access, thrown together by making openings in the party-walls. A kitchen and a printing-office have been established in the basement; and, during the working hours, the odours of cooking and printing-ink, mixed up with the exhalations of several defectively constructed closets, are drawn into every room in the building; and this is the air supplied for breathing purposes to the highest and lowest of the officials employed in the establishment. Mr. Hardy, during the past session, explained, in his place in the House, that everything that could be done was being done to remove the existing evils; but he admitted that, until a really good office could be found to hold the whole of the departments under his control, he did not think that all that was requisite *could* be done. Meanwhile, failing the discovery of an appropriate building, or the construction of a new pile of buildings to be placed at the disposal of the War Secretary, the Civil servants of this branch of the Government must perforce remain contented with what has already been done for their welfare.

Another of those sad instances of want of care which have been responsible for so many lives has just been made public. The wife of Lord Cottesloe has recently lost her life at Swanbourne from hastily swallowing, by mistake, a portion of a poisonous liniment intended for external application, instead of some medicine prescribed for a slight attack of rheumatism. We have no information as to whether the very necessary, and now usual, precaution had been taken of placing the liniment in a bottle of such construction that the mere touch would have indicated that its contents were of a dangerous nature.

The largest city in the civilised world must, of course, pay the penalty of its greatness; yet the recent report of Colonel Henderson, the Chief of the Metropolitan Police, for the year 1874, giving the list of killed and wounded by street accidents during that period, is somewhat startling even to those most accustomed to the perils of London traffic. Without including the City proper, the metropolitan police reports show 124 persons to have been run over and killed, and 2568 persons to have been maimed or injured. Only one person was killed by a fire-engine, a vehicle especially likely to be dangerous to life; five deaths were due to accidents from ridden horses, and five from broughams and horses; fourteen persons were killed by cabs, fourteen by heavy carts, fifteen by omnibuses and cars, and eighteen by waggons and drays; whilst no less than fifty-two victims—one a week—are put down to the account of light carts and vans. When such a list of casualties is brought to our notice it does not seem out of place to ask if nothing could be done to lessen such a waste of life.

The return of the number of deaths registered in the eight principal towns in Scotland during the month of July last has just been published; from this it will be found that the number (2341) is 248 under the average for July during the last ten years, allowance being made for increase of population. Four males and four females were returned as over ninety years of age, the eldest being a tailor aged 102 years. The births in Scotland during the above period were 3765, a larger number than in any July during the past ten years; of these 9·5 per cent. were illegitimate.

It is not very often that an outbreak of cholera occurs at any of the hill stations in India, but this year has proved an exception to the rule, as the disease has made itself severely felt both at Simla and at the neighbouring military sanatorium of Kuscowlie. According to the latest telegrams received, there had been at Simla, up to the middle of last month, 152 cases, of which ninety-one resulted fatally. As usual, the great majority of the deaths occurred amongst the natives, but nine Europeans were included amongst the victims. The Government has now taken the sanitary engagements into its own hands, and it is to be hoped that the measures adopted may have a salutary effect. No satisfactory reason has yet been assigned for this outbreak. In the plains, the season has, thus far, not been marked by any unusual prevalence of cholera; in Calcutta, although cholera is never entirely absent from the native portion of the town, the European community has enjoyed a marked immunity from it since the construction of the drainage and waterworks.

Cholera has lately formed the subject of a scientific discussion at Munich. In a recent report, Dr. Franck has laid down certain principles which do not generally differ from the suggestions universally adopted by those who advocate the theory of contagion. The first thing to be guarded against is the terror the malady inspires. Cheerfulness, and avoidance of all violent grief and excitement, sober and regular habits, will greatly contribute to immunity from the disease. The feet and abdomen should be protected from cold, warm clothing should be adopted, and great attention paid to diet, so as to avoid too copious meals, cold drinks, heavy food, bacon, goose, smoked meat, bad potatoes, sour milk, hard eggs, raw fruit, cabbage, etc. On the other hand, it is advisable to eat beef, veal, lamb, fowls, venison, fish (except eels), bear-ham, turnips, horse-radish, etc. Cleanliness, both of the body and of the dwelling, should be enforced; ventilation of the latter attended to, and the floors continually sprinkled with acetic acid, the fæces of the sick being carefully disinfected. Dr. Franck's opponent at Munich—Dr. Pettenkofer—represents the localist school, according to which cholera is chiefly engendered by the state of the soil, and is not contagious; so that man is not to be regarded as a principal, but only as a secondary agent of dissemination. Dr. Pettenkofer does not impugn Dr. Franck's hygienic advice, but endeavours to show, by authenticated facts, that in many cases they have proved useless. The only use of disinfectants, he maintains, is their tendency to calm the apprehensions of those who believe in them; in short, his opinion of Dr. Franck's report is, that it contains nothing calculated to protect the city of Munich from a fresh visitation. The whole question, he asserts, lies in the constitution of the soil: the more porous it is, and the lower the waters, the greater the probability of invasion; whereas, if the soil be impenetrable, and the waters high, there may be a few cases of

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sporadic cholera, but no epidemic. Hence, drainage on an extensive scale is alone to be relied on, and this is proved in the instance of Dantzig.

CONVICTION FOR FALSELY PRETENDING TO BE A REGISTERED MEDICAL PRACTITIONER.

On Friday last week, a man named William Carnley Smith appeared before Mr. Bridge, at the Hammersmith Police-court, to answer a charge preferred against him by the Kensington Board of Guardians for falsely pretending to be a registered medical practitioner by signing a medical certificate under the Vaccination Act, to the effect that a certain child was not in a fit state to be successfully vaccinated. In support of the charge two certificates were produced, one purporting to be signed by Percy Leslie, M.D., 1, Allen-terrace, Kensington, and the other bore the signature, "W. C. Smith, *pro* Percy Leslie, M.D." Mr. Claydon, who appeared for the defendant, admitted the facts, but contended that the case did not come within the statute, as the defendant had not represented himself to be a duly authorised medical practitioner. He was an assistant to Dr. Leslie, and signed the certificates by his authority. It was quite impossible for duly qualified men to do all their work, and they were obliged to employ unqualified labour. The defendant was studying for the profession, meantime he merely acted as Dr. Leslie's assistant. This statement, however, was not borne out by evidence subsequently adduced, for the officer appointed under the Vaccination Act said that there was a brass plate bearing the defendant's name on the gate where he resided. Formerly Dr. Leslie's name was on the plate, but it had been taken down for some months. Since proceedings had been taken, another plate had been put up. Dr. Leslie resided in Westminster. Dr. Leslie stated that it was a common practice for unqualified labour to be employed in hospitals and by general practitioners. He had known the defendant four years; he studied and lived with him in Westminster, but for twelve months he had ceased to be his (Dr. Leslie's) assistant, and had removed to Kensington. He had been to the defendant's house often since he had resided in Kensington, and no doubt the defendant was constantly in the habit of signing certificates for him; there was no other alternative, as he could not always be at home. He did not see the child on the day mentioned in the certificate, neither was the father of the child a patient of his. Mr. Bridge said it was absurd to say that the defendant was Dr. Leslie's assistant; he came down to Kensington, put up a brass-plate, and acted as a doctor. This was not an ordinary case of an assistant signing a certificate on behalf of his master. He should, therefore, fine the defendant £10, and order him to pay two guineas costs, with the alternative of two months' imprisonment. We are glad to see that Mr. Bridge refused to be deceived by the feeble defence attempted to be set up, and that he visited a grave offence with a severe penalty. We must be allowed to express some surprise and regret that Dr. Leslie should have felt it right to have come forward in support of the defence, as even on his own showing it is clear that the defendant had left him for a twelvemonth, and had removed to a different part of the metropolis.

BRITISH MEDICAL DEFENCE ASSOCIATION.

This excellent society continues to make steady progress, and, although no special appeal has been made to the profession, names are being constantly added to the list of members. At the last meeting of the Provisional Committee, which was held last week, a good deal of time was spent in discussing the terms of a circular which it is intended to send every medical practitioner in the kingdom, but its exact form was not definitely settled, and the matter was postponed until the next meeting, to be held on Friday, September 3. Mr. George Brown, the Hon. Secretary, reported that since the last meeting he had been in communication with Mr. Upton, the Clerk to the Society of Apothecaries, respecting the prosecution of Mr. Hugh Ker, whose proceedings in connexion with a provident dispensary in Copenhagen-street, Islington, have already been reported in these columns. Mr. Upton had written to Mr. Ker, stating that complaint had been made respecting his practising as an apothecary without licence; and, in reply, he had received a letter from Mr. D. O. West, L.S.A., of 164, Ball's Pond-road, N., to the effect that he had purchased the dispensary practice of Mr. Ker, but had retained his services as an assistant. Mr. Brown said he had called on Mr. West, and expressed to him a hope that he would not attempt to screen illegal practice, and Mr. West assured him that he should not employ Ker longer than was necessary to gain an introduction to the practice. Under these circumstances the Committee thought legal proceedings against Ker should be delayed for the present. In another case, where the Committee had ordered a prosecution to be instituted against a man who had been practising in London for fifteen years without legal qualification, Mr. Brown said that on the day before he intended to apply at the police-court for a summons, he ascertained that the party whom it was intended to prosecute had been admitted to examination at Apothecaries' Hall, and had received the licence of that body to practise. A communication was read from the East-end Branch of the Association respecting the employment of a qualified medical man by the unqualified proprietor of a medical hall, who is said to do a large practice among the poor in the East-end. In consequence of the lateness of the hour, the consideration of the case was postponed until the next meeting.

ENGLISH REGISTRATION STATISTICS.

From the Registrar-General's quarterly return, which has just been published, we learn that during the quarter ending June 30 last 214,650 births were registered in England and Wales, being at the annual rate of 36 per 1000, or 0·9 per 1000 less than were registered in the corresponding quarter of last year. The birth-rates in the several counties ranged from 27·8 and 28·2 in Herefordshire and Sussex, to 42·1 and 48·7 in Staffordshire and Durham. In the agricultural counties generally the birth-rate was much below the average, whilst in the manufacturing and mining counties it, in most instances, considerably exceeded the average; in the large towns it ranged from 21·7 in Cheltenham to 47·2 in Gateshead. The deaths registered during the quarter number 130,797, being at the annual rate of 21·9 per 1000, or 0·5 above the average rate in the corresponding quarter of the ten preceding years. This exceeds the mortality of any spring quarter since 1866, when the rate was equal to 24·2 per 1000. The excessive mortality last quarter was undoubtedly due to the unusually severe alternations of temperature during April, and the exceptional coldness of the greater part of June—conditions which appear to have been especially unfavourable to the health of infants and elderly persons, among whom diseases of the respiratory organs were very fatal. In the agricultural counties generally the death-rate was low, whilst it exceeded the average in the manufacturing counties of the North of England; thus, in the counties comprising the South-Eastern and South-Midland Divisions (principally agricultural), the death-rates were 18·6 and 19·8, but in the York and North-Western Divisions they were 23·7 and 24·6 respectively. Among the large towns the death-rate was low in the following:—Dover 14·6, Devonport 17·1, Portsmouth 17·3, Colchester 17·4, Yarmouth 17·5, and Brighton 17·8. In the following towns the death-rate greatly exceeded the average—Manchester 28·1, Rochdale 28·3, Stockport 28·5, Wigan 28·5, Preston 28·8, and Oldham 30·3. In consequence of the excessive death-rate of last quarter, it is estimated that 3000 persons, aged

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upwards of sixty years, died in England and Wales who would have survived had the death-rate at these ages not exceeded the average rate in the five preceding corresponding quarters. During the quarter 15,419 deaths were in England and Wales referred to the seven principal zymotic diseases—viz., to scarlet fever, 4063; whooping-cough, 3640; fever (typhoid, typhus, etc.), 2728; diarrhœa, 2463; measles, 1432; diphtheria, 745; and small-pox, 348. Of the deaths from the last-named disease, 73 occurred in Birmingham, 44 in Keighley, 32 in Bristol, 20 in Darlington, 16 in Stockport, 12 in the Dewsbury district, and 11 in Liverpool. No fatal case of small-pox was returned in any of the counties of the Eastern Division, nor in Devonshire, Dorsetshire, Wiltshire, or Shropshire. One death from this disease occurred in Cornwall, and only one in the five counties of the North Midland Division. Referring to the recent outbreak of small-pox at Keighley, the Registrar-General says: "The epidemic in this town is remarkable for its intensity among the unvaccinated, and has been conspicuous for the unenviable notoriety which the Keighley guardians have earned by their wilful persistence in refusing to fulfil the duty, imposed upon them by the compulsory Vaccination Act, to prosecute those who neglect to comply with its provisions." With respect to the other zymotic diseases, it is satisfactory to observe that the number of fatal cases in each group shows a steady decline when compared with preceding quarters—a result doubtless due to more strict attention to sanitary precautions.

THE CHOLERA IN SYRIA.

A CORRESPONDENT of the *Union Médicale*, Dr. Cossini, residing at Damascus, in a letter dated August 4, states some facts relating to the recent outbreak of cholera, which will be of interest to our readers. He says that the disease was first observed at Hama, a town of from 35,000 to 40,000 souls, fourteen soldiers of the garrison being seized with cholera in the middle of March, thirteen of whom died within a few days. It was not until the beginning of April that any cases were met with in the town itself, but during the next two months and a half the disease spread over the different quarters of the town, producing from fifteen to twenty deaths daily. The obstinacy with which it prevailed within the town during seventy-five days, without ever showing any disposition to pass beyond its boundaries, gave rise to hopes that it was a truly local outbreak, which would become extinguished *in situ*, especially as cholera at that time prevailed nowhere else whence it could have been imported. In fact, no epidemic had prevailed anteriorly either at Djeddah or Bagdad, or among the pilgrims returning from Mecca. These hopes were at last rudely disappointed by the spread of the disease, first to the villages near Hama, and then to Homs, a town of 25,000 inhabitants at forty-five kilometres distance. The garrison of Hama was ordered to Damascus, where it arrived at the beginning of June, and on the 13th of that month cholera appeared in Damascus, and soon spread, so that by July 20 the epidemic had reached its apogee, producing 140 to 150 deaths per diem. In fact, the deaths reached there at least 200 per diem, as the Mussulmans concealed those which occurred among themselves. A terrible panic seized the inhabitants, so that the streets were crowded with those who were flying away. Christians and Israelites emigrated in whole masses, many of them becoming the subjects of cholera on the road, while others succumbed to various accidents. Those who managed to reach Sayta, Beyrout, or the Lebanon, carried the disease with them, and the consequence is that almost the whole of Syria has become invaded by the disease. At Aleppo, Antioch, Beyrout, Saffeda, and all the villages situated along the Orontes, and in some of those of the Lebanon, the epidemic has prevailed with more or less intensity. The native physicians hastened to take their flight on the appearance of the first cases. Since July 26 the epidemic has begun to decline at Damascus, so that at the date of this letter there were only thirteen deaths per diem. The origin of the epidemic is quite a mystery, as Hama is an isolated place on the borders of the desert.

NARCOTISM BY THE PRODUCTS OF TISSUE-CHANGE AFTER FATIGUE.

THE fact that severe fatigue, either of the muscular or nervous system, predisposes to sleep, has led Dr. W. Preyer, of Jena, to make experiments with those substances which are most likely to be formed in the tissues after such exertion, especially lactic acid, to see whether they possess any narcotic properties. He finds, after a long series of observations and experiments, that lactate of soda, either subcutaneously injected in a concentrated aqueous solution, or else introduced into the empty stomach in large doses, frequently induces sleep if the subject of the experiment is kept quiet and undisturbed. There are, however, considerable individual differences in its effects both on animals and men, not only as to the time of onset of sleep, but also as to its duration and intensity. Young and small animals are affected more easily than old and large animals. Preyer finds that the exhibition of such liquids as are favourable to an abundant production of lactate of soda in the intestinal canal—*e.g.*, concentrated syrup, or copious draughts of sour milk and of whey—in many cases gives rise to drowsiness, and even actual sleep; and he thinks that this fact might be of practical application in some diseases where morphia and chloral are now exclusively ordered. Lactate of soda, in doses much larger than are required to induce sleep, increases the number of the respirations and also their depth; and reflex irritability and (in warm-blooded animals) the temperature are diminished. Dr. Preyer, whose communication will be found in *Centralblatt* (No. 35, August 7), from his experiments on animals is strongly opposed to the use of the lactates of potash, magnesia, and lime for narcotic purposes in the human subject.

THE SWIM ACROSS THE CHANNEL.

LEANDER, Lord Byron, and Mr. Ekenhead have been hopelessly eclipsed as champion swimmers by Captain Webb. This gentleman's feat of swimming across the English Channel without any artificial assistance whatever, without touching a boat or any other mechanical aid to rest, is a marvellous instance of strength and endurance, courage and pluck, and makes a swim across the Hellespont mere child's play. But it is interesting also from a physiological point of view. From the time when he dived from the Admiralty Pier at Dover to the happy moment when his feet touched the French shore—that is, for twenty-one hours and three-quarters—Captain Webb was in a vast changing body of water, without any protection from dress, and he swam some twenty-five miles; yet the temperature of the body was not, so far as we have heard, much, if at all—and, at any rate, was not dangerously—lowered; and though severely tried by the roughness of the sea during the latter part of the time, he was not at all dangerously exhausted. We hope we may be supplied with some scientific report of the Captain's condition on landing. It would be extremely interesting, for instance, to know his temperature; to learn whether he had lost weight, and, if so, in what degree; and to be told whether he chose cod-liver oil for his nourishment during exertion for scientific reasons or empirically.

THE DISCHARGE OF OVA, AND ITS RELATION IN POINT OF TIME TO MENSTRUATION.

IT is still a vexed question among physiologists at what period the human ovary discharges its products into the Fallopian tubes. The general belief is that the ova are thrown off towards the end of the menstrual flow or immediately after its cessation. Dr. John Williams, Assistant Obstetric Physician to University College Hospital, however,

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in a note communicated to the Royal Society, and published in *Proceedings* No. 162, brings forward a number of cases which tend to prove that the discharge of ova really occurs before the appearance of the monthly flow with which it is connected. In ten out of fourteen bodies of women dying of various diseases, either a day or two before, or two or three weeks after, the ordinary catamenial period, rupture of a Graafian follicle, or hæmorrhage into its cavity, had occurred before the return of the menses. Of the other cases—in one it was doubtful whether rupture of a follicle or the appearance of the discharge would have taken place first; in two a menstrual period had passed without maturation of a follicle; and in the fourth a periodical discharge was imminent, though the ovaries contained no matured Graafian follicle. Dr. Williams finds that other writers, who have recorded cases similar to his, in the main favour the view he supports. Reichert, however, who has examined the bodies of twenty-three women, in whose organs signs of menstruation were recognisable, arrived at the conclusion that rupture of the Graafian follicle takes place at an early stage of the menstrual flow.

SUCCESSFUL CANDIDATES FOR HER MAJESTY'S BRITISH MEDICAL SERVICE.

List of gentlemen who competed successfully for appointments in Her Majesty's British Medical Service at the examination held at the University of London on August 9 (names in order of merit):—

		Marks.			Marks.
1.	Hewett, F. C. C.	2367	9.	Daubeny, C. A.	1775
2.	Taaffe, R.	2132	10.	Ievers, P. G.	1775
3.	Le Grand, W. J.	2050	11.	Burges, W. A.	1720
4.	Briggs, W. H.	1855	12.	Fleming, H. B.	1720
5.	Fenn, E. H.	1825	13.	James, W. M.	1618
6.	Kellett, L. H.	1825	14.	Hayes, P. A.	1540
7.	Thompson, T. W.	1785	15.	Kirkwood, K.D.L.	1450
8.	Findlay, J.	1780			

SUCCESSFUL CANDIDATES FOR HER MAJESTY'S INDIAN MEDICAL SERVICE.

The Military Secretary, India Office, reports that the following candidates for Her Majesty's Indian Medical Service were successful at the competitive examination held at Burlington House on August 9. Thirty candidates competed for ten appointments; all were reported qualified. The names are given in order of merit, viz.:—

1.	Freyer, P. J.	6.	O'Neill, John.
2.	Weir, P. A.	7.	Pedroza, F. H.
3.	Haig, P. de H.	8.	Clarkson, J. W.
4.	Lewtas, John.	9.	Day, C. H.
5.	Ferram, Edward.	10.	Parker.

VERRUCA SENILIS.

Under the above title, Dr. I. Neumann, of Vienna, has lately described a skin disease which occurs in elderly people, and which consists in the development of numerous warty tumours, especially on the back and chest. They have a rusty brown or even a deep black colour, and they give rise to considerable inconvenience by becoming excoriated and ulcerated by the friction of the under-clothing. The tumours consist principally of numerous layers of epidermic cells, massed either on a smooth surface or else on the remains of papillæ. Microscopically, these cells exhibit no abnormal appearances. The rete mucosum is, however, narrower than usual, and contains much pigment; the hair follicles are dilated with a mass of smegma, downy hairs, and epidermic cells; and the sebaceous glands are enlarged and filled with dried secretion, and their opening is either obstructed or obliterated, so that they project above the surface of the skin as pale red wart-like tumours. The verruca senilis therefore differs materially from an ordinary wart, both in the large share which the epidermis has in its formation and also in the non-implication of the papillæ; and for this reason Neumann proposes "keratosis pigmentosa" as a more appropriate name. The treatment he recommends consists in scraping away the epidermis, and then applying soft soap, dilute carbolic acid, or else a solution of iodine and iodide of potassium in glycerine.

A MORTUARY WANTED FOR BETHNAL-GREEN.

The parochial mind of Bethnal-green is beginning to awaken to the need of providing a public mortuary for that parish, although as yet nothing beyond talk has been done by way of supplying the want. Hitherto the bodies of persons found dead in the streets or taken out of the canal have generally been deposited in the workhouse mortuary, but recently the guardians have decided not to allow bodies to be brought from all parts of the parish to the workhouse premises, as they consider that such a practice exposes the inmates to danger. Bodies of deceased persons are now deposited in the parish stone-yard to await interment. This arrangement, although probably the best within the command of the parochial officials, can scarcely be said to satisfy the demands of public decency.

ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

The following are the questions which were set at the recent examination of candidates for her Majesty's Army, Navy, and Indian Medical Services:—

Anatomy and Physiology.—1. Describe the mode in which you would proceed to obtain a side view of the parts contained in the female pelvis; then state the position and relations of the various parts, together with the bloodvessels and nerves by which they are supplied. 2. Give the dissection required to display the internal iliac artery and its branches; enumerate the latter, and give their courses and distribution. 3. Describe the external ear, including the membrana tympani; and give the muscles, nerves, and vessels connected with it, and the minute structure of its cartilage and other tissues. 4. Give an account of the mode of development of the teeth in the human subject. 5. How would you proceed to prepare thin sections of the kidney and of the spinal cord for the purpose of displaying their minute structure most advantageously? (The structure need not be described.) 6. How is the blood pressure in an animal best determined? What difference exists between the pressure in the arteries and veins respectively, and how is it accounted for?

Surgery.—1. Describe the causes, symptoms, and effects of extravasation of urine in the perineum, etc., and its treatment. 2. A child has a swollen knee-joint, with the limb kept in a flexed position: the skin is not red, nor ulcerated. The patient cannot use the leg in walking. This condition has come on gradually, and is of some months' duration. Describe the probable changes in the structures of such a joint; the usual course of the disease; and the treatment—constitutional and local. 3. Describe the stages of a rupial sore; its commencement, progress, and process of healing. Under what constitutional conditions, and with what complications does it usually appear? and what treatment should be adopted for its relief? 4. Describe the symptoms of dislocation of the head of the femur into the sciatic notch; and the method of its reduction. 5. What treatment should be adopted in a case of compound fracture of the patella; and what would be the probable result of such an injury, immediate and remote? 6. Describe the structure of enchondroma; what tissues it most frequently affects; and what are the prospects of relief by operation.

Medicine.—1. What are the usual views now held of the nature of tubercle? What organs are most likely to be affected in children and adults? Describe the symptoms of a case of tubercular meningitis and one of tubercular peritonitis. 2. What is the natural position of the heart, and what are its boundaries? What are the causes which alter its position? What are the physical signs of the following conditions:—Hypertrophy and dilatation of the right ventricle connected with great pulmonary emphysema; hypertrophy and dilatation of the left ventricle connected with aortic obstructive and

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regurgitant disease; great inflammatory effusion into the pericardium? 3. Describe the following eruptions:—Small-pox on the second and on the eighth day; measles on the second day; herpes zoster, lepra vulgaris, eczema rubrum. 4. Describe a case of acute Bright's disease. Give the causes, and state what pathological conditions may be produced in the kidney. Give the treatment. 5. What do you mean by puerperal fever? State the causes, symptoms, and means of prevention. 6. What are the preparations of iodine and bromine in the Pharmacopœia? State the use made in medical practice of these various preparations.

Natural History and Physics.—Zoology: 1. Give the characters of the order *Ruminantia*, and indicate its principal genera. 2. Describe the structure of the heart in the different classes of vertebrates. 3. Describe the structure, development, and reproduction of the Guinea-worm. 4. Give the characters of the class Insecta, and of its principal divisions. How are animals distinguished from plants? Botany: 6. What are the essential characters of the natural order *Cruciferæ*? 7. What are the principles of phyllotaxis? 8. Describe the fruit of a fig, a mulberry, a pineapple, a strawberry, a raspberry, and a rose. 9. What are the principal forms of inflorescence? Give examples of each. 10. Describe the structure, development, and mode of reproduction of a fern. Physics, etc.: 11. Explain the terms specific heat, latent heat, radiant heat, and state the differences in the rapidity of the conduction of heat by different bodies. 12. Describe the structure of a galvanic battery. 13. Define the terms combustion, oxidation, osmose, capillary attraction, refraction, reflection, focus. 14. What are the principal oceanic currents? How do they affect the temperature and climate of the land? 15. What is chalk—chemically, structurally, and geologically?

FROM ABROAD.

Mortality Returns of the Paris Hospitals.

M. Besnier, in the second quarterly report for 1875, read at the Paris Hospital Medical Society (*Union Méd.*, July 29), draws attention to the extraordinarily changeable character of the atmospherical conditions which prevailed. There were frequent and sudden changes of heat and cold, with extensive thermometrical variations; extreme dryness during a large portion of the period, followed by rains of a torrential character towards its termination; variable winds, blowing principally from the east in April, and from the west in May and June; and the proportion of ozone was more considerable than at the corresponding period of former years. It is easy to suppose that, under such conditions as these, affections of the respiratory organs would continue predominant, and that cases of pneumonia would be frequent. The general mortality of the civil hospitals of this second quarter equalled that of the first quarter, and exceeded that of the second quarter of the preceding years, being 3047 as compared with 2721 in 1872, 2847 in 1873, and 2813 in 1874. Of affections of the *respiratory organs*, 4087 cases were admitted during the quarter, and of these 1095 (or 26·78 per cent.) were fatal. Of these there were 1350 cases of phthisis with 732 (54·18) deaths, 927 of pneumonia with 277 (29·88) deaths, 1400 cases of bronchitis with 67 (4·78) deaths, 341 cases of pleurisy with 17 (4·98) deaths, and 69 cases of influenza with 2 (2·17) deaths. There were also admitted during the quarter 127 cases of croup with 90 (70·78) deaths. *Small-pox*, which since the terrible epidemic of 1870-71 had well-nigh disappeared from Paris, has of late shown an increased tendency to manifest itself. The total number of deaths for the whole town during 1874 only amounted to 46, and has reached 145 during the first six months of 1875. Four arrondissements furnished a large proportion of the cases, and M. Besnier urges upon the authorities the necessity of concentrating attention upon these, pointing out the great success that has recently attended the efforts made at Bordeaux to cut short an epidemic which appeared there. During the past six months of 1875 there have been admitted into the Paris hospitals 230 cases, furnishing 53 deaths, which is a great increase over the corresponding six months of last year, when there were only 22 cases with 2 deaths. The Hospital Administration since May last has effected the isolation of the small-pox patients, instead of having them distributed over the different hospitals as heretofore. During May, June, and the first fortnight of July, 131 adult patients were admitted into these isolated hospitals, and of these 15 died and 82 were dismissed. Of the other eruptive affections during this second quarter, there occurred only 3 deaths from scarlatina and 25 from measles. There were also 43 deaths from erysipelas, and 56 from typhoid fever.

Small-pox Hospitals.

Prof. Léon Colin, of the Val-de-Grâce, at another meeting of the above Society (*Union Méd.*, August 17), read a paper in furtherance of the removal of patients from the general hospitals and their segregation in special establishments—a practice which has met with, until quite lately, unaccountable opposition on the part of the authorities. None of the discussions which we have read upon the subject contain any mention of the strong evidence of the utility of this practice derivable from the prolonged experience of this country. Indeed, M. Colin himself, who is an accomplished epidemiologist, makes no allusion to the evidence favourable to his views that is derivable from this source. Personally, however, he has had good opportunity of observing with what impunity small-pox patients may be assembled in large numbers together, as he was in charge of the small-pox hospital that was established at Bicêtre during the siege of Paris. The accumulation of 8000 patients in a single establishment seems to have been attended with no ill effects upon themselves, their attendants, or the surrounding population. This he regards as a striking proof that in diseases strictly virulent, arising from a decidedly specific cause, their evolution seems to be, so to say, determined beforehand, the fate of the individual attacked depending much more upon the energy with which the contagious germ has impressed him than upon the circumstances amidst which he passes through the disease. Is it to be supposed that the same immunity would have been observed had this hospital, in place of small-pox cases, been filled with the subjects of typhus, dysentery, or wounds? The ophthalmia consequent on the disease alone seemed to be aggravated by the agglomeration.

However abundant the small-pox emanations, there are evidently very restricted limits to their diffusion; and although perhaps the breadth of a street may not seem to be a sufficient protection, M. Colin is convinced that there will, in the event of the disease becoming prevalent again, be no danger in erecting within Paris itself as many hospitals as may suffice for the treatment of all the cases. He is strongly in favour of the adoption of the *baraque* or shed hospitals in preference to a more permanent form of building; for patients suffering from small-pox are far less susceptible to the influence of cold and changes of weather than are the subjects of other severe febrile affections or wounds. Such hospitals are much less costly, are rapidly erected, can be shifted to the quarter of the town requiring them, and when saturated with contagiums can be burned.

Fracture of the Patella.

Prof. Neill, of the University of Pennsylvania, in a recent clinical lecture (*Philadelphia Med. Times*, June 26), gives an account of his mode of treating fracture of the patella by adhesive plaster, which he has employed with success for many years at the Pennsylvania Hospital:—

"The apparatus consists merely of a back-splint, strips of adhesive plaster three-fourths of a yard long and one inch wide, and two or three rollers. The back-splint should be made of half-inch plank, and should reach from the middle of the thigh to the middle of the leg, at the same time corresponding to the thickness of the limb. It should be padded on its upper surface in the middle, to fill up very fully the popliteal hollow. After it is applied to the back of the knee, it can be retained at first by a strap or two circularly applied at each extremity. Then the accurate coaptation of the fragments is to be effected by applying the middle of the loop of a plaster-strip immediately below the lower fragment, and, drawing the extremities upwards and obliquely, fastening them to the under surface of the splint. The wooden surface secures a firm adhesion, and much more so than if the strips were applied to the skin. After the lower fragment is fixed, the upper can be approximated to it in the same manner by loops successively applied and the extremities drawn very obliquely to the lower and under surface of the splint. Then a roller is to be applied from

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the foot upwards, extending beyond the middle of the thigh so as to compress the muscles and prevent the extensors from contracting. Now we place the limb upon an inclined plane, and elevate it as much as possible, so as to approximate the origin and insertion of the rectus. In a few days the swelling will subside, and the dressings be reapplied, and thus the fragments can be still more closely approximated, and the probability of a short ligament be considerably enhanced. Thus the patient is to lie for at least six weeks, although the posture can be changed and still the same effect be produced by raising him to a sitting posture while lowering his limb. Six weeks more will be required to render the union sufficiently firm to be used. It is from disregard of this knowledge—that it takes as long a time to mend a patella as it does to mend a fractured thigh—that unsatisfactory results are so often obtained. And although the limb be kept extended, and fixed for three months, anchylosis will not occur, but some stiffness will remain for a long time, and frictions and partial flexions will have to be constantly maintained until the gradual use of the limb is secured. By these means this man will have a useful limb, and if the ligament is one-third, one-half, or even three-fourths of an inch in length, he will walk perfectly well; if it is longer than this he will experience some difficulty in going upstairs."

Action of Quinine upon the Gravid Uterus.

The same journal furnishes an abstract of a paper, read by Dr. Albert Smith before the College of Physicians of Philadelphia, upon the action of quinine upon the gravid uterus, the conclusions he arrives at being the result of careful and prolonged investigation. In the first place, he has found that quinine exerts no effect upon the uterus in a quiescent state, as, for example, when given to women for the relief of the effects of malaria. Nay, more, in some cases in which the symptoms of malarial poisoning have been associated with paroxysmal pains of a threatening character in the sacro-lumbar region, these latter have disappeared under the action of large doses of the drug called for to relieve the constitutional condition. Dr. Smith has had only a limited experience in the use of quinine in abortion and premature labour, but in five such cases he has found that fifteen grains, given after the process has so far advanced as to be beyond the possibility of arrest, have exerted no effect in increasing contractions or diminishing hæmorrhage.

But when the uterus is in normal action at the full period of gestation, quinine plays an active part in aiding parturition; and for a series of years Dr. Smith has employed it in cases of marked inertia, with dilatation, combined with other methods of increasing action, such as diffusible stimuli, hot drinks, abdominal friction, etc., so as to obviate the use of ergot, which he has long since given up in consequence of its dangerous effects upon the child, its occasional injuriousness to the mother, and the uncertainty of its action. He has found that when given at the onset of the process of labour quinine increases markedly the normal uterine contractions, these retaining, however, their proper intermittent character, as contrasted with the continued action induced by ergot. The efficiency of these contractions may be judged of from the fact that in thirty-two cases, unaccompanied by obstruction—although many were primiparæ, and a larger proportion than usual had occipito-posterior presentations,—the average duration of labour, after the quinine had been administered, was about one hour, although in several of these women the forceps had to be employed in former labours on account of inertia during the second stage. Quinine also promotes permanent tonic contraction after the expulsion of the placenta, no flooding having taken place in any one of forty-two cases in which it was given, although in several of these there had been more or less profuse discharges after prior labours. The lochial discharge also is less after its use, and in a majority of cases the after-pains are less severe. After the administration of quinine the pulse is reduced in frequency, and the "nervous demoralisation" so often seen during the first stage of labour is relieved. Although the dose has been uniformly fifteen grains, it has never disturbed the brain or caused the usual unpleasant effects of large doses, even in persons who at other times are very susceptible of its influence. While persuaded of the value of quinine in parturition, Dr. Smith believes that it has no special property of stimulating the uterus to contraction, being inert when this is in a quiescent state or on the accidental induction of premature labour. He regards it as a general stimulant and promoter of vital energy and functional activity, inducing no peculiar action, but merely increasing the power of the uterus to expel its contents in its own natural method, converting what is a defective or even pathological action into a simple physiological process. By giving full doses at the onset of labour we favour the rapid and safe termination of what otherwise might be a tedious and exhausting work.

REVIEWS.

A Manual of Instructions for the Guidance of Army Surgeons in Testing the Range and Quality of Vision of Recruits. By Surgeon-General J. Longmore, C.B. Second edition. Printed under the superintendence of Her Majesty's Stationery Office.

This is a revised edition of a small manual which was originally published in 1863, at a time when the writings of Professor Donders upon the anomalies of the refraction and of the accommodation of the eye had not as yet become widely known to the profession. Professor Longmore describes his little work as an *aide-mémoire*, and claims for it no more than an attempt to sum up in a concise form the elements of physiological optics, including the use of the ophthalmoscope, and the best method of applying them to the examination of the eyesight of recruits.

The test-types which are in use in our army and navy are Snellen's types, although Professor Longmore draws attention to the sight-tests of Dr. Burchardt, which are designed on the principle of making the intervals between different objects of a definite size, and which are thus applicable to the examination of recruits who cannot read; and, on the other hand, which obviate the difficulties that sometimes arise from the fact that some letters are more easily recognised than others. It is considered necessary that a soldier, to be effective, should be able to distinguish clearly a man from any other object at a distance of 500 yards under ordinary illumination, as in moderately clear daylight; and in applying Snellen's types, a man who could read No. XX. in an ordinarily lighted room at a distance of 7 ft. 5 in., would probably be able to recognise the figure of a man at 500 yards. A man six feet in height, to be seen under the same visual angle as Snellen's types, would have to stand at a distance of about 1375 yards. It has long been found impossible to obtain in sufficient numbers recruits who possess a full range of vision, and it is considered sufficient that a recruit should be able to see a bull's-eye three feet in diameter at a distance of 600 yards, and by a subsequent order that he should be able to see a rectangular bull's-eye two feet square at 600 yards. According to Snellen's types, this would correspond to a visual acuity of about $\frac{1}{3}$ of the normal standard; and this was subsequently lowered so that a visual acuity of $\frac{1}{4}$ is considered sufficient. According to Professor Longmore's experience, the attempts at imposition are but few, whilst in the case of Continental armies, where conscription is in force, such attempts are very frequent. There does not appear to be any exact degree of myopia which renders a recruit ineligible for our army, but degrees of myopia higher than $\frac{1}{12}$ are usually sufficient to cause his rejection.

The use of spectacles in the ranks is not encouraged. The Germans do not object to their use, on the ground that myopia is much more frequently met with amongst communities which are educated and intelligent—a remark which is amply illustrated by their officers. It would be well to consider whether a man who is ineligible on account of myopia as a combatant might not do good service to his country in some other branch of the service. This is, in fact, the case in the Austrian and in the German services.

This modest little pamphlet of instructions contains a very good outline of this scientific branch of the military surgeon's duties, and it appears at a time when the attention of ophthalmologists is especially directed to the subject. The whole matter has been exhaustively reviewed, and, as regards the French military service, rather severely criticised by Dr. Giraud-Teulon at a congress of French surgeons during the present year; and the subject is announced for discussion at the next meeting of the Ophthalmological Congress, to be held at Brussels.

Professor Longmore's work contains more than is essential to the examination of recruits, and it is to be regretted that

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the work has not reappeared in the form of a complete manual, which would appeal to others than those who are members of his class at Netley.

An Easy Introduction to Chemistry. Edited by the Rev. ARTHUR RIGG, M.A., and WALTER T. GOOLDEN, B.A., late Scholar of Merton College, Oxford. New edition, revised. London: Rivington's. 1875.

THIS is a capital little book to put into the hands of boys with a taste for natural science, so as to foster it and to prepare the way for chemical text-books, properly so called. A short account is given of the principal elements and of their combinations, and especial stress is laid on the applications of chemistry to the arts and to the uses of daily life. No attempt is made to introduce the reader to chemical formulæ or equations, but the idea of combining proportions is lightly touched on. We can recommend the book to those who have sons intended for the medical profession later on, not only for its interesting style, but for its accuracy and trustworthiness.

The Monthly Microscopical Journal. August 1. Edited by HENRY LAWSON, M.D. London: Robert Hardwicke.

THE only papers of medical interest in this month's journal are one on Conjoined Epithelium, by Dr. Martyn, of Bristol, which has already appeared in the *British Medical Journal*; a first instalment of Dr. Bastian's address at the Pathological Society on the "Microscopic Germ Theory of Disease"; and part of a lecture of Dr. Beale's on "The Origin of Life," delivered at the College of Physicians, and which has already been reported in our columns. Those who are not weary of biogenesis and abiogenesis, and care to hear the champions of either side fight their battles o'er again, will find these essays more comfortable to read in the large print of the *Microscopical Journal* than in the necessarily smaller print of the weekly papers, but whether the action on their brains will be aught but soporific in these days when the dog-star is supreme, we dare not surmise. We are sorry to say that the *Monthly Microscopical Journal* is scarcely up to the mark this month as "a record of microscopical research at home and abroad."

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

PARIS, July 25.

M. BOUILLAUD'S FUNERAL EULOGIUM ON M. ROCHE: HIS CHARACTER, LIFE, AND WORKS; RESEMBLANCE AND ANTAGONISM BETWEEN BROUSSAIS AND LAENNEC—A NEW METHOD OF TREATING VARICOSE VEINS—THE "PRIX MONTHYON" AWARDED TO DR. DIEULAFOY—M. RASPAIL.

PERHAPS no people in the world pay such respect to the dead as the French do; but it would be better if they would show a little more to the living. Among the customs practised by them at funerals, one is to pronounce a eulogium over the tomb of the deceased, but the practice is applied only to members of the male sex who had in some way distinguished themselves during life. It is not for me to deliver an opinion as to the propriety or otherwise of these discourses, but I must say they are often most instructive. One was lately pronounced over the grave of M. Roche, who died a short time ago, and as the deceased was a member of the Academy of Medicine, that learned body was represented at the funeral by a deputation, and M. Bouillaud, the senior member present, was called upon to pronounce the eulogium. This he did in the most impressive manner, and manifestly under the influence of deep emotion, as he was a personal friend of the deceased, and as the discourse was most interesting and instructive, I trust that this will be a sufficient apology for offering it to your readers. The following is a condensed translation of it:—

"The colleague that we have conducted to his last home was not an ordinary man, nor one of those whose life ends with their death. Before entering on civil practice, Roche, like his friends Sansom, Bégin, Broussais, Jourdan, had for some years been in the Military Medical Service. He had the honour to form part of the great French armies which, proud of the Cæsar that commanded them, carried to the extremities of the earth the glory of their valiant and generous country. He was one of the last survivors of that strong and truly virile generation which was born about the end of the last century—a period ever memorable, and which was rendered famous by the revolution which then broke out in France. The immense shock caused by this political and social renovation of the country extended even to the medical profession. The schools of medicine and surgery which then existed were entirely abolished under the auspices of such men as Thouret and Fourcroy, and replaced by institutions called 'Ecoles de Santé,' in which between the two sisters—Medicine and Surgery—so long separated from each other, the happiest alliance took place, and they were restored to their primitive unity. At this period medicine experienced that complete transformation which previous centuries had no doubt paved the way for, but had been unable to complete. To the young and glorious author of 'General Anatomy'—to Bichat—was reserved this supreme honour, of which he was the true personification. The new school adopted for its motto the celebrated phrase of the immortal work just referred to: 'What is observation if we ignore the seat of disease?' In other words, What is medicine, what are diseases, if we ignore the organs that are diseased? Such was the device of the new school, by which device it was to conquer. To speak more explicitly, medicine was nothing else, as far as concerned the knowledge of diseases properly so called, than the knowledge of anatomy, physiology, and pathology; and a new era, which might be designated 'the incarnation of diseases,' had at last arrived. This was the flag of Bichat's school, or rather of the incarnation of diseases which Broussais and Laennec, astonished perhaps to find themselves thus united, hoisted at the time when their names produced such a sensation in the medical world. Let us endeavour to prove what we have advanced.

"Broussais in 1816 adopted for his motto, in his celebrated 'Examen de la Doctrine Médicale généralement adoptée,' Bichat's maxim—'What is observation, if we ignore the seat of disease?' He commented on this motto in the following terms:—'Explain by proper analysis the often confused manifestations of the suffering organs; direct my attention to the painful agent of the universal disorder which affects my senses, in order that I may with perfect security apply the consoling balm which ought to put an end to the painful scene; I shall then admit that you are a man of genius. But as long as you confine yourself to putting together certain salient characters of pathological disorders in order to form intellectual groups which have no connexion with organs, I shall say that you have not understood the enigma of living nature.' Later on, Broussais applied the term 'entity' to these intellectual groups, and proudly declared that 'he will never bend his knee before the Pantheon of this ontology of a new species.'

"In 1819, Laennec, three years after the publication of Broussais' work, brought out his immortal 'Traité de l'Auscultation Médicale.' In the second edition in 1826, which, like the first, he dedicated to the professors of the Faculty of Medicine, of which he was also professor at the time, and one of its brightest ornaments, the dedication contained the following passages, which are translated from Latin, the language in which it was written:—'The first part of medicine consists of the knowledge of diagnosis and pathological anatomy, without which therapeutics would be a fight of mountebanks, and the physician, with his eyes closed, following in the uncertain path of beings possessing reason,—that is to say, products of the imagination,—will strike life oftener than disease.'

"It is impossible not to be struck with the perfect resemblance which exists between Broussais and Laennec, as far as regards the doctrine by which diseases bear a relation to organs, which are known by certain signs, and afterwards treated according to the rules of sound therapeutics.

"These two illustrious rivals were primarily bent on conquering one another, and secondarily on answering certain questions of very great importance, such as the nature, the classification, the localisation of the fevers termed essential, the part played by inflammation in the pathogeny or genesis of what were then termed 'accidental products,' whether analogues or heterologues of normal tissues, and of which tubercles and cancers constitute the principal. In this obstinate struggle between Laennec and Broussais, who were both Bretons, Louis Charles Roche, without passing the limits of academic moderation, fought, not without *éclat*, under the banner of Broussais, acknowledging at the same time the high authority and the glorious services of the chief of those against whom he felt

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it his duty to combat. Roche was, in fact, endowed to an eminent degree with those precious qualities of the mind and temper, the owners of which know so well how to avoid the precipices of extreme parties, and are always ready to enter, under the influence of the smallest ray of the light of healthy observation and discussion, on the sacred path of truth, if by some misfortune they had left it for any time.

"It was in this spirit, and with the help of an old friend and companion in arms, Sanson senior, that Charles Roche composed the 'Nouveaux Eléments de Pathologie Médico-Chirurgicale,' the brightest gem of his scientific crown. In this work, not any more than Broussais, did he 'bend his knee before the Pantheon of medical ontology'; but, like Broussais, he laid great stress on the relation that exists between diseases and the organs of the body, and the necessity for being on the look-out for the first manifestations of disease, in order to apply the proper and timely remedy; and, like Laennec, he recognised the great importance of a thorough knowledge of morbid anatomy, and the use of the divers instruments for the purposes of diagnosis, without which a physician would be like a man groping in the dark, or one dealing with phantoms or creatures of the imagination—'*phantasiæ scilicet fictiones*' of Laennec, whom he greeted as the immortal inventor of a new method of exploration."

M. Roche was one of the oldest members of the Academy of Medicine, his admission dating as far back as 1823; and M. Bouillaud, his eulogist, is a member of the same standing. The oldest member now living—that is, as member of the Academy—is the celebrated Baron Jules Cloquet, who was admitted in 1821; he took his degree in 1817. Roche's diploma is dated 1819.

We all know how troublesome and intractable are varicose veins in any part of the body. Various measures have been employed by different surgeons for the treatment of varix. Among the radical means, the injection into the vein of two or three drops of the solution of the perchloride of iron (French pharmacopœia) is that generally practised in France; and I remember to have heard M. Maisonneuve, at a clinical lecture when he was surgeon to the Hôtel-Dieu, recommending the injection into the surrounding cellular tissue, instead of into the vein itself. His argument was that the inflammation thus produced would be sufficient to cause obliteration of the vein, and that there would thus be less risk of phlebitis, or any of the dangerous accidents that attend all injections into the veins. He simply threw this out as a suggestion; and as he retired soon after from hospital practice, I have not learned whether he had an opportunity of putting it into practice, or whether it has been adopted by any other surgeon. The suggestion, however, is worthy of consideration, and as such I offer it to your readers.

A M. Rigaud, Professor at the School of Medicine at Nancy, lately brought to the notice of the Surgical Society of Paris a new method of treating varicose veins. For nearly a quarter of a century M. Rigaud practised cauterisation with the Vienna paste, with the view of producing obliteration of the vein, and obtained a fair amount of success. He noticed, however, that on exposing the vein, in order to apply the caustic, the vein contracted to nearly half its diameter, and, at the same time, the external coat seemed to thicken and lose its transparency. This applied of course to all the vessels thus exposed to the air, and from it he argued that if such an effect is produced by simple contact with the air, it would be superfluous to apply any other remedy. He accordingly treated a certain number of cases in this way:—after cutting down upon the vein, he isolated it from the surrounding tissue by passing a bit of tape or adhesive plaster around it, and thus left it exposed to the air. About the seventh day the vein becomes completely dry and obliterated; this portion then separates from the rest of the vein, and the wound in the skin, caused by the surgeon, heals rapidly. It sometimes happens that the rupture of the veins does not take place, but they are transformed into a mass of fibrous tissue. M. Rigaud performed the operation 151 times; 140 on the lower extremities, and eleven for varicocele. The immediate result had been so far a success that the veins were completely obliterated, but, unfortunately, he could not say whether in all the cases the cure was permanent. In fifteen, however, of those he had seen some time after, and on whom he had operated on the lower extremities, the cure was radical and definite; but in seven of these cases M. Rigaud observed the development of new varicose dilatations of the collateral branches as well as of the superficial veins of the skin.

This method of simply isolating the veins and exposing them to the air is, according to M. Rigaud, free from danger, and yet in his report he states that the "only" accidents he observed were phlegmonous inflammation limited to the tract of the vein, erysipelas of the skin, some cases of simple phlebitis, but never diffuse,—accidents which are not generally fatal. In looking over his report, however, I find three fatal cases recorded; but these were attributed to accidents during the operation: in two cases rupture of a collateral branch took place during the separation of the vein, and in the third case death was caused by phlebitis and pyæmia resulting from a slight puncture of the vein with the point of the bistoury. M. Rigaud consoles himself, however, with the consideration that these three cases, far from being discouraging, go to show the excellence of his method, and that it is only when the veins are wounded, whether intentionally or otherwise, that there is any real danger, especially when the veins are already in a diseased condition.

Dr. Dieulafoy, so well known in connexion with the instrument that bears his name, has been rewarded by the Academy of Sciences with the "Prix Monthyon" for his interesting work on "L'Aspiration des Liquides Morbides," and for the service rendered by his pneumatic aspirator to medicine and surgery. Like all new inventions, Dieulafoy's aspirator at first met with great opposition on the one hand, while on the other it was most enthusiastically accepted in practice as an instrument which promised to effect wonders. This has been in a great measure realised, and I should say that Dieulafoy's pneumatic aspirator deserves to be placed next in rank to the immortal invention of Laennec. The former, however, possesses this advantage over the stethoscope: it is not only an instrument of diagnosis, but it is also employed as a remedial agent. I find that Dr. Dieulafoy's work has also been published in English by Messrs. Smith, Elder, and Co., of London.

That old political offender, Raspail, has just been released from prison, where he had been incarcerated for twelve months for having written seditious articles against the French Government in an annual publication of his (*Almanach et Calendrier Météorologique*), which it is believed he got up for the purpose of giving vent to his political spleen quietly and unmolested, as he thought that from the title of the work no one would ever think of finding politics in it. In this, however, the old gentleman was mistaken. He was cited to appear before the Jury of the Seine, by which he was condemned to two years' imprisonment and to a fine of 1000 fr. From this sentence he appealed, and the Court at Versailles reduced the term of imprisonment to one year; and in consequence of his advanced age (eighty-one years) he was permitted to pass it in a *maison de santé* at Bellevue, near Paris.

Few men have earned a greater notoriety than Raspail, both as a pseudo-doctor and a political agitator. Camphor forms the basis of his medication; for him it is a panacea for all diseases, about the pathogeny of which he has the most confused notions. And what wonder when we consider that he was not brought up in the science and art of medicine! He is, however, reputed to be a good chemist, but his therapeutics, like his politics, bear the impress of a very learned and most audacious empiricism. He has four sons, who seem to have inherited the propensities of the father, and one of them, Camille—an *officier de santé*, and not a *docteur en médecine*, as represented by one of your contemporaries—continues his father's consultations in the Rue Carnot, Paris, where, with the prestige of his father's name and "system," hundreds of the credulous populace daily flock to seek medical advice. Old Raspail has retired to private life, where it is to be hoped he will spend the remainder of his days in peace and quietness.

HEALTH OF LONDON.—According to the Registrar-General's return, 2299 births and 1453 deaths took place in London last week. The death-rate declined from 22·5 to 22·0, and the births were 44 in excess of the average for the last ten years. A decrease is noticeable in the number of deaths caused by scarlet fever, which were only 59 during the week 68 deaths arose from whooping-cough, 27 from measles, and 181 from diarrhœa. Nine fatal cases of diphtheria are also registered. To violence 64 deaths are attributed, six of them resulting from the contusions and fractures caused by horses and vehicles in the streets, and 71 cases of injury from such casualties are reported as having come under the notice of the police. One hundred and seven deaths have happened in hospitals, 109 in workhouses, and 11 in lunatic asylums.

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GENERAL CORRESPONDENCE.

"ALCOHOLIC PHTHISIS."

[To the Editor of the Medical Times and Gazette.]

SIR,—In your impression of August 7 appears an article under the above heading. From it I gather that phthisis is produced sometimes by the imbibition of a "daily excess of alcohol." There is an entire absence of all symptoms until death is near at hand—pain in the side, difficulty of breathing, hæmoptysis, and "the fatal end is not far off"; medicines, diet, and change of air being useless. For twenty years or so I have taken a "daily excess of alcohol," and the article has made me reflect on the possibility of slow alcoholic poisoning in my own case. I am a medical man, and often prescribe a daily excess of alcohol to procure repose and allay irritability. Could you give me an idea of the quantity which would be dangerous to prescribe, and the principal data on which the theory is founded? My own nightly dose is three ounces and a half, which is sufficient in my own case to procure the "comfort" spoken of in the article.

I am, &c.,

August 16. A BAYSWATER M.D.

THE ABUSE OF THE IN-PATIENTS' DEPARTMENT OF HOSPITALS.

[To the Editor of the Medical Times and Gazette.]

SIR,—Will you permit me to call attention in your columns to the following instance of the way in which hospitals are abused?

Mrs. O., a widow, with an income exceeding £1000 a year, has a daughter about twenty years of age, whose independent income is £300 a year. The daughter is the subject of juvenile or congenital cataract, and her mother is told that by an operation the sight may be restored, but that the fee for such an operation would be 100 guineas. It might have been supposed that a person in easy circumstances such as Mrs. O.'s would not have thought 100 guineas too large a fee for the benefit to be obtained. But Mrs. O. thought differently. She went to the Moorfields Ophthalmic Hospital; her daughter was admitted as an in-patient, and was operated upon by one of the senior surgeons of the Hospital; her sight was restored, and at the end of a fortnight she left the Hospital. Mrs. O. has been heard to express great satisfaction at the benefit received, and an intention to give £20 to the funds of the Hospital. No doubt the Committee have congratulated themselves on the receipt of the donation, and have probably advertised it in the *Times*, with "grateful acknowledgments." But in the meanwhile how does the case, which is probably only one of many that escape notice altogether, affect the interests of the staff of the Hospital, and of the profession generally?

We have heard lately from Mr. Wordsworth, in a letter to one of your contemporaries, that 500 patients were rejected as unsuitable in one year from the out-patient department of the Moorfields Ophthalmic Hospital. How, then, can this case have escaped the scrutiny of the officer appointed to inquire into the circumstances and position of the patients admitted? It is obvious that, if such a case escapes the observation of the inquiring officer, the method of investigation must be very unsatisfactory, and it would almost follow that it might be altogether dispensed with. It is surely the duty of the committee of these large hospitals to protect the interests of their honorary medical officers, and to do so efficiently. Otherwise the surgeons are, by giving their services to all comers, really cutting their own throats, and diverting cases that should come to them in private into the channels of gratuitous relief. If the Moorfields Hospital would imitate the example set them by the Committee of the Great Northern, perhaps we should less frequently hear of instances of abuse such as the one I have quoted above.

I have taken care to ascertain the truth of all the particulars of the above case, and shall be happy to give the name and address of the patient and her mother, and the other sources whence I have derived the various statements above made.

I am, &c.,

London, August. AN OPHTHALMIC SURGEON.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY OF LONDON.

FRIDAY, MAY 28.

Sir W. JENNER, Bart., K.C.B., M.D., F.R.S., President, in the Chair.

HYPERTROPHY OF THE LOWER PARTS OF THE FACE.

MR. BARWELL exhibited the patient suffering from the above disease, whose case he had narrated at the meeting of the Society on March 12 last. On March 13, Mr. Barwell placed a ligature around both facial arteries just below the wind on to the surface of the lower jaw; not only simply ligaturing the vessel, but dividing it and tying it above and below the point of division. The operation was followed by a severe attack of erysipelas, from which, however, the patient made a good recovery. The proceeding was attended for a time by a diminution in the hypertrophy; during the last month, however, which the man had passed in the country, the swelling had again increased, and his state was now much the same as before the operation. It was noted that there was much greater pulsation on the right side than on the left, the collateral circulation being more freely established, but this did not appear to have had any influence on the growth. The patient refused any further operative interference at present.

In reply to Mr. Hulke, Mr. BARWELL stated that both facial arteries were ligatured simultaneously.

The PRESIDENT considered that a slight diminution in the size of the lips had taken place; but, as there was distinct pulsation on the right side, it was clear that the hypertrophied tissues still received a considerable supply of blood.

Mr. BARWELL stated that the lips had increased slightly since the patient quitted the hospital. Within a week after the operation, slight pulsation was felt on the right side. The facial artery was certainly tied, and there was no second facial artery; but it was impossible to deal operatively with the collateral circulation. If any further treatment were to be adopted, he thought a small portion of mucous membrane might be excised; but the patient would not now consent to any such procedure.

DOUBLE FISTULA IN ANO.

Mr. MAUNDER read notes of a case of double fistula in ano: one treated by the knife, the other by elastic ligature. The patient, a female, aged twenty-four, had suffered from fistula in ano for some time—one fistula, on the right side, having made its appearance two years ago; another, on the left side, twelve months previous to her coming under observation. These two fistulæ were equidistant from the anus, and extended to about the same depth, where they communicated with the bowel. The one on the right side was divided by the knife, and the elastic ligature was applied to the one on the left. The knife-wound was dressed with a strip of oiled lint, and no application was made to the other. For two or three days after the operation, the patient complained of severe pain, and this was especially referred to the left side. On the sixth day, the ends of the ligature were found lying in a deep groove, which they appeared to have cut in the tissues; and, on the ninth day, the ligature came away. On the twelfth day, the wound made by the knife was almost on a level with surrounding parts, while that which was the result of the ligature was a deep groove, having very prominent callous edges like the margins of a chronic ulcer of the leg. On the twenty-second day, the knife-wound was completely cicatrised, but that made by the ligature was only partially healed, and still grooved. Five weeks after the operation, it was found that the groove left by the ligature was converted into a sinus, the edges having united; it was, therefore, again united, and complete union took place in about a fortnight, *five weeks* after the wound made by the knife had closed. Mr. Maunder remarked that, as a rule, it would be wrong to endeavour to establish a principle of practice from the experience of a single case, but the test of the efficiency of a method of treatment was absolutely trustworthy when two different operations were performed simultaneously upon the same patient, who was the subject of a similar complaint in corresponding localities. Under these circumstances, the history of the above case would induce him to declare in favour of the knife as a means of causing less pain and quicker

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restoration to health. The elastic ligature might be reserved for those who would on no terms submit to a cutting operation, as well as for those of hæmorrhagic diathesis.

Mr. HEATH thought there were cases of fistula seated high up, where, to obviate hæmorrhage, it would be more prudent to use the elastic ligature or similar means. The knife, however, was preferable in the vast majority of cases. He would never employ the elastic ligature for the removal of tumours, the experience of the first case in which the treatmont was carried out in this country (that of Sir H. Thompson) being by no means encouraging.

Mr. HUTCHINSON understood Mr. Maunder to admit that there were exceptional cases where the ligature might be employed, but none where it could compete with the knife. He had seen but little of its use, but could confirm Mr. Maunder's statement as to the slowness of healing that followed its use.

Mr. HULKE had not used the ligature himself, but had seen it employed in three cases; and the extreme painfulness and slow progress made in each case had convinced him of the inferiority of the method.

Mr. THOMAS SMITH said that he had tried the elastic ligature on two occasions, the result being that he would never resort to it again, unless prevented for very good reasons from using the knife.

ARTERIO-VENOUS ANEURISM IN THE THIGH CAUSED BY A PISTOL-SHOT.

Mr. HULKE read notes of this case. The patient, a coach-builder, aged forty-four, was admitted into the Middlesex Hospital, complaining of great pain and weakness in the right lower extremity. The whole limb was swollen, its cutaneous veins were dilated, the leg was eczematous, and there was a small, very painful, superficial ulcer on the shin. He stated that three years before, when in Missouri, a smooth-bore pistol exploded as he was putting it into his right trousers-pocket. He fell; and, from the sharp pain he felt in the knee, he thought that the ball had lodged in it. However, in a few moments he was able to get up and stand. On stripping off his trousers, he found an entrance wound below the right hip, but none of exit; and an hour after the accident he discovered the bullet under the skin at the inner side of the thigh, whence a doctor cut it out. Its spherical shape was unaltered. The loss of blood from both wounds did not exceed a wineglassful; and more, he said, came from the cut made for the extraction of the bullet than from the entrance wound. In a couple of days both wounds had closed. He went out the next morning after the accident; and, except on the first day, he did not strictly keep his bed, but for about one month he hobbled out with a stick or crutch, and then resumed his work. Two nights after the accident, when the wound had already closed, he was kept awake by pain in the thigh, and he then became aware of an unusual throbbing in it. This, his doctor said, was of no moment; he was to lie still till it stopped, which, however, had not yet happened. The limb grew weak and painful, and, at the end of a year, it often gave way under him in walking, making him stumble. His statement was borne out by the presence of a small scar (that of the entrance wound, five inches vertically below the crista ilii, and four inches and a half from the anterior superior iliac spine, level with the upper border of the great trochanter, and of a rather smaller linear scar, where the ball was cut out, on the inner side of the thigh, seven inches and a half below the spine of the pubes. A line joining these two scars cut the axis of the thigh obliquely, and it crossed the course of the large femoral vessels at a point where the femoral vein usually has passed from the inner side to behind the superficial femoral artery. From this spot upwards the femoral artery and vein were greatly dilated; the vein was much more swollen than the artery, and it was most so under cover of the sartorius muscle, where the course of the bullet crossed it. At this spot there was a very considerable sinuous bulging of the skin, which closely simulated an aneurismal pouch. The vein, in its whole extent, pulsated synchronously with the femoral artery, and throughout its entire course a loud rough murmur was audible. It was a continuous, rough, blowing sound, with a rhythmical swell, synchronous with the pulse in the artery. A strong purring vibration was felt along the course of the vein. The dilatation murmur and the palpable vibration were observable from the ham upwards to above the groin, as far as the external iliac vessels were accessible. Below the level of the lower sac their intensity quickly diminished. All the cutaneous veins were unnaturally conspicuous. The pulse at the ankle was weaker than on the other side. Pressure on the femoral artery in the groin was immediately followed by a diminution of both vein and artery, and by the instantaneous cessation of the pulsation, murmur, and thrill. The above symptoms left no room to doubt that a communication existed between the superficial femoral artery and its attendant vein, and their greatest intensity at a spot nearly opposite the lower of the two scars, indicated this to be the situation of the inoculation. For several weeks, careful pressure was made by using a Carter's compressor at the groin, alternately with a Skey's tourniquet put on a few inches below. For several days, also, direct compression upon the spot of inoculation was combined. These measures altogether failed to produce any permanent effect; and, notwithstanding every care in applying it, the pressure induced a slight attack of eczema in the groin, which over-ran the scrotum and penis, and provoked a slight lymphadenitis. The patient had now become weary of this treatment; but as his general health was deteriorated, he was sent into the country. He was not seen again for three months, when his leg was found to be more swollen, but there was no appreciable difference observable in the state of the femoral vessels. He remained in hospital six weeks, and again direct pressure alone, and combined with pressure on the cardiac side of the inosculation was tried, with perfectly negative results. He was then supplied with an elastic stocking reaching from foot to groin, and the uniform and efficient pressure of this was followed by the best results, enabling him to follow his occupation with but little inconvenience. There was no alteration in the condition of the aneurismal varix, but the circulation in the leg and the nutrition of the tissues had become manifestly better.

Mr. HEATH was not surprised to hear that pressure had not been beneficial. He related particulars of the case of a lady who, after striking her leg, had subsequently an apparent arterio-venous aneurism, formed by a communication occurring between the anterior tibial artery and an accompanying vein. In that case, pressure was tried without effect; and authors generally seemed to have had the same experience. An elastic stocking was then ordered. The patient had some trouble during a subsequent pregnancy, but was now well.

The PRESIDENT inquired if the colour of the limb were altered.

Mr. HULKE replied that the skin was a little bluish when the bandage was off. One interesting circumstance connected with these cases was, that not merely the vein, but the artery, also dilated. Roux published several cases of arterio-venous aneurism following venesection, in some of which the symptoms of aneurism did not appear for several years; in one case, six years. In all these cases the artery was enlarged up to the trunk; and the radial and ulnar arteries were also largely dilated. He thought the phenomenon was due to the fact that the arterial met the venous current, and consequently could not advance so readily as in the normal condition.

Dr. POWELL thought the arterial enlargement due to the fact that the vessel had been wounded and inflamed, and then had gradually given way.

Mr. HULKE remarked, however, that the whole length of the artery was enlarged, not only the part injured.

Mr. PICK said that these cases usually occurred from accident, sometimes from ulceration. He alluded to the case of a girl, aged thirteen, in whom the veins of one leg were enormously dilated. Soon after birth, the veins of one limb were seen to be much larger than those of the other; and, at thirteen years of age, one leg was nearly twice as large as the other. The veins were then so dilated that they were thought to be about to burst. The worst were treated by being obliterated by needles passed beneath them. Afterwards, an elastic stocking was fitted, with which she went to the country.

A DOUBTFUL CASE OF CUTANEOUS DISEASE.

Dr. DICKINSON made some observations upon the case exhibited by Dr. R. J. Lee at the Society, on November 27, 1874. Dr. Tilbury Fox, Dr. Duckworth, and himself had been appointed as a committee to inquire into the case. The disease was a skin eruption, which, commencing at the heel, in three weeks travelled "like a comet" up the limb, and once or twice encircled the trunk; as the head of the line, which was dotted and red, advanced, the tail of the line gradually faded. Chloroform had been given to the child, and a small portion of skin excised: this was still to be examined microscopically. The operation had stopped the progress of the disease.

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Dr. Southey asked if the disease were the result of fraud, or was it due to a parasite?

Dr. Dickinson said the affection was undoubtedly due to disease, and not to art. The committee were inclined to think it parasitic. The line had advanced at its end regularly; the committee had cut out that end of the streak, and believed they had excised the head of a parasite, which had still to be minutely examined.

Acute Pemphigus.

Dr. Southey gave particulars of a case of this disease. The patient, aged nineteen, a well-nourished young woman, was admitted into St. Bartholomew's Hospital with the history that she was a general servant, but that latterly she had led a somewhat irregular life. She had always enjoyed good health. On October 28 she first presented herself at the hospital with a sore on the side of the hand which had commenced as a blister. She stated that the sore was at first about the size of a three-penny-piece. On November 15 she first felt very poorly; she was feverish and could not eat; had a sore throat, and an eruption all over her face and body. The rash came out with much irritation and tingling. It appeared first as small round raised spots, which varied in size from a pea to that of a cob-nut. On November 19, when first seen by Dr. Southey, her body was covered by blebs or bullæ of various sizes, some of them surrounded by a halo of redness. On the face were several large ones, especially at the inner angles of both eyes, at the corners of the mouth, and on the chin. Others were seen on the dorsal and palmar surfaces of both hands and between the fingers. The arms and legs were especially affected at the flexures of the joints. On the back, chest, and abdomen the blebs were large and oval, and in some parts confluent, measuring quite an inch across. Some looked quite transparent, others presented more opaque contents, while those which were pressed upon, or had been rubbed, contained a yellowish fluid. The fluid collected from a few in a test-tube was alkaline and albuminous enough to coagulate entirely by heat. The mucous membrane of the mouth looked sore and aphthous; the tongue was protruded with difficulty, and was covered with a yellowish-white fur. Her throat was sore, so that she swallowed with difficulty; and there was a superficial aphthous sore situated about the middle of the hard palate, and extending to the velum palati. The heart and lungs were normal; the abdomen was empty and retracted, not painful on pressure. Pulse 117, soft, feeble, regular; respirations 24, regular; temperature 101·7°. Her skin was moist and perspiring. She was ordered effervescing saline draughts, with small doses of opium; milk and beef-tea, with stimulants. A solution of nitrate of silver (ten grains to the ounce) was injected into some of the larger bullæ, and the parts everywhere were swathed in cotton-wool soaked in carbolised oil. Fresh bullæ came out every day; and the back, buttocks, and thighs presented superficial sores, which were excessively painful, and bled when the dressings were changed. On November 29 she was placed in a warm bath at a temperature of 100° Fahr., in which she remained five hours, the greater part of the time being spent in sleep. She took more food that day than on previous days; and, to the surprise of her nurses, after having been lifted into the bath in an almost inanimate condition, she managed to get out of it with only slight assistance. The following day she was kept in the bath twelve hours, and the next day ten hours. On the fourth day she was kept in the water six hours and a half. In consequence, however, of the water being allowed to get too cold while she slept, she became confused, slightly delirious, exhausted, and shivering when put to bed. Reaction, however, set in, and the following day she was found to be very prostrate, with a pulse of 120, very feeble, and temperature 100·2° Fahr. She was breathing quickly, and complained that her throat was worse, and she was not so well. A sample of urine was obtained; it was high-coloured, specific gravity 1045, contained no albumen, but turned quite black, and effervesced violently upon the addition of nitric acid. On December 4, the carbolic acid dressing was discontinued, and carron oil substituted. From this date the improvement became very manifest. Although restless, feverish, and difficult to manage, she gained strength day by day, and no fresh bullæ made their appearance. In a few weeks she was able to leave the hospital for Walton.

Mr. Hulke remarked that the nervous prostration in this case had been supposed to be due to the carbolic acid; perhaps the colour of the urine was traceable to the same cause. In surgical cases, where carbolic acid was much used, the urine was often quite purple.

Dr. Southey remarked that, in such cases, the smell of carbolic acid remained in the urine. Indican, which was passed in large quantity in cases of great prostration, appeared to be abundantly present in the urine in this case.

Dr. Greenhow said that the dark colouring of the urine, when due to carbolic acid, appeared spontaneously; whereas only by the addition of the strong acids was the dark colour of indican brought out. In almost every case of recovery from the collapse stage of cholera which he had seen, indican was present.

Mr. Hutchinson asked if Dr. Southey could state more carefully the quantity of serum in any of the bullæ; and was there any considerable amount of inflammatory material at the base of the bullæ? He had never seen iodide of potassium hydroa developed to a stage that could be mistaken for acute pemphigus. The bullæ of hydroa looked as if they would rival in size the bullæ of pemphigus; but they never did do so. Again, in iodide hydroa, the bullæ had great inflammatory infiltration at their base, and were depressed at the centre. Then, too, the iodide in Dr. Southey's case was given only one day. Mr. Hutchinson mentioned a case of acute pemphigus. The patient was a man, aged twenty-six, and Mr. Hutchinson had seen him at the beginning of his illness. He then had a curious group of vesicles over each eyebrow, with a good deal of erythema around. Bullæ then appeared upon the trunk, increased in size, and became as large as half-eggs. There was ulceration over the buttocks; and in other particulars the case resembled Dr. Southey's. He (Mr. Hutchinson) at first refused to acknowledge that it was pemphigus; but seeing that the patient emaciated rapidly, became very prostrate, and seemed about to die, arsenic was then given. No other bullæ appeared, and the patient at once rapidly improved, although no other alteration in the treatment was made. When the man was nearly well, the remedy being discontinued, a few fresh bullæ appeared. Arsenic was again given; the bullæ healed, and the patient became quite well. In another man, a very serious case of pemphigus, arsenic did not succeed, and the man died. This was the only case in which Mr. Hutchinson had found the remedy fail to cure the disease, and he regretted that in that instance he had not pushed it further. Within twenty-four hours after arsenic was given, the fresh eruption of bullæ usually ceased. The astonishing point in Dr. Southey's case was, that the patient recovered without specific treatment, for such he considered arsenic to be in pemphigus. He had never seen a case cured without definite specific treatment.

The President mentioned a case of chronic pemphigus, which resisted all treatment in the Children's Hospital. The child then went to the country, fortunately had measles, and rapidly recovered from pemphigus.

Dr. Southey said that some of the bullæ contained one drachm of liquid, and were as large in diameter as a shilling. They had no red rim around, nor induration, nor did deep ulceration ensue, except at the buttocks and other parts subjected to pressure, and in the face, where the girl picked out the bullæ. The body, after the attack, was left covered with pigmented stains; but scars remained only where pressure had produced them. No iodide of potassium was given after the first day in the hospital. He believed, if she had not been kept in the bath, she would have died. Morphia injections gave no relief; but, when she was placed in the water, and pressure taken off her, then she rested in comfort. The bath was discontinued with the healing of the worst sores at the back of the body, because of the difficulty experienced in maintaining the water at a constant temperature.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, July 7.

W. O. Priestley, M.D., F.R.C.P., President, in the Chair.

The following ordinary business preceded the adjourned discussion:—

The undermentioned gentlemen were elected Fellows of the Society:—John W. Mason, M.R.C.S., John Powdrell, M.R.C.S., Matthew Reid, L.R.C.P. Edin., and W. K. Walker, M.R.C.S. (Calcutta).

A letter from Dr. Arthur Farre was read by the President,

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offering a large collection of casts showing the various conditions of the uterine organs, including the placentæ, in health and disease, for the acceptance of the Society. Three casts were shown, merely as specimens of the collection. These were beautifully modelled and painted, representing as naturally as possible the appearance of morbid specimens.

After a few words from the PRESIDENT, the offer of Dr. Farre was accepted by the Society by universal acclamation.

SPECIMEN OF BLIGHTED OVUM.

Dr. EDIS showed for Dr. Stothard, of Hull, a shrivelled fœtus of about the fifth month of utero-gestation that had been expelled at full term, together with another living fœtus, the case having been one of twins. Both placentæ were attached to the same bag of membranes, the one being considerably smaller than the other.

The PRESIDENT suggested whether the case was one of super-fœtation.

Dr. EDIS replied that the position of the placentæ scarcely warranted such a conclusion.

UTERUS AFTER CÆSARIAN SECTION.

Dr. NEWMAN exhibited a specimen of a uterus, removed from a patient post-mortem, in which Cæsarian section had been performed eight years since on account of extensive disease of the os and cervix uteri. He thought it would be of interest to many to know the issue of the case that had been previously reported to the Society. In 1872 the patient was delivered with the aid of long forceps of a living child at full time. In August, 1874, the integument of the abdominal wall suddenly gave way, and a large coil of intestine protruded; this was returned by Mr. Row, but she died within a week. A large dissecting sub-peritoneal abscess was discovered lying mainly between the under surface of the rectus abdominis and transversalis fascia.

The PRESIDENT observed that it was in reference to this case Dr. Farre had desired to show one of the casts present.

Dr. PLAYFAIR inquired if anything had been discovered in the condition of the cervix which would explain the difficulty for which Cæsarian section had been resorted to.

Dr. NEWMAN replied that he had only made a slight examination of the uterus. When pregnancy occurred in 1871 there were distinct traces of scar tissue, the cervix being deeply indented and changed in structure.

DERMOID CYST.

Dr. BARNES exhibited a specimen containing hair and several well-developed teeth, and a firm jaw-shaped plate of osseous substance. The cyst had been removed by ovariotomy. It was filled with pus at the time of the operation. The patient died on the second day.

VENOUS COAGULUM.

Dr. BARNES also exhibited a uterus, the internal surface of which was covered with dark decomposing mucous *débris*, the left femoral vein being blocked with coagulum, there having been diffuse cellulitis of left thigh. The patient, aged forty-five, married, was admitted on May 8 with an abscess under left arm, which had burst before admission. She had been subject to eczema for three years. She was delivered on June 19, at about the seventh month, and died on July 1. The case was of interest as throwing some light on the discussion at the present time.

Dr. SNOW BECK inquired as to the condition of the uterine veins.

COLLOID TUMOUR.

Dr. BARNES also exhibited a large conglomerate of colloid tumours, weighing twenty-eight pounds, which had grown from the omentum. It was supposed to have been ovarian, and had been removed by gastrotomy twenty-five days previously, the patient doing well. The few large vessels connecting the growth with the omentum had been tied by silk ligatures and left in the abdomen. Mr. Haward had examined the tumour, and pronounced it to be malignant.

Dr. BANTOCK asked if there had been any history of inflammation previous to the operation, as pus was discovered.

Dr. BARNES replied that he knew little of the case previous to the operation.

EXTRA-UTERINE FIBROID REMOVED BY GASTROTOMY.

Dr. ROUTH exhibited a specimen weighing seventeen pounds and a half. His object was merely to show the tumour in its recent form. On a future occasion he would give full particulars both as to the history and treatment.

Dr. HEYWOOD SMITH inquired if the clamp had been used, and how much of the body of the uterus was involved in the tumour.

Dr. ROUTH replied that no clamp had been used.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following are lists of candidates who have passed the recent examinations:—

FIRST M.B. EXAMINATION (FOR HONOURS).

ANATOMY.

Second Class.—Miller, Richard Shalders, University College; Bury, Judson Sykes, University College; Benham, Frederick Lucas, University College.

PHYSIOLOGY, HISTOLOGY, AND COMPARATIVE ANATOMY.

First Class.—Henderson, George Courtenay (Exhibition and Gold Medal), University College.

Second Class.—Benham, Frederick Lucas, University College; Wilkinson, Arthur Thomas, B.A., B.Sc., Owens College School of Medicine; Pye, Walter, St. Bartholomew's Hospital; Stevenson, Leader Henry, Guy's Hospital; Miller, Richard Shalders, University College.

Third Class.—Sedgefield, Arthur Robert Wyatt, King's College, and Willcocks, Frederick, King's College (equal); Hudson, James, University College, and Wiglesworth, Joseph, Liverpool School of Medicine (equal).

ORGANIC CHEMISTRY, AND MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

First Class.—Wilkinson, Arthur Thomas (Exhibition and Gold Medal), Owens College School of Medicine; *Henderson, George Courtenay (Gold Medal), University College.

Second Class.—Goodchild, Francis, St. George's Hospital.

Third Class.—Miller, Richard Shalders, University College.

* Obtained the number of marks qualifying for the Exhibition.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.—DOUBLE QUALIFICATION.—The following gentlemen passed their first professional examination during the recent sittings of the examiners:—

Aylward, Ernest, Hastings.
Baxter, Edward John, Middlesex.
Bremner, Alex. Tratman, Gloucestershire.
Crane, Alfred Wyatt, France.
Hartley, Harrison, Yorkshire.
Howard, John Albert, Taunton.
Ilderton, Harry Pell, Manchester.
Logie, William Alexander, Kirkwall.
M'Bryan, Henry Crawford, Dublin.
Macaskie, James Griffith, Berwick-on-Tweed.
Mumford, Wm. Ellis, West Indies.
Murray, Hugh, Sutherlandshire.
Ratton, John Michael de Verde, Dublin.
Richards, John Elletson, Yorkshire.
Smith, Thomas Henry, Stockton-on-Tees.
Stenhouse, Daniel, Auchterarder.
Thomson, Andrew Douglas Ramsay, Dalkeith.
Watson, James, Lanarkshire.
Wood, Francis Henry, Wakefield.

The following gentlemen passed their final examination, and were admitted L.R.C.P. Edin. and L.R.C.S. Edin.:—

Bateman, Arthur Wigley, London.
Bentley, George Herbert, Bombay.
Brereton, John Parker, County Tipperary.
Cranston, William, County Cavan.
Douglas, Robert Green, Northumberland.
Dyer, James Alexander, Fifeshire.
Eadon, William Frederick Bailey, Sheffield.
Gibson, Charles, Newcastle-on-Tyne.
Godfray, Edwin, Jersey.
Green, Marryat Hahnemann, London
Harvey, Robert, India.
Macdonald, John, Skye.
M'Carthy, William, Cork.
Power, William Dudley, Cork.
Ross, Roderick, Lewis.
Sandberg, Arthur Gregory, Yorkshire.
Schofield, George Taylor, Hull.
Scott, Jeremiah, County Cavan.
Shaw, Thomas Bowes, Yorkshire.
Waller, Bryan Charles, Yorkshire.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.—The following gentlemen passed their first professional examination during the July examinations:—

Fox, Louis Windham, Bristol.
Evans, Robert Davies, North Wales.
Hamilton, George Gibson, Falkirk.
Macnaught, John, Glasgow.

The following gentlemen passed their final examination, and were admitted Licentiates of the College:—

Cannon, Frank John, London.
Champneys, Charles Thornton, Glasgow.
Cotterill, Joseph Montagu, Brighton.
Crowdy, Frederic Hamilton, Newfoundland.
Groesbeck, Herman John, Cincinnati, Ohio.
Kennedy, David Makin, Liverpool.
Laing, Henry Wm., Bridge of Earn.
Macdonald, Thomas R., Skye.
Richardson, Charles Sidney, Dover.
Shand, Henry Miller, Aberdeen.
Stevenson, John, Edinburgh.
Smith, Andrew, Fifeshire.
Underwood, John James, Cumberland.
Wilson, Thos. Duddingston, Edinburgh.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 19:—

Bruce, Robert, 121, Old-street, St. Luke's.
Chant, Thomas, Bridgewater.
Clark, William Theobald Blanton, Malmesbury, Wilts.
Joseph, Sidney Westbrook Jorworth, St. Leonard's-on-Sea.
Willans, William Blundell, Singapore.

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The following gentlemen also on the same day passed their primary professional examination:—

James, Thomas, Middlesex Hospital.
Morris, Clarke Kelly, St. Thomas's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BURNESS, ALEX. G., M.B., C.M.—Physician to the North London Hospital for Consumption and Diseases of the Chest.

CADDY, HENRY, M.R.C.S. Eng., L.S.A.—Senior House-Surgeon to the Royal Southern Hospital, Liverpool.

GWATKIN, OWEN, M.R.C.S. Eng., L.S.A.—Junior House-Surgeon to the Royal Southern Hospital, Liverpool.

NAVAL APPOINTMENTS.

ADMIRALTY.—O. P. Brown, Surgeon, to the *Boscawen*; Thomas C. Hickey, Surgeon, to the *Duncan*.

BIRTHS.

BEAMAN.—On July 14, at Bangalore, Madras Presidency, the wife of Surgeon-Major A. H. Beaman, 36th Regiment N.I., of a daughter.

DALBY.—On August 20, at 18, Savile-row, the wife of W. B. Dalby, M.B., F.R.C.S., of a daughter.

NOAD.—On August 16, at Wokingham, Berks, the wife of G. W. Noad, M.D., of a daughter.

PLATT.—On August 21, at 1, Priory-villas, Kilburn, the wife of William Henry Platt, L.R.C.P., of a daughter.

PULLAR.—On August 21, at Kensington-park-gardens, the wife of A. Pullar, M.D., of a son.

SPACKMAN.—On August 22, at Bowers House, Harpenden, the wife of F. R. Spackman, M.D. Lond., of a daughter.

WALSH.—On August 22, the wife of A. J. Walsh, M.D., of 89, Harcourt-street, Dublin, and Larchill, Co. Dublin, of a daughter.

MARRIAGES.

GROVES—FERRIER.—On August 19, at St. Michael's Church, Beccles, Suffolk, George Norris Groves, Esq., of Coonoor, Neilgherries, India, to Helen Killett, second daughter of the late W. S. Ferrier, F.R.C.S., of Great Yarmouth, Norfolk.

HANCOCK—RUSSELL.—On August 21, at St. Mary's, Tyndale's-park, Clifton, Harris Scott Hancock, of Hankow, China, son of the late Rev. Robert Hancock, vicar of Bathford, to Mary Elizabeth, daughter of the late Christopher Russell, M.D., formerly of Enniskerry, co. Wicklow.

MEIKLEJOHN—REYNOLDS.—On August 17, at All Saints, Child's-hill, Hendon, J. W. S. Meiklejohn, M.D., Fleet Surgeon R.N., to Mary Elizabeth, only child of the late William Reynolds, Esq.

WILLS—WATKINS.—On August 17, at the parish church, Brighton, Charles James Wills, M.D., of H.M. Telegraph Department in Persia, to Alice Lucy Watkins, widow of David Rees Watkins, Esq., of Carmarthen, and daughter of John Irving, Esq., of Withdean House, Patcham, Sussex.

DEATHS.

BOYCOTT, Rev. HENRY ADEN, only son of T. Boycott, M.D., F.R.C.P., 46, Montagu-square, London, at Grantchester, near Cambridge, on August 19, aged 27.

CHILVER, THOMAS FARQUHAR, F.R.C.S. Eng., L.S.A., formerly of New Burlington-street, London, at his residence, 27, Upper Brunswick-place, Brighton, on August 15, in his 71st year.

NAISMITH, WILLIAM, M.D., M.R.C.S. Eng., at Hamilton, on August 18, aged 50.

WILSON, ELIZABETH, widow of the late William Thomas Wilson, M.D., R.N., at 116, Stockwell-park-road (the residence of her father), on August 17.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOURNEMOUTH GENERAL DISPENSARY.—Resident Medical Officer and Secretary. Applications, with testimonials, to the President, on or before August 31.

BURY UNION.—Medical Officer for the Radcliffe District.

DAVENTRY UNION.—Medical Officer for the Workhouse and the First District.

DISPENSARY FOR SICK CHILDREN, GARTSIDE-STREET, MANCHESTER.—Assistant Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Chairman of the Medical Staff, Gartside-street, Manchester, on or before September 15.

DUDLEY DISPENSARY.—Resident Medical Officer. Candidates must possess both a medical and surgical diploma. Applications, with testimonials, to the Honorary Secretary, Thomas Sheppard, Esq., The Trindle, Dudley, on or before September 1.

HAY UNION.—Medical Officer for the Herefordshire District.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—Assistant Physician. Candidates must be F.R.C.P. and registered. Applications, with testimonials, to the Chairman of the Medical Staff, Children's Dispensary, Gartside-street, Manchester, on or before September 15.

KEYNSHAM UNION.—Medical Officer for the Keynsham District.

LEEK UNION.—Medical Officer for the Norton District.

MIDDLESEX HOSPITAL MEDICAL COLLEGE.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

ORMSKIRK UNION.—Medical Officer for the Second District.

ROYAL SOUTH HANTS INFIRMARY, SOUTHAMPTON.—House-Surgeon. Must be duly qualified. Applications, with testimonials, to William Beer, Assistant-Secretary, on or before September 5.

ROYSTON UNION.—Medical Officer for No. 5 District. Applications on or before September 6.

TISBURY UNION.—Medical Officer for the Donhead District. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, Shaftesbury, on or before September 2.

UCKFIELD UNION.—Medical Officer for the Maresfield District.

WARWICK COUNTY LUNATIC AND IDIOT ASYLUM.—Second Assistant Medical Officer. Candidates must possess both a medical and a surgical degree, and be unmarried. Applications, with testimonials, to Dr. Parsey, at the Asylum, Hatton, Warwick.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Colchester Union.—Dr. Brown has resigned the Second District; area 4729; population 6267; salary £75 per annum.

St. Giles-in-the-Fields, and St. George, Bloomsbury, Parishes.—Mr. Bennett has resigned the Workhouse and the District; area 245; population 53,429; salary £250 per annum.

Shepton Mallet Union.—Mr. J. E. Macdonald has resigned the Fourth District.

APPOINTMENTS.

Bury Union.—William Sellers, M.R.C.S. Eng., L.S.A., to the Radcliffe District.

Chailey Union.—Robert B. Smith, L.R.C.P. Edin., L.R.C.S. Ire., to the Burbage District.

Daventry Union.—Samuel L. Popham, M.B. and C.M. Dub., to the First District and the Workhouse.

Dover Union.—Alfred Grandison, M.B. Dub., L.R.C.S. Ire., to the St. Mary's District and the Workhouse.

St. Thomas Union.—Frederick F. Jay, M.R.C.S. Eng., L.R.C.P. Lond., to the Woodbury District.

West Derby Union.—R. M. Anderson, L.R.C.S. Edin., L.R.C.P. Edin., to the Walton Workhouse.

ROYAL COLLEGE OF SURGEONS.—On and after Wednesday next, September 1, the Library and Museum will be closed for the usual repairs, cleansing, etc., and be re-opened, the former on Friday, October 1, and the latter on Monday, October 4. The annual registration of students will be commenced on the 1st, as usual, but a rumour has reached us that this will probably be the last occasion of inflicting this unnecessary trouble on so many parties.

WORCESTER INFIRMARY.—In consequence of the resignation of Dr. Inglis, and the complaint by the medical staff "of the injustice inflicted upon him by the vote of censure for a single unavoidable absence from duty, in the face of fourteen years' service, together with the interpretation put upon the rules," a sub-committee has been appointed, upon the motion of Earl Beauchamp, "to inquire into the rules relating to the honorary medical staff, and to report what amendments, if any, it may be desirable to make thereon."

CATHETERISM OF THE URETERS.—Professor Simon, of Heidelberg, who has introduced the practice of passing the whole arm into the rectum, describes a not less adventurous, and more audaciously bold, procedure with respect to the ureters. In No. 88 of *Volkmann's Sammlung*, after describing the circumstances under which it is desirable to dilate the female urethra (so that the finger may be carried in and the bladder explored), and to perform the vesico-vaginal section, he states that this latter operation may be taken advantage of for catheterising the ureters. He has himself done this seventeen times on eleven women, and has been enabled without the slightest difficulty to reach the pelvis of the kidney. As yet he has had no opportunity of employing this procedure in a case of disease, but believes it will be found useful in the diagnosis and treatment of calculous affections: calculi in obstructed passages might be extracted or cut out, and so forth.—*Wiener Zeitung*, August 10.

MR. HENRY HANCOCK.—At the last meeting of the Council of the Royal College of Surgeons, when a letter was read from Mr. Henry Hancock, resigning his seat as a member of the Court of Examiners, and stating that it was not his intention to offer himself for re-election, it was resolved unanimously—"That the best thanks of the Council be, and are hereby, tendered to Mr. Hancock for the efficient manner in which he has discharged his duties as a member of the Court of Examiners." It will be gratifying to Mr. Hancock to know that this high opinion of his colleagues is shared by the profession—especially by teachers at the metropolitan and provincial schools, and also, let it be added, by their pupils, who join with us in expressing a hope that he may long enjoy his well-deserved retirement. Happily for the College, he still retains his seat as a member of the Council, to which he was elected in 1863, becoming a member of the Court of Examiners

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in 1870, and obtaining the high honour of President in 1872, and Hunterian Orator the following year. Mr. Hancock has served on all the boards and committees of the College.

TINCTURE OF EUCALYPTUS IN GANGRENE OF THE LUNGS.—In an elaborate memoir upon gangrene of the lungs, read recently by M. Bucquoy, at the Paris Hospital Medical Society, he stated that his employment of eucalyptus, as a general rule, has not been attended with the success he had anticipated from what had been said of its properties. In the various bronchial affections he has not found it more useful than other balsamic preparations, and much less so than antimonials. He will not, therefore, be accused of partiality for it in recommending this remedy for the only affection in which he has found it yielding excellent results—gangrene of the lungs. In this disease it has surpassed all other substances which he has employed for removing the horrible fetor characterising it. During the five years he has been at the Cochin he has seen at least two or three cases a year, and in five of these cases he attributes their cure, in a great part, to the action of the eucalyptus; and in cases in which the disease has terminated fatally, it has been very useful in removing the fetor when carbolic acid had failed to do so, while the violence and tenacity of the cough have been much modified.—*Bulletin de Thérapeutique*, August 15.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. J. Forster, Little Hampton, Adelaide.—Letter, with enclosure, received.

M.D., Bombay.—Your interesting case has been received. The date of your diploma of membership precludes you from election to the fellowship of your college, which is only obtainable after examination. From your distinguished services, and high social position, no doubt you would be elected a fellow of the Edinburgh College.

Mr. Murray.—The list of gentlemen who passed the Arts examination is too long for publication in this journal.

Spes.—The statute to repeal the Adulteration of Food Acts, and to make better provision for the sale of food and drugs in a pure state, has just been issued. The amendments will take effect on October 1 next. Analysts are to be everywhere appointed, and a purchaser can have an article analysed for 10s. 6d. The Act is to apply to the United Kingdom.

A. P., Wisbeach.—The old physician's muff was carried "that he might have his hands warm and delicate of touch, and so be able to discriminate to a nicety the qualities of the patient's arterial pulsations. He made his rounds in cold weather, holding before him a large fox muff, in which his fingers and forearms were concealed."

N. N.—The next meeting of the German Sanitary Association is to be held at Munich on September 13 and two following days.

Howard G.—Five medals of Jenner have been struck—three by the German nation, one by the surgeons of the British navy, and the other by the London Medical Society.

Smothered.—According to a statement recently made by Dr. Hardwicke at an inquest, there are 500 cases of suffocation of children in bed every year in the whole county of Middlesex, and about 140 yearly in Central Middlesex.

M. K. L.—Lemon-juice as a specific against scurvy was known in this country more than 200 years ago, as appears from the work entitled, "The Surgeon's Mate, or Military and Domestic Medicine," by John Woodall, Master in Surgery, London, 1636.

W. Y.—A census recently taken showed that the population of New York city was 1,018,622.

Obesity.—Daniel Lambert was interred in the burial-ground of St. Martin's, Stamford Baron. The inscription over the grave is as follows:—

"Altus in animo, in Corpore Maximus.

In remembrance of that prodigy in nature, Daniel Lambert, a native of Leicester, who was possessed of an exalted and convivial mind, and in personal greatness had no competitor. He measured 3 ft. 1 in. round the leg, 9 ft. 4 in. round the body, and weighed 52 st. 11 lb.! He departed this life on June 21, 1809, aged thirty-nine years. As a testimony of respect, this stone is erected by his friends in Leicester."

Ceteris Paribus.—Read the lectures on Clinical Medicine by the late Dr. Latham.

Willan B.—It was Dr. Farr who remarked that diarrhœa "is as constantly observed in English towns when the temperature rises above 60° as bronchitis and catarrh when the temperature falls below 32°."

Mr. Berry.—Sir Christopher Wren made some curious illustrative models in pasteboard of the muscles, "as they naturally rise in dissection," for the use of the celebrated Dr. Scarborough in his lectures at Surgeon's Hall.

A CORRECTION.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your obituary of the late Mr. John Churchill, it is stated that "the day after Liston's funeral, Sir William (then Mr.) Fergusson called in Prince's-street. The well-known manual on Surgery and a life-long friendship were the results." As I cannot find any correction of this paragraph in the last number of the *Medical Times and Gazette*, I beg to take the liberty, as an old pupil of Sir William's, to set the matter right. Liston died in October, 1847. Fergusson's "System of Practical Surgery" I had read before entering as a pupil at King's College in 1846, and I believe the first edition appeared in 1842, soon after Mr. Fergusson settled in London.

I am, &c.,
GEORGE P. RUGG, M.D.

Stockwell Villa, Clapham-road, August 25.

[We find, on reference to the Messrs. Churchill, that our correspondent is quite right. The first edition of Fergusson's work did appear in 1842. We are much obliged to Dr. Rugg for calling our attention to the error. —ED. *Med. Times and Gaz.*]

CASE OF THE LATE MR. P. C. MERRYWEATHER.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In forwarding to you a list of the donations we have received since you last published the contributions to this fund, we feel it will be a subject of much satisfaction to those who have kindly aided in this matter to know that the amount raised has done great and permanent good. Besides supplying immediate wants, it has enabled Mrs. Merryweather to take a good house, where she is already prospering and maintaining and providing for the education of her children. She is very grateful indeed to all who have so kindly extended the helping hand in the time of her great need. The appeals in the medical journals have brought assistance even from distant Kurrachee.

We are, &c.,
CHARLES J. HARE, M.D. Cantab., F.R.C.P.,
W. A. ATWOOD, L.K.Q.C.P.I.

57, Brook-street, Grosvenor-square, W., August 21.

	£	s.	d.
Donations already acknowledged	148	16	0
Waggett, John, M.D., Stanley-terrace, Notting-hill, W.	2	2	0
Nodes, Mr., Norfolk-terrace, W.	1	1	0
Poppleton, R. D., Esq., Highbury New Park, N.	1	1	0
H. A. L.	1	1	0
Smith, Henry, F.R.C.S., Wimpole-street, W. ...	5	5	0
Penhall, John, M.R.C.S., St. Leonard's	2	2	0
Cave-Brown, Mrs., Hastings (per J. Penhall, Esq.)	5	0	0
Willington, Miss, Hastings (per J. Penhall, Esq.)	1	0	0
Per Mrs. Dawes, The Oaks, Burgess-hill, Sussex:			
Foster and Else, Messrs., Brighton	0	10	0
Coleman, W. F., M.R.C.S., Brighton...	0	10	0
Hampson, Mrs. J., Cheltenham	10	0	0
Hooke, Mrs.	3	0	0
Hampson, Mrs.... ...	2	0	0
Booth, Mrs., Pennington Hall, Manchester	3	0	0
Pickett, J., L.R.C.P.E., Blenheim-crescent, W.	1	1	0
A Friend, C. C. B... ...	10	0	0
Atwood, Miss	0	10	6
C. and Uxor	1	1	0
Stevens, H. N., M.R.C.S., Connaught-square, W.	2	0	0
Liddard, Dr. Thos., Ladbroke-grove-road, W...	0	10	6
Taylor, Thos., M.R.C.S., Bocking, Braintree ...	1	1	0
Vinen, Edward H., M.D., Chepstow-villas, W. ...	1	1	0
Haydon, N. F. J., L.R.C.P. Lond., and Mrs. Haydon, Newton Abbot	5	0	0
Burder, G. F., Esq., Clifton, Bristol	10	0	0
Whiteman, R. H., L.R.C.P.E., Putney ...	0	10	6
Workman, John W., M.R.C.S., Reading ...	1	1	0
H. H.'s Mite	0	10	6
A Friend at Kurrachee...	5	0	0
Jack, Charles, Esq. ...	0	10	6
Per Joseph Seaton, M.D., Sunbury, S.W.:			
Begley, W. C., M.D., F.R.C.P., Hanwell ...	1	1	0
Langton, Daniel W., Esq., Alston Lodge, Maidstone	1	1	0
Dunn, Robert, F.R.C.S., Norfolk-street, Strand	1	1	0
Lobb, Arthur T., Esq., 24, Inverness-ter., W.	2	2	0
Rogers, W. R., M.D., Berners-street, W. ...	1	1	0
Wilson, E., F.R.C.S., F.R.S.	5	5	0
Westall, Edward, Esq., Holland-villas-rd., W.	1	1	0
Langton, Thomas, Esq., Broadway, Westminster, S.W.	0	10	0
Martin, J. J., Esq., Cosham, Hants... ...	1	1	0
Total	£240	7	6

CASES OF SUN-SCORCH.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In your answers to correspondents last week you relate a case of a boy being severely scorched by the sun's rays in the year 1859. I beg to state that three women applied at this hospital on the 16th ult., who had been burnt in a similar manner. Three days previously they were employed gathering and washing parsnips in a field from 6 a.m. until evening. About an hour before noon they began to complain of a burning pain in their left arms, which rapidly became red and swollen. The following day they were so bad as to be unable to resume their work. When seen, the left arms in all three were congested and much swollen. In two of the women large bullæ covered the dorsal aspect of the arms and forearms; in the other case, which was much slighter, the vesications were confined to a small patch on the front of the forearm. The different position in the latter case was easily explicable by the different nature of this patient's employment, she having been engaged in tying the bulbs together. They are all three still attending the hospital. The cuticle has completely peeled off in parts, and suppurating surfaces are left; in one woman these are of some extent. They all complained of great pain, it being even a more marked symptom than in ordinary burns. Two other women working with them were affected in the same manner, but not to such an extent as to necessitate their attendance at the hospital. I need hardly say that the women were exposed to the full force of the sun's rays. They explain the fact of the left arm only being affected by their holding the plants by the leaves with their left hands whilst they washed or tied them together with their right, the right arm, therefore, not being kept in one position for any length of time like the left.

I am, &c.,
C. LAMB TAYLOR, House-Surgeon.

Wolverhampton and Staffordshire General Hospital,
Wolverhampton, August 25.

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Our Contemporary Mr. Punch, on "Suitors' Sufferings," says, "As law is to rheumatism, so is equity to gout. The fusion of law and equity may be said to form the counterpart of rheumatic gout."

Inter Alia.—"But, see! his face is black and full of blood!
His eyeballs further out than when he lived,
Staring full ghastly like a strangled man;
His hair uprear'd, his nostrils stretched with struggling,
His hands abroad displayed as one that grasped
And tugg'd for life, and was by strength subdued."
Shakespeare.

Fergus M.—Dr. Glen, Medical Superintendent in the Dundee Infirmary, died in 1863.

A Member.—You are not the only one who has expressed a similar opinion of the recent meeting at Edinburgh, and of the charges made for viewing the places mentioned.

"*In Vino Veritas.*"—Socrates considered the indulgence in wine pardonable; and, according to Horace, Cato the Censor had often recourse to its exhilarating virtues.

"Narratur et prisci Catonis
Sæpe mero inculuisse virtus."

Seneca states that the Roman ladies frequently indulged in these potations. Consult Dr. Druitt's work.

COMMUNICATIONS have been received from—

Professor Spence, Edinburgh; Dr. J. A. Hatchard, St. Leonard's; Mr. T. Maddison, Durham; Dr. A. Millman, New Galloway; Dr. Wynter, Chiswick; Dr. T. Arlin, Shelocta, U.S.A.; The Military Secretary, India Office; The Director-General of the Army Medical Department, War Office; Dr. C. G. Comegys, Cincinnati; The Registrar of Apothecaries' Hall, London; Dr. Hare, London; Captain Blount, R.N., London; Mr. H. Caddy, Liverpool; Mr. B. Brown, Liverpool; Dr. J. Wyllie, Edinburgh; Mr. T. M. Stone, London; The Registrar-General, Edinburgh; Dr. L. Wood, Ansable; Mr. P. S. O'Reilly, St. Louis; Dr. Young, Hong-Kong; Dr. Lionel S. Beale, London; Dr. Bruce, London; Dr. J. Hughlings-Jackson, London; Dr. Sparks, London; Mr. J. Chatto, London; Mr. George Brown, London; Mr. F. Taylor, London; Mr. J. Perkins, Cambridge; Mr. P. Bell, Edinburgh; Mr. C. Taylor, Wolverhampton.

BOOKS AND PAMPHLETS RECEIVED—

Louise Lateau, ou la Stigmatisée Belge, par le Dr. Bourneville—Annual Address before the Society of the Alumni of the Medical Department of the University of Pennsylvania, by C. G. Comegys, M.D.—On the Administration and Value of Phosphorus as a Remedy for Loss of Nerve Power, etc., by E. A. Kirby, M.D.—Ziemssen's Cyclopædia of the Practice of Medicine, vol. x.—Jackson on the Localisation of Movements in the Brain—Yeld on State Medicine in relation to Education—Vanderstraaten's Introductory Lecture, delivered at the Opening of the Fifth Session of the Ceylon Medical School—Quarterly Return of the Births, Deaths, and Marriages Registered in the Divisions, Counties, and Districts of Scotland—Whitmore's Annual Report on the Health of the Parish of St. Marylebone, 1874.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Hastings and St. Leonard's Chronicle—Science Gossip.

APPOINTMENTS FOR THE WEEK.

August 28. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

30. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

31. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

September 1. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

2. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

3. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 21.

BIRTHS.

Births of Boys, 1155; Girls, 1144; Total, 2299.
Average of 10 corresponding years 1865-74, 2107·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	770	683	1453
Average of the ten years 1865-74	772·8	710·2	1483·0
Average corrected to increased population	...	...	1587
Deaths of people aged 80 and upwards	...	...	30

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	19	...	10	...	3	...	32
North... ...	751729	...	9	14	3	16	...	2	1	38
Central ...	334369	...	4	...	...	6	...	2	1	18
East	639111	...	5	5	1	18	...	...	3	31
South	967692	1	7	21	5	18	1	2	3	62
Total	3254260	1	27	59	9	68	1	9	8	181

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·986 in.
Mean temperature	66·6°
Highest point of thermometer	85·4°
Lowest point of thermometer	53·8°
Mean dew-point temperature	56·2°
General direction of wind	S.W.
Whole amount of rain in the week	0·39 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 21, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Aug. 21.	Deaths Registered during the week ending Aug. 21.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2299	1453	85·4	53·8	66·6	19·23	0·39	0·99
Portsmouth ...	122632	27·3	70	56	...	...	...	...	...	...
Norwich	82842	11·1	42	46	...	...	...	...	...	...
Bristol	196186	44·1	123	93	82·6	43·3	62·0	16·67	0·08	0·20
Wolverhampton ...	71718	21·1	37	37	81·5	48·3	62·2	16·78	0·02	0·05
Birmingham ...	366325	43·6	285	171	83·0	49·0	62·8	17·12	0·04	0·10
Leicester	109830	34·3	92	72	86·0	49·5	63·7	17·61	0·01	0·03
Nottingham ...	92251	46·2	62	34	87·0	47·5	63·6	17·56	0·18	0·46
Liverpool	516063	99·1	384	267	73·7	53·0	60·9	16·06	0·01	0·03
Manchester ...	356626	83·1	284	201	82·0	47·0	64·3	17·95	0·07	0·15
Salford	135720	26·3	134	93	78·8	45·0	60·8	16·01	0·03	0·20
Oldham	87437	18·7	80	42	...	...	...	...	...	...
Bradford	168305	23·3	153	76	80·0	48·0	61·2	16·22	0·09	0·23
Leeds	285118	13·2	197	139	83·0	52·0	63·1	17·28	0·18	0·46
Sheffield	267881	13·6	157	122	80·7	50·5	63·0	17·22	0·03	0·08
Hull	133932	36·8	115	71	83·0	50·0	63·0	17·22	0·04	0·10
Sunderland ...	106342	32·2	84	50	...	...	...	...	...	...
Newcastle-on-Tyne	137665	25·6	121	69	78·0	48·0	60·0	15·56	0·00	0·00
Edinburgh	211626	50·5	106	76	...	...	...	...	...	...
Glasgow	534564	88·6	393	296	71·1	47·0	60·8	16·01	0·74	1·88
Dublin	314666	31·3	220	142	75·5	45·0	62·8	17·12	0·01	0·03
Total of 21 Towns in United Kingdm	7742889	37·0	5438	3607	87·0	43·3	62·6	17·01	0·12	0·30

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·99 in. The lowest was 29·83 in. on Tuesday afternoon, and the highest 30·19 in. on Saturday morning.

*** The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.**

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ORIGINAL LECTURES.

LECTURES ON INJURIES TO THE HEAD.

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the London Hospital; Surgeon to Moorfields Ophthalmic Hospital and the Hospital for Skin Diseases.

LECTURE V.

(*Continued from page 63.*)

TRAUMATIC INFLAMMATION IN THE SUB-ARACHNOID SPACES AT THE BASE OF THE BRAIN.

APPENDED CASES.

Case of Fracture of the Base of the Skull, followed by Discharge from the Left Ear and Paralysis of Left Seventh Nerve—Inflammation of Subarachnoid Tissues—Death—Autopsy.

Nov. 2. W. A man, aged twenty-one, fell whilst drunk. Bleeding from left ear.
„ 3. Th. Much sickness and headache. Free serous discharge from ear; sleepless.
„ 4. F. Discharge from the ear; sleepless.
„ 5. S. Discharge continues. Sleepless; occasional delirium.
„ 6. Sun. Still sleepless.
„ 7. M. Admitted into hospital deaf in left ear; furred tongue; paralysis of seventh nerve.
„ 8. Tu. Still sleepless. Peculiar manner, but rational. Pulse 100. Large pupils.
„ 9. W. Sleepless.
„ 10. Th. Sleepless but takes food, and is rational. Dilated pupils.
„ 11. F. Pneumonia; sleepless. Pulse 100. Herpes on lips.
„ 12. S. Increased difficulty in breathing.
„ 13. Sun. Death at four in the morning. No convulsions.

Autopsy.—Effusion of puro-lymph into the tissues of the subarachnoid space at base of brain and at transverse fissure; starting of the left occipito-temporal suture and fracture of the petrous bone. Rupture of membrana tympani.

J. M., aged twenty-one, admitted on Monday, November 7, at 4 p.m. He walked into the ward; was quite conscious, and gave his own history. He stated that on Wednesday afternoon he was drunk and had a fall. He was carried home, and when he came to himself he had a bad headache, and vomited repeatedly. On Thursday he was "very bad" and was in bed all day. On Friday he was also sick. On Saturday he felt better, and had less pain in his head. This is his statement. On Saturday night his friends state that he was delirious. He states that his left ear bled freely at the time of the accident, and that when he commenced vomiting, "water flowed from the ear." When "he retched, a great deal came," "made his pillow in a dreadful mess." Since then the discharge of fluid from the ear has continued. He believes that his nose did not bleed. He says he has not slept since the accident, on account of severe pain in his head.

Present Condition.—He speaks in a thick, spluttering manner, as if he were half drunk. We observe that when speaking he uses only the right half of his mouth; the left half remains closed. His mouth is a little drawn to the right side. He can close both eyes, but he closes the left less perfectly than the right. He can also move his left cheek towards the ear, but he does it slowly and not nearly so well as on the right side. There is no squint. His pupils are rather small, but not particularly so; both act well. His face is flushed; lips rather dusky. Scalp rather hot; ears hot; tip of nose quite cold. He appears inclined to go to sleep; says he has not much pain in the head now. He can move all his limbs equally well. His hands are cool. Pulse soft, feeble, and occasionally intermittent. There is dried discharge in his left ear; he says there has been no escape of fluid since Saturday. Tongue thickly covered with white fur, large, flat, and flabby.

November 8.—He reports that he did not sleep in the night, and adds that he has "not slept since the accident." He is very thirsty; has not shivered. He says that he has very little pain in his head. He does not know what kept him awake, but "could not sleep," and was very restless. He is less flushed than yesterday; in fact, he is rather pale. Skin of forehead warm; nose warm. He appears to be utterly deaf in the left ear. He took his soup for dinner, and appears to have enjoyed it. His tongue is covered with a creamy fur. There is now no discharge from his ear. Pulse 100, regular, soft. Pupils of equal size (natural), and active. His head is shaved, and he has ice applied. His bowels have acted twice in the night. He still speaks in a heavy, thick manner, as if half drunk; but his memory is good, and he is quite rational.

9th.—4.30 a.m.: He still asserts that he has never slept since the accident, and asks for opium.

11th.—5 p.m.: Still complaining bitterly of being unable to sleep. Skin hot, aspect flushed; pulse 100. Herpes on the lips noticed yesterday. Pupils dilated, and although they contract when he looks at a candle, they remain even then larger than natural. His water is not high coloured. His feet are cool, but not cold.

12th.—He is evidently much worse. His aspect is dusky; lips purple, and there is a circumscribed flush on each cheek. He breathes with difficulty. I examined his chest yesterday, as well as his restlessness would allow me, and did not detect any evidence of pneumonia. To-day his aspect is decidedly that of pulmonary congestion. His face is bedewed with perspiration; his pupils are very large in the shade, and when exposed to light, only contract to a slight extent. His right pupil is larger than the left. His tongue is, as it has been throughout, broad, flat, and covered with a thick white fur. I scarcely ever saw a tongue more loaded, yet he still takes his milk and beef-tea. His night was again quite restless, and he has repeatedly been decidedly delirious. His delirium is attended with hallucination, but it quickly passes off when he is roused by conversation.

At the time of my visit he was perfectly rational, and his memory seemed perfect. He reiterated his request for something to send him to sleep, a request which he has made every day with the utmost energy. The nurses confirm his statement that he has literally not slept since he came into the hospital. He does not complain of pain in his head, but of aching all over, and especially of pain in his back. The nurses state that when he gets out of bed he staggers, but he has no paralysis of any limb, and has great muscular power in both hands. His pulse to-day is more feeble, and 110. The left side of his face is still, as it was, almost paralysed.

On Saturday evening, after the above notes were written, he became noisy, and was on that account sent into a separate ward.

During the night he was delirious, and frequently shouting loudly. At four in the morning he died. From first to last he had never had any convulsion nor any twitching of muscles. He had never squinted, and with the exception of the partial paralysis of his left portio dura, which we believe to have been connected directly with the injury, he had never had any paralysis. On the Friday, thirty hours before he died, I made him grasp each of my hands with each of his, and he did so with such force that I was glad to ask him to desist. In the afternoon before he died (twelve hours before death), although, as described in the preceding note, he was suffering very much from dyspnœa, yet he was sitting up in bed at the time of our visit with a mug of tea in one hand and a piece of thick bread and butter in the other. He stated that he did not feel either hand weak, but fancied that his left was not so good as the other.

He used his left hand, however, freely. As regards his mental faculties, notwithstanding his occasional delirium, they appeared to be perfect.

The last time I saw him, in the evening before he died, he begged for a dose of opium, asking, "Are you the head-doctor? If not, I won't ask you, for I know you must go according to orders. But if you are, do let me have something to go to sleep." He had been rough and unmanageable all the time, persisting in throwing his clothes into disorder, in spitting about the ward, etc., in spite of the entreaties of the nurse. Thus, although not in a state of actual delirium, we might consider that he had been very excitable and restlessly impulsive the whole time. On several occasions he had begged the nurse to remove a "black man" whom he imagined was near him. At the time of my visits, however, he was always quite rational.

He was an exceedingly muscular, powerful man, and had a very vigorous heart. There was a rumour that he had been an opium-eater, and this, if true, would explain to some extent his sleeplessness.

We examined the body at two in the afternoon. Both lungs were loaded with blood, and their posterior lobes were in a

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state of recent hepatisation. Large portions of them sank in water. The heart contained in both cavities large masses of very firm fibrinous coagulum. His bladder was distended with pale yellow urine. Head: the scalp was loaded with venous blood. No bruise was perceptible externally. A small bruise, implicating all the tissues of the scalp on the left side, about an inch and a half behind the ear, was disclosed on turning back the scalp. On removing the pericranium, a starting of the temporo-occipital suture in its whole length was found. There was a little extravasated blood, both in the suture and between the membrane and the bone. The separation permitted of some motion. There was no fracture of the vault. The calvaria and the brain were now cut through and the upper part removed, the line of section passing through the ventricles. The ventricles contained serum in moderate quantity. In the anterior cornu of the right lateral ventricle was a small quantity of purulent lymph. In the opposite one there was none, but in the posterior cornu of this there was lymph in the tissue of the pia mater. The lining membrane of the ventricles did not appear to be even congested. In the subarachnoid space of the transverse fissure was a considerable quantity of greenish-yellow puro-lymph which moulded itself to the parts. The lymph extended over the upper surface of the cerebellum in the tissue of the pia mater as a very thin layer of infiltration. At the base of the brain under the anterior lobes and about the optic nerves there was no effusion, but commencing at the optic commissure and passing backwards, the subarachnoid tissue was infiltrated with pus and lymph. This lymph was of a greenish-yellow colour, and matted all the nerves together. It evidently contained much fluid in its meshes, for when the medulla was cut and the parts removed gradually, it lost much of its apparent thickness. It extended laterally upon the lobes of the cerebellum and upwards over the crura cerebri to the transverse fissure. The arachnoid over this effused lymph was smooth and glistening, and nothing could be scraped from its surface. The parietal arachnoid in apposition with it was also quite smooth and free from inflammatory effusion. The velum interpositum was much congested, but did not show any evidence of inflammatory effusion. The choroid plexuses on each side were somewhat œdematous, but showed no lymph. The portion of the plexuses which passed down into the posterior cornu of the left lateral ventricle was swollen, and of a greenish-yellow colour from effusion into its tissue. The corresponding one on the opposite side was simply congested. There was no trace of inflammation in the third ventricle. Indeed, with the exception of the patch of lymph mentioned, as being present in the anterior cornu of the right ventricle, the lining membrane of the ventricles was everywhere perfectly free from inflammatory effusion. On the right side there was evidence of contusion in the hemisphere, especially of the sphenoidal tube. There was no visible laceration of the arachnoid, but there were several large patches of extravasted blood between it and the convolutions; the largest patch was the size of a halfpenny, and was abruptly circumscribed. There was effusion of blood into the arachnoid sac on this side. A clot (consisting of a drachm or two) adhered to the under surface of the sphenoidal lobe, and a thin layer covered almost the entire hemisphere, adhering chiefly to the parietal membrane. There was no blood at the base of the brain proper, nor any on the left hemisphere at any part. The pia mater of both hemispheres was intensely congested, and its veins turgid with dark blood.

In reference to the symptoms present during life, we had throughout entertained a clear opinion that there could be no arachnitis over either hemisphere, because the man had no paralysis. Until the last day or two it had been hoped that he would recover, and the absence of alarming symptoms is certainly remarkable. His pulse had remained quiet.

He had continued to take and enjoy his food, and had been for the most part free from actual delirium.

An exceedingly foul tongue, absolute sleeplessness, and great thirst had been his chief symptoms. Inasmuch as bleeding from one ear, followed by discharge of watery fluid, and attended by symptoms of partial paralysis of the portio dura, had occurred, I had expressed a confident opinion that the petrous part of his temporal bone must be fractured. In the post-mortem room, on stripping off the dura mater we could find only a starting of the temporo-occipital suture, and the most careful inspection of the petrous portion failed to discover any fissure in it.

We tried forcible movements of the skull, but could not discover any movement; with the ear speculum a recent laceration in the membrana tympani was found. It was triangular in form, having its apex at the middle of the membrane, and its base towards the Eustachian tube.

The lining membrane of the Eustachian tube and of the tympanic cavity was intensely congested.

We removed the temporal bone for subsequent examination. It was only after making several sections of it that I discovered that there was a line of fracture crossing horizontally through the canal for the carotid artery and in a direction to cross also that for the portio dura. The specimen is preserved.

As regards the exact mode of death, my impression is that it was chiefly brought about by the very extensive pneumonic consolidation of both lungs. The occurrence of pneumonia is common to all severe injuries to the head. But, in this instance, we seem to have a special explanation of it in the manner in which the roots of the pneumogastric nerves were surrounded with inflammatory deposit. As regards the functional impairment of the other cranial nerves, whose trunks, equally with those of the pneumogastrics, were surrounded with inflammatory deposit, we may note that the man could see well and also hear well with the uninjured ear. Nothing more could be ascertained respecting the third nerves than that the pupils, at first active and of normal size, subsequently became less active and much dilated.

As to his fourth and sixth nerves, nothing could be ascertained. There was no squint, nor any degree of ptosis, but inasmuch as the disease involved the nerves of both sides, it is scarcely probable that unsymmetrical symptoms would be induced by it.

In reference to the fifth nerves, we have the fact of the thick fur on the tongue, and perhaps of some impairment of taste.

The portio dura and portio mollis on the left side were both probably damaged in the original injury; those on the other side retained their functions.

There was no reason to think that his lingual nerves were impaired, but the disturbed function of those included in his eighth pair, especially of the pneumogastric, has already been alluded to. To this we must refer the sickness from which he first suffered, and the subsequent thirst, and perhaps the entire inability to sleep.

We must now turn to another case.

The patient from whom the specimens which I now show you were taken was a labouring man named G., who was brought into the hospital in a state of insensibility on the third day after a fall.

You may remember that at his bedside we were obliged in the first instance to make a diagnosis in the absence of the history, and that we had to deal with a man who could struggle and resist, but who could not be got to speak, to put out his tongue, or in any way to recognise those about him. Thus, he had no paralysis of limbs, but at the same time he was more profoundly insensible than ought to be the case even in the most severe forms of mere concussion.

We found that on touching his eyes he would raise his hand to resist, whilst he made no attempt whatever to close his eyelids, from which fact we inferred that the facial nerves were paralysed, whilst the fifth nerves and those supplying his limbs were not so; and from this we conjectured that probably he had sustained an injury to the base of his skull, and that the petrous portion of the temporal bone on each side was fractured, the fracture crossing the track of the portio dura. I mentioned to you the particulars of a case in which a man was admitted with somewhat similar symptoms, excepting that he was quite conscious and could tell us that he was absolutely deaf, and in whom a subsequent autopsy showed a circular fracture crossing the internal ear on both sides and filling its chambers with blood, whilst, owing to the membrana tympani being uninjured, there had been no bleeding externally. You will remember the triad of symptoms which we so often mention as diagnostic of fracture of the petrous bone—deafness, bleeding from the ear, and facial paralysis.

In the man before us we had only one of these—the paralysis; for there had been no hæmorrhage, and his insensibility was too deep to allow us to test his hearing. Nor was the paralysis absolute, for although, as I have stated, he made no attempt to close his eyes, and although he allowed us to stretch open his mouth without any resistance, yet on pulling his hair for some time we succeeded in making him frown a little.

The man had been more than six hours in the hospital when I first saw him, and his insensibility had much deepened. At first he had been so restless that it had been found neces-

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sary to fasten him in bed. His pulse was quickened, and his temperature 102°; and these conditions, taken together with his facial paralysis, led us to conjecture that he was suffering from inflammation of the pia mater consequent on fracture of the petrous bone.

The next day, my house-surgeon, Dr. Toom Smith, had obtained for me the history, and it strongly supported the diagnosis, inasmuch as it showed that the man's head symptoms had come on gradually, and had not been present immediately after the accident. The account was that he had fallen a considerable height on to the top of his head; that he was quite insensible at first, but by the time that he had been carried home had become perfectly conscious. On reaching home he knew his wife, and told her that he was deaf. On the next morning he took food, and ailed so little that he walked out into his garden; he also walked a distance of nearly a mile to see his surgeon, and back again. He complained that the sun was strong in his eyes, and that he had a pain in his head. On the next day he complained more of the pain in his head, but he was still able to take food. He wished to have the room darkened, as the light was intolerable to him. During the following night the pain in his head became such that he was quite unable to control himself, and towards morning he began to ramble in his sleep, and very soon lost the power of expressing himself altogether. It was in this condition on Thursday morning that he was brought to us. He died on Friday, May 16, the day after his admission, and the fourth day after his accident.

I have nothing special to tell you as to the mode of his death, excepting that it appeared to concern the lungs and the respiration-nerve centres. During his last hours his breathing was diaphragmatic only, the lividity of his face bearing testimony to the gradually increasing congestion of his lungs. At this time his pulse kept up well, and was not more than 96 in the minute. He had no convulsions. The respiratory movements had increased to 54 in the minute, but his temperature on the day of his death was only 101°.

The post-mortem showed us a beautiful example of inflammation limited to the subarachnoid spaces. At the base of the brain, on the first two inches of the cord, and over the surfaces of both hemispheres, the subarachnoid spaces were occupied by inflammatory effusion. The arachnoid itself was clean and transparent, and not a shred of lymph, nor even the slightest greasiness, could be detected upon it. The prominences of the cerebral convolutions were not in any way covered or concealed, the puro-lymph effusion being limited to the sulci. The folds of pia mater passing into the transverse fissure were soddened, and slightly greyish from effusion, but there were no changes evident in the velum interpositum, the choroid plexuses, or the lining membrane of the ventricles.

Let us now turn to the skull itself. Having removed the brain, not the slightest evidence of injury to the dura mater was visible, and its epithelial lining showed no traces of inflammation.

On stripping up the dura mater, we found on the right side an exceedingly fine fissure crossing transversely the petrous portion of the temporal bone. There was not the slightest displacement, and the crack was so delicate that until we had sawn the bone out we could not feel entirely certain that there was one. It ran right over the aqueductus Fallopii, in which the portio duro is lodged. Here, then, we had a satisfactory explanation of the occurrence of inflammation of the pia mater, and of the symptoms of deafness and facial paralysis on the right side. We could not, however, on the left side discover any fracture or anything to explain the weakness of the portio dura which had been observed. Probably this was due to the effusion of lymph around the trunk of the nerve.

(*To be continued.*)

COMMENTARIES ON DISEASE IN CHILDREN.

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LECTURE IX.—FIBROID INDURATION OF THE LUNG (CIRRHOSIS).

FIBROID induration of the lung is a disease which is frequently met with in the adult, and has been often described. In children, being less common, it has received comparatively little notice, but it is not the less interesting and important.

The disease consists in a gradual thickening of the partitions between the air-cells by a dense fibroid tissue, which forms an interlacing network, spreading in all directions through the alveolar walls. Sometimes fibro-nucleated growths can be detected, but these are often absent, so that the induration has been described as depending upon the infiltration of an amorphous substance between the interstices of the alveoli. After a time the new material shrinks, contracting the lung and dilating the bronchi. In the densest parts the air-vesicles may be completely obliterated by the new fibre-formation and its accompanying contraction; and the cut surface of the lung is then seen to be smooth, shining, firm, hard, and non-granular. It is traversed by whitish bands, which are the thickened interlobular septa, and by thickened bronchi, whose channels are sometimes dilated, sometimes nearly or even quite obliterated by the new fibrous growth. In this stage the varying amounts of black pigment give to the surface a grey, marbled appearance, which is very peculiar and characteristic. The indurating process is not confined to the inter-lobular septa, but attacks also the walls of the vesicles in the interior of the lobules. It is associated with an accumulation within the vesicles of nucleated and epithelial cells, granular corpuscles, and granules—the result of an accompanying inflammatory process. Some pathologists are disposed to look upon the new fibroid tissue as a modification of the grey granulation. The complete dissimilarity in the clinical characters of the two diseases is, however, hostile to the ready acceptance of such a theory. Fibroid induration in young subjects seems to be always a secondary lung affection; and the diseases to which, in the large majority of cases, it is found to succeed are catarrhal pneumonia and pleurisy.

Catarrhal pneumonia in children is apt to assume a sub-acute character, especially when it occurs in the course of measles and whooping-cough. Bronchial dilatation is also a common accompaniment of this form of inflammation of the lung; and the presence of bronchiectasis seems to have the effect of prolonging the course of the inflammation and delaying its resolution. It seems probable, too, that dilatations of the air-tubes continuing after the subsidence of the catarrhal disease, tend to excite a recurrence of the inflammatory process, and to increase the fibroid thickening. The dilatations become filled with secretion, which they are unable to expel. The retained secretion putrefies, and excites great irritation of the surrounding tissue. A localised catarrhal pneumonia is set up, and the inflammatory process runs a tedious course on account of the continued irritation produced by the decomposing contents of the tubes. By this means the fibroid thickening is increased, and frequent recurrence of these attacks may lead to extensive induration of the lung. In some cases the irritation excited by the retained and fetid sputa may be so great that ulcerative destruction of tissue is set up, starting from the bronchial tubes. The disease in this form has been named "fibroid phthisis" by Dr. Andrew Clark.

Pleurisy is the other cause to which many of these cases of fibroid lung disease may be attributed. In such cases the lymph appears, as it were, to creep into the lung, and the induration extends inwards from the pleura.

The following case offers an illustration of an early stage of the disease, and shows the influence of catarrhal pneumonia in producing thickening of the fibrous tissue of the lung.

Charles S., aged six years, was admitted into the East London Children's Hospital, under the care of Dr. Bruce, on November 18. He came of a healthy family, and all his brothers and sisters were alive and well, except one who had died of diarrhœa. The boy had never had pertussis or measles, but had been for three years subject to a frequent cough. Two years before, he had had an attack of scarlatina. Since that time his cough had been more troublesome, and he had occasionally expectorated mucus tinged with blood. During the last six months he had been losing flesh, and for a month before admission had complained of pains in the left breast and epigastrium, which were increased by taking food.

On admission there were no very positive physical signs. The percussion-note at the whole of the right back was thought to be too high-pitched, and the same was noticed in the left axillary region, but there was no positive dulness. Elsewhere the note was healthy. The respiration everywhere was normal, and dry rhonchi were heard generally about the back.

Very shortly after admission the boy began to improve. His cough diminished, and he was allowed to leave his bed. The

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temperature varied in the evening from 100° to 101°, and his breathing was uniformly high, ranging from 40 to 48; but the appetite was good; he seemed cheerful, and did not appear to suffer much inconvenience from his illness.

On December 18 he caught cold. His cough became more severe, and the temperature rose in the evening to 102°. The pulse also became quicker, and the breathing accelerated. On the next evening (December 19) his temperature was 102·6°, the pulse 126, and the respirations 54; and from that date until December 27, when my attention was first directed to him by the house-surgeon, his evening temperature varied from 103° to 104·8°, his pulse from 126 to 156, and his respirations from 48 to 66.

On December 27 the following note was taken:—Boy rather small for age, but in tolerably good condition. Chest well formed, limbs straight, fingers distinctly clubbed. Lies in bed with head low; face flushed; nares acting; pulse 140; respirations 68, but respiratory movements not at all laboured, and no signs of dyspnœa; temperature in rectum 103·2°.

The right side of the chest moves more freely than the left. Heart's apex at fifth interspace in nipple line. The percussion-note is dull over the whole of the left side of the chest, but the dulness is greater inferiorly than above. Thus, in front complete dulness begins at third rib; behind at the spine of the scapula; and laterally dulness is only complete in the infra-axillary region. Resistance is only moderately increased. Vocal fremitus can be felt indistinctly, and rhonchal fremitus is strong over the whole left back. With the stethoscope a subcrepitant rhonchus is heard all over the side with both inspiration and expiration. Above, it is coarse, but becomes finer towards the base where it is mixed up with a sibilant rhonchus. The loudness of the rhonchus renders the breath-sound indistinct above, but from the angle of the scapula to the base the respiration is loud and intensely tubular, with bronchophonic resonance of the voice, and also at a spot a little to the inside of nipple it is tubular although less loud. The right side of the chest appears healthy except at the base behind, where the percussion-note has a wooden quality, and the respiration is blowing, with subcrepitant rhonchus. At the right supra-clavicular region also the percussion-note is a little high-pitched, but the breathing is natural. An occasional sibilant creak is heard over the right front.

On December 31 there were distinct evidences of consolidation of the right apex. Percussion was dull both above and below the clavicle, and also at the supra-spinous fossa. At the latter spot the breathing was weak, with sibilant rhonchus and coarse crepitation, while in front it was harsh, with a sibilant wheeze. At the right base behind there was also some dulness, and the respiration was faintly tubular, with coarse crepitation.

The left apex seemed, on the contrary, to be clearing, for the percussion-note at the supra-spinous fossa was only slightly high-pitched, and in front was resonant as far down as the upper border of the third rib. Above the left clavicle the respiration was diffused-blowing, with a fine crepitation, elsewhere at the upper part of that lung the breath-sound was quite concealed by loud subcrepitant rhonchus. In other respects the physical signs were the same as at the last report, with the exception that the rhonchus at the left back had a more distinctly bubbling character, and was more metallic in quality than before. Since December 27 the temperature had been very high, being seldom less than 105° in the evening, with a fall to 102° or 103° in the morning; pulse 140 to 145; respirations 60 to 84, slower in the morning than the evening.

On January 3 the signs of consolidation of the right apex were still more marked. The dulness reached in front as far downwards as the second rib, and the breathing there was bronchial, with coarse subcrepitant rhonchus. The same rhonchus was heard all over the right back, although the percussion-note was only dull at the apex and the extreme base. At the left back the dulness reached no higher than the spine of the scapula, and the supra-spinous fossa was quite resonant. In other respects the physical signs had undergone little alteration. Vocal fremitus was felt equally on both sides posteriorly. The coarse subcrepitant rhonchus was also heard over both sides of the back, and at the left base had developed into a large metallic bubbling. The temperature continued very high as a rule, but on the evening of January 1, after very profuse perspiration, it fell to 97·8° in the rectum; by the next morning it had, however, returned to 104°. The cheeks continued flushed in the latter part of the day, and the nares acted slightly, but there were no signs of dyspnœa, although the number of respirations varied from 50 to 60 in the minute. The child's appetite was poor, and he was very thirsty, but he only coughed occasionally, and then sometimes expectorated offensive purulent matter. His breath had also somewhat of a putrid odour.

On January 7 there was great improvement. The temperature since last report had fallen, being seldom over 100°; and his respirations were also much diminished in frequency—40 to 48. On the previous evening, at 7 p.m., temperature 99°; pulse 96; respirations 42. The fetor of breath and sputa had been removed by the use of a creasote inhalation. The physical signs had also undergone a favourable change. At the right back the percussion-note was now healthy, but the respiration was rather bronchial, with the same rhonchus becoming rather metallic at the base. Vocal resonance was rather stronger than natural. At the left back the percussion-note was only completely dull from the angle of the scapula to the base. A loud metallic subcrepitant rhonchus accompanied the respiration. This, although coarse, was less large and less like gurgling than before, and at the base was mixed up with a dry, creaking rhonchus. The vocal resonance was still intensely bronchophonic over the lower half of the left back. The metallic subcrepitant rhonchus was heard all over the left front and side of chest, but only slightly at the right front, and the percussion at the right apex anteriorly was merely high-pitched, and no longer dull as before.

The child now began to improve. His temperature remained low, and the pulse and respiration diminished in frequency. His appetite also improved; he looked brighter in the face; was more cheerful and lively, and began to gain flesh. He had occasional attacks of diarrhœa, which rather depressed him at times, but these, after lasting a day or two, subsided readily under the influence of treatment.

The physical signs also improved very greatly. On January 17, at the left back the percussion-note, although generally high-pitched, was only dull at the base, where the respiration was rather blowing, and was accompanied by a faint, fine rhonchus. At the right side, posteriorly, resonance was natural and the respiration was healthy, except at the base, where it became faintly blowing in quality. Vocal fremitus was stronger on the left side than on the right. In front, the physical signs were natural, except that at the left side the breath-sounds were high-pitched and harsh, with here and there a little creaking rhonchus, and in the infra-axillary region some metallic crepitation. Last evening temperature 99°, pulse 84, respirations 29; this morning, temperature 98·4°. On this date (January 17) the bowels became again relaxed, and for several days afterwards the motions, although not very frequent, were slimy and unhealthy-looking.

After this the improvement in the general health still continued, and the temperature remained little higher than natural—99° to 100°; the respirations were seldom under 50, and the pulse varied from 100 to 120. The left side continued to move less freely than the right, and the left intercostal spaces sank in more deeply in respiration. This state of things continued until February 5, the physical signs undergoing little change, except that the crepitating rhonchus reappeared on both sides, and became again very metallic at the left base behind.

On February 5 the temperature rose in the evening to 101°, and the pulse and respiration again increased in frequency. From this date the temperature remained high until the end. The severity of the general symptoms also returned: the appetite failed, the strength became reduced, and the boy began again to lose flesh. The physical signs also began slowly to increase. The dulness crept higher up in the left back, the breathing became more generally tubular, the bronchophonic resonance of the voice was no longer limited to the base, and the rhonchus was everywhere on both sides of the fine bubbling variety, with more or less of a metallic quality.

On February 14 the dulness reached at the left back as high as the spine of the scapula; and at the right back the percussion-note seemed less resonant than before, with greater resistance. All over both sides posteriorly bubbling rhonchus was heard, which at the left base became very large, metallic, and ringing in quality. The respiration there was almost cavernous, with intense bronchophony. Elsewhere at the back it was blowing or tubular. Temperature at 5 p.m. 102·6°.

On February 21 the boy was very much worse. His appetite was very bad, and he would take nothing but milk and broth. He often vomited, and was so weak that he could hardly sit

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up in bed. The cough was frequent and loose, and the breath and expectoration had again become very offensive. There was no œdema of the legs.

At the left back percussion was dull from apex to base, with cavernous respiration even at the supra-spinous fossa. Rhonchus was heard only after a cough, and then was gurgling. Vocal resonance intensely bronchophonic. At the right back percussion was high-pitched as before, and dull at the base. Respiration bronchial or diffused-blowing from apex to base, accompanied, except at the apex, with small metallic subcrepitant rhonchus. Vocal resonance stronger than natural, but not bronchophonic. In front the percussion-note was dull over all the left side, with increased resistance; in the axillary and infra-axillary regions the note was rather tubular, with natural resistance. Respiration was everywhere on this side cavernous, with faint and rather distant small-sized bubbling rhonchus accompanying both expiration and inspiration. Vocal resonance natural. The right front was resonant, with loud, rather snoring, respiration, and no rhonchus. Vocal resonance natural. Temperature in the morning 100·2°, pulse 135, respirations 84; temperature in the evening 103·2°. The temperature continued high, with very rapid pulse and respiration. On February 23, at 9 a.m., temperature 103°, pulse 190, respirations 80; at 5 p.m., temperature 104°, pulse 188, respirations 86; and the child died on the following morning.

Autopsy.—Both lungs slightly adherent towards the base, but the adhesions feeble and easily broken down. Left lung small and shrunken, feels very solid and firm, and no part crepitates on pressure except a spot on the outer surface at the juncture of the upper and lower lobes, corresponding to the left axillary region. Bronchi, both large and medium-sized, very much dilated. Mucous membrane much injected. On section the surface is deep-red, not granular, and is marked with greyish intersecting lines or streaks, which are the thickened interlobular septa, so that the lobules are unusually well defined. All over the surface are greyish points about the size of a small pin's head. These are evidently the sections of divided thickened bronchioles. From many of them minute yellowish semi-solid masses can be squeezed, and from others a thick yellowish fluid exudes on pressure. The substance of the lung is very firm, and is only broken down with difficulty by pressing the finger into it, but a section tears tolerably readily. Small portions sink in water. On section of the lower lobe the colour is a darker red, and the bronchi are excessively dilated. The dilatations are fusiform. In other respects the characters are the same as those already described. No grey granulations or cheesy masses are to be seen anywhere, nor are there any signs of ulceration of the bronchial tubes.

Right lung considerably larger than left. The two superior lobes crepitate pretty freely on pressure. The lower lobe and inferior half of the middle lobe alone are solid to the touch, and these on section show a dark-red non-granular surface, over which are scattered yellowish points of the size of a small pin's head. On pressure some of these escape as small masses of semi-solid yellowish matter, similar to those squeezed out of the left lung; others cannot be so pressed out. The bronchial tubes are dilated, although to a less extent than in the opposite lung, and the fibrous tissue has not undergone the same development, for much fewer sections of bronchioles can be detected. The upper lobe is bright-red in parts, but still crepitates and is not easily broken down. At the apex a spot of collapse is seen forming a kind of cap to the summit of the lung. It is very superficial, and the part of the lung which it overlies is very red and crepitates less perfectly than the other parts of the same lobe. The bronchial tubes in this lobe are somewhat dilated, but to a less extent than elsewhere. There are no ulcerations. No grey granulations or caseous deposits can be seen in any of the organs. The other organs all seem healthy, with the exception of the liver, which is very firm and rather fatty.

In the above case the fibroid thickening was only in an early stage. It was probably not entirely dependent upon the attack of pneumonia, from which the child suffered soon after his admission into the hospital. The history pointed to some chronic lung-mischief of considerable standing, for the boy had been subject for three years to a frequent cough, and this for two years had been very troublesome, and had been accompanied by the expectoration of purulent matter streaked occasionally with blood. A chronic bronchitis of such duration would probably lead to some increase in the fibrous tissue of the lungs, and to some dilatation of the bronchi. The insignificant character of the physical signs on the child's admission, and the absence of blowing or cavernous breathing—a change in the respiratory sounds which became afterwards very marked—seemed, however, to show that fibroid thickening, if present, was of small extent, and that the bronchiectasis was inconsiderable in amount; but it is possible that the degree to which the disease had advanced may have been concealed by the presence of compensating emphysema. The quality of the percussion-note was found, on the boy's admission, to be altered from a state of health; and the clubbing of the finger-ends indicated some long-standing impediment to the circulation, such as would be produced by a difficulty in the passage of the blood through the lungs. Besides, the rapid extension of the physical signs of consolidation to the front of the chest during the first attack of pneumonia—a phenomenon very unusual in an ordinary case of pulmonary inflammation—seemed to indicate a very abnormal condition of the lung.

At the time when I first saw the patient (December 27) the case presented many points of resemblance to one of pleurisy. The left side of the chest was completely dull over its lower half, both before and behind, and the breathing there was loud and intensely tubular, with bronchophonic resonance of the voice—a condition often to be met with in the pleurisy of childhood. The heart, however, was not displaced; the dulness was not the dead, toneless dulness produced by a collection of fluid; vocal fremitus was not suppressed; and the subcrepitant rhonchus heard with the breath-sound differed widely from the superficial crackle heard in an inflamed pleura, and became finer and more like true crepitus at the base, where it was mixed up with sibilant rhonchus.

After admission into the hospital, the child suffered from two distinct attacks of catarrhal pneumonia. In the first attack the physical signs were those common to the subacute form of that complaint; but in the second a certain abnormal character was imparted to them on account of the extensive dilatation of the bronchi, which at this period had become decided. It was on this account that the crepitation, which was at first of the coarse variety common to that form of pneumonia, became much more bubbling, and acquired an intense metallic ring, such as is often found in small cavities and softening caseous deposits. From the physical signs alone it would, no doubt, have been impossible to exclude breaking up of the lung, especially as the increasing weakness of the child, and his steady pyrexia, were quite compatible with such a condition. The frequency, however, with which severe catarrhal pneumonia is accompanied by dilatation of the bronchi, made it equally probable that bronchiectasis was the cause of this peculiarity in the auscultatory signs; and the post-mortem appearances confirmed this view of the case.

Besides the catarrhal pneumonia and the dilated bronchi, the autopsy showed a considerable excess of fibroid tissue in both lungs. The fibroid induration was as yet in an early stage. Had the boy recovered from the second attack of pulmonary inflammation, the bronchiectasis would no doubt have partially subsided, and a certain wooden quality of percussion-note, with harsh or bronchial breathing, might have been the only physical signs remaining to indicate the abnormal condition of the lung. In fact, possibly little more would have been discoverable than was present when the child was first admitted into the hospital.

(*To be continued.*)

THE HOWARD MEDAL OF THE STATISTICAL SOCIETY.—The following is the title of the essay to which this medal will be awarded in November, 1876. Essays to be sent in on or before June 30, 1876:—"On the Mortality of Hospitals (General and Special) in the United Kingdom in Times Past and Present." For further particulars application may be made to the Assistant-Secretary, Somerset House-terrace, King's College, Strand, London.

A GIGANTIC FUNGUS.—A few days since there was gathered, in the park of the Marquise de Laborde, near Fontenay, a gigantic fungus, the production of which had probably been favoured by the great quantity of rain that has fallen in the locality this summer. It is a specimen of *Lycoperdon giganteum*, almost spherical in shape, and weighed when fresh 2 kilogrammes and 160 grammes. Its circumference measured from 101 to 103 centimetres, and the whole of this enormous cellular mass was supported on a little root 5 centimetres long and some millimetres in thickness. Three days before it was gathered there was no appearance of it on the spot.—*Révue Scientifique*, August 21.

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ORIGINAL COMMUNICATIONS.

REPORT OF A

SEVERE CASE OF ROSEOLA RHEUMATICA, WITH CLINICAL REMARKS.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

W. S., FEMALE, aged twenty-three, servant, admitted June 18, 1872. Was taken ill about three months ago with rheumatism in her shoulders, hips, knees, and ankles. This still continues, but at present she has not much pain in her arms, but chiefly in her legs. The joints do not swell, but are very painful. She cannot account for the present attack, but says she has always been subject to slight attacks of rheumatism; it has never before been so bad as it is now. Never had rheumatic fever. She had scarlet fever and small-pox when she was a child. Subsequently, when much more ill, she stated that she did not know whether she had had scarlatina or not. The former statement seems to me the more reliable, and may very possibly have been made by her relatives to my clerk, who records it. She took to her bed three weeks ago on account of weakness. She had a very severe attack of erysipelas about fourteen days before last Christmas. Vomiting after meals has occurred once a day the last two or three weeks. Her hair is thin and short, and she has a wild expression; speaks very quickly, but coherently and rationally. No cardiac bruit. Pulse 132; temperature 38·8° (101·8°). Urine, specific gravity 1024; not albuminous. She took up to June 25 strychniæ gr. $\frac{1}{30}$, acidi nitrici ♏ij., spt. chlorof. ♏x., aq. ʒj., ter die. She was then ordered pot. iod. gr. v., ammon. carb. gr. iij., dec. cinch. ʒj., ter die.

June 25.—Temperature 37·6° (99·7°); pulse 120, very weak.

27th.—Temperature 36·2° (97·1°); pulse 116.

She was slowly mending, when she was attacked (July 2) with an eruption consisting of red spots and patches on the chest and arms, extending subsequently all over her. On 4th the mouth and throat were very sore, the tongue white and coated, and the fauces covered with white patches. Pulse 120; temperature 37·2° (98·9°). The eruption occurred during hot weather, and was evidently roseola. On 6th the palms of hands and soles of feet, the toes especially, were severely affected, were of a deep red, much swollen and very tender. Poultices were applied. On 8th the eruption and erythema had very much diminished. Pulse 104; temperature 36° (96·8°). She took after July 2 magnes. sulph. ʒj., acid. sulph. dil. ♏x., quin. disulph. gr. j., aq. ʒj., ter die. Used garg. potass. chloratis; had port wine four ounces.

July 11.—On face, neck, chest, back, arms, and legs there is now a very copious rash, consisting of round spots, scarcely elevated, coalescing as they spread by their margins into extensive areas of general redness, which are most marked on the back, abdomen, upper chest and upper arms, and least so on the legs. The feet present numerous spots on each dorsum, and extensive red patches with swelling on the soles. Throat not sore; some conjunctivitis. Pulse 96, rather jerky; temperature 39° (102·2°). The eruption appeared on the night of 9th, but was slight yesterday. Acid. sulph. dil. ♏xv. aq. ʒj., quater die.

13th.—Stomach sick, vomits almost all she takes, only retains ice and brandy. Bowels confined until she had a dose of castor oil to-day. Great thirst. Tongue not over-red, moist, and coated. Her skin is almost as red as a boiled lobster everywhere; feet and toes are much swollen and very sore; legs almost covered with eruption, and face also; a patch on the middle of forehead and left cheek is most exempt. Throat not sore. Does not know whether she has had scarlatina. Mist. potass. citratis ʒj., tinct. opii ♏iij., 4tis horis; soda-water, brandy ʒiv.; ice-baths.

15th.—Temperature 37·2° (98·9°); pulse 110. Urine, specific gravity 1005, no albumen, acid. The whole surface of the body is almost quite uniformly red, but the colour is duller, and there is no apparent exudation. The eyelids are much affected, the right especially; the mucous surface is very red. Bowels open with oil; stool dark and offensive. She has derived much relief from being sponged with glycerine lotion. Collyr. plumbi is applied to eyes; hyd. c. cretâ gr. iij., h. n.

18th.—Is much better; skin is less red, but there is still much hyperæmia and swelling of the feet. Desquamation has commenced in several parts, thin scurfy flakelets separating. On the soles of the feet there are some thin scabs; no serous effusion at any part. Taking last two days quinæ disulph. gr. j., acid. nitr. ♏ij., aq. ʒj., quater die.

20th.—Very considerable desquamation taking place on the face, arms and hands, and chest; on the abdomen and lower limbs there is scarcely any, only the thin lamellar crusts on the soles of the feet, which are still red, but less swollen and tender. She cannot stand. Eyelids and corners of mouth sore. Feels better. Temperature 36·6° (97·8°); pulse 100, weak.

22nd.—Legs are desquamating now. Urine not albuminous, specific gravity 1009. To have a bath, and to have the skin oiled afterwards. Port ʒiv. in place of brandy.

29th.—Considerable swelling of the labia, and a patch of ulceration; the feet are redder again than they were, and so exquisitely tender that she is quite fearful of their being touched. Tongue smooth, red, dry. No appetite. Pulse excited. To be fed with spoonfuls of iced milk solely. Acid. muriat. ♏j., acid. hydrocy. dil. ♏ij., aq. ʒss., quater die.

August 1.—Is decidedly better; surface less red, but still desquamating a little. Temperature 37° (98·6°); pulse 105, not very weak.

3rd.—Enjoys her porter, but takes nothing else except the milk (three pints); swelling of labia is less; no bedsores. Tongue very red, denuded, clammy. Bismuthi carb. gr. v., mist. mucilag. ʒss., ter die.

8th.—Takes very little food except milk and stout; is half-childish and silly, cries. Last two days has had some recurrence of erysipelas about the nose and mid-face.

12th.—Very great improvement in the last few days, since she has been carried to a window and freely exposed to the air; she can now walk the length of a long ward and back again with the aid of a chair, can dress herself, and has eaten some chicken the last two days. Her hands feel to her cold and painful, though they are warm, and her feet also, which are very tender. All desquamation has ceased. Erysipelas quite gone. She got stronger, and went out August 22.

Remarks.—This patient had, previous to her admission, suffered from severe erysipelas, and from rheumatoid affection of the joints, which continued. The stomach also betrayed an irritable condition of its mucous surface. There was no history of any exposure to contagion. Under the influence of hot weather the first outbreak of the general eruption occurred, the pulse being slower, and the temperature lower than at the date of admission, and continuing to fall until July 8. The next day, with a further fall of pulse, but a rise in temperature of 5·4° Fahr., the eruption increased very much, and became universal. There was conjunctivitis, but no sore throat on this occasion, as there had been on the first. In six days the temperature had become normal, the pulse remaining frequent; but the cutaneous hyperæmia was as great as ever. On the ninth day it was declining, desquamation had commenced, and continued very abundant for several days. The feet remained hyperæmic and exquisitely tender for at least three weeks from the commencement of the second outbreak; and the general surface, though less red, was not, I am pretty sure, by any means normal for even longer. The red, denuded, dry state of the tongue suggested the existence of a similar state of the gastric mucous surface, and the thirst and anorexia pointed to the same conclusion. The swelling of the external genitals, as late as the twentieth day, shows that hyperæmia, attended with exudation, affected this region. The recurrence of erysipelas on the face in a mild form towards the close of the attack is noteworthy, showing the tendency to cutaneous hyperæmia in one form or another. The weakening of the mental faculties indicates that the nervous system had been a good deal implicated in the morbid process. The treatment does not call for special remark, except as to the great benefit which resulted from free exposure to the air during recovery. The chief question for discussion is, What was the nature of the disorder, more especially of the second manifestation? Was it scarlet fever, or roseola, or dengue, or erysipelas? Before attempting to answer this, it will be well to determine whether the second and severer outbreak was a relapse, or whether it was a different disorder from the first. In favour of the first view are the similarity of the eruptions, their extensive distribution, the swelling, soreness, and tenderness of the feet on the two occasions, and the probability of a recurrence in a disorder so like roseola as this was. In favour of the second is to be mentioned that the throat was very sore on the first occasion, but not on the second; that the temperature

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was notably elevated in the second outbreak, but not in the first; that the tongue then was red and dry, and the stomach irritable. These differences, especially the first two, seem of importance, yet I cannot but think that anyone who saw the patient on the two occasions would be much disposed to believe that the pathological state was essentially the same in both. The temperature fell to normal on the second occasion in four days, and did not rise again, while the eruptive hyperæmia persisted much longer. After the first few days, therefore, there was no material difference between the two states; at least, until desquamation commenced, for which there was no opportunity in the first attack. Returning to the original question, we may say that the malady could not have been erysipelas, for there was but little swelling except in a few parts, no bullæ, and the eruption prevailed in a uniform manner over a far larger extent of surface than is ever so affected in erysipelas. The spots and patches of the initial period were unlike the red blush of this exanthem, and the hyperæmia persisted much longer than is the case in it. To dengue there is some resemblance in the presence (previously, however) of rheumatoid pains in the joints, in the eruption, in the throat being sore, in the remission, the relapse, and in the desquamation. But dengue is a tropical epidemic malady, marked by suddenness of invasion; acute pain in all the joints, rendered excruciating by the slightest touch; and an eruption of ephemeral duration (Aitken). These were not the features of the malady in question, and, therefore, though we may recognise a sort of relationship between it and dengue, as also to erysipelas, we can by no means admit identity. Was the disorder, then, scarlet fever? It is certain, I think, that the first attack was not, for although the throat was sore, and the fauces were patched with white, yet the absence of elevated temperature excludes the idea of scarlet fever. In the second attack the temperature was elevated, but not so much as in most cases of scarlet fever, where it almost always, according to Wunderlich, exceeds 104°. Moreover, the eruption was not like the diffused flush of scarlet fever at its onset, but consisted of round spots quite like those of the first attack. It is true, however, that such as these are seen in scarlatina variegata (Hebra, Syd. Soc. trans., p. 196). The duration of the eruption was much longer than that of scarlet fever, for the skin continued hyperæmic for more than three weeks, although desquamation was going on for quite the latter half of this period. Also, which is of special significance, the throat was not sore—a symptom scarce ever wanting in severe scarlet fever. The prolonged duration and the occurrence of the exanthem—admitting that there was a recurrence—is much more like roseola than scarlet fever. Sir T. Watson says that roseola has more of a chronic character than scarlet fever; it comes and goes, and has no settled or definite course. It must be admitted as quite possible that the first attack was roseola, but the second scarlet fever. Against this is the statement that she had previously had scarlet fever, and presumably, therefore, was but little, if at all, susceptible of contagion; nor did it appear that she had been exposed to any. Had there been evidence of contagion proceeding from her, it would have been decisive in favour of scarlet fever, but no great stress can of course be laid on its absence. The desquamation is much more like the doing of scarlet fever than roseola, yet it was very marked in certain cases described by Rayer of roseola cholerica, and is mentioned by E. Wilson as occurring (slight, furfuraceous) in roseola autumnalis. The increased redness and exquisite tenderness of the feet, which was noted in my patient three weeks after the second outbreak, is unlike anything I know of occurring in scarlatina, but comports with the genius of roseola. From this review of the evidence the most probable conclusion seems to me to be that the disorder on both occasions was the same, and that it was, in fact, a gigantic roseola rheumatica. The pathology of the case would appear to be the following:—The patient was undoubtedly of a highly rheumatic diathesis, and had suffered recently a severe attack of erysipelas, which, even at the time she was in the hospital, showed a tendency to reappear. She had therefore a systemic cause of semi-inflammatory, non-suppurative disorder—viz., the unknown cause of rheumatism, and an enfeebled state of innervation of the cutaneous vessels, such as erysipelas implies. The latter probably determined the special operation of the cause of rheumatism to the skin, and, as it continued to act, the eruption—its result—was slow to disappear. It should be noted as accordant with this view that the rheumatoid pains seem to have disappeared as the eruption became developed.

CARBUNCULAR INFLAMMATION OF THE LIP.

By WILLIAM D. WILKES, M.R.C.S.,
Surgeon to the Salisbury Infirmary.

THREE cases of carbuncular inflammation of the lip which I have seen in Salisbury and its neighbourhood may be worth narrating. I give them from notes made at the time without any view to publication.

Case 1.—On February 26, 1867, I was called in the morning to see Mr. S., Master of the School of Art. He was a single gentleman, aged thirty-three years; he had been ailing through the winter, and working hard, and had lately, on principle, left off stimulants. When I saw him, he had a carbuncular swelling around the right nostril—livid, hard, and swollen,—and the upper lip was in the like state; the bowels were confined; the tongue quite clean; no bad teeth; an offensive discharge from the right nostril. He was sensible; had a hurried anxious manner, and complained of a severe pain in the right side, increased on breathing. No air entered the lung in respiration, and the whole side was dull on percussion. He was ordered to bed, and five grains of compound colocynth pill were given at once, one leech to the face, and a poultice; bark and ammonia mixture and a blister over right lung behind were prescribed, and good beef-tea frequently. The leech relieved him, but erysipelatous swelling spread over the face, and he had great heat of head in the evening.

On the 27th, at 9.30 a.m., he had been delirious during the night, and out of bed seven or eight times; sensible when spoken to. The blister had risen well. The left lung is now dull; breathing more hurried; the carbuncular inflammation has spread, and the skin is very tense. Punctures down to bone; only blood escaped. Poultice and beef-tea continued, etc. Profuse sweating came on during the day, passing even through the under blanket and mattress. At 5 p.m. more tension of face; punctures made. He was delirious all day. We took off his bedclothes and shirt, and laid him between dry blankets, and gave him brandy and beef-tea. Afterwards he began rapidly to sink, and died at 6.30 p.m.

It seemed to be a case of carbuncle, with rapid blood-poisoning in the system, chiefly involving the lungs. Mr. G. R. Tatum, of Salisbury, saw him with me in consultation.

Case 2.—On November 15, 1867, at 9 a.m., I received a telegram from Mr. R., of Quarley Down Farm, a cold and bleak spot, to go there directly. On arrival I saw a widow lady, aged thirty-four, in a dying state. The right side of her face was enormously swollen and livid, with the eye closed from œdema, arising from a large carbuncle centering about the angle of the mouth. All that could be done was to administer enemata of brandy, beef-tea, and eggs. She died about 1.30 p.m. The case immediately reminded me of the former one. Quarley is not more than six miles from Andover, where the gentleman was taken ill. The weather was similar (cold north-easterly winds and frost), and both situations were bleak and exposed. The following history I gleaned from Mr. R., the patient's friend:—"Mrs. D. first complained of a small pimple on the right side of the mouth, which she pricked with a needle, causing it to discharge; her face then began gradually to swell. I advised her taking an aperient, which she did on Monday night, November 4. On the next day she was summoned to London on important business, and left Grately station by the 11.45 train. All this time her face continued to pain her; she attributed it to a bad tooth, and she consulted a chemist, close to the hotel in London, who prescribed poppy-heads and camomile as a poultice, which gave relief. She returned to Quarley on the 6th, and appeared better. On the 9th, just before retiring to bed her lip became painful. On the 10th, had breakfast in bed, got up to dinner, but ate nothing; had wine in the afternoon, which did her good, and about an hour before tea she expressed a wish to go to bed; the lip continued to pain her and began to swell. I at once sent for a surgeon, who ordered bread poultices, with a portion of laudanum. This gentleman came again on Monday, the 11th, at 5 p.m., pronounced it to be an abscess, and considered it was not forward enough to lance. At his next visit, on the 13th, in the afternoon he operated upon the lip, but with little success. Next day (14th), finding that Mrs. D. had not slept, administered laudanum, leaving instructions for a further dose if sleep was not produced. Mrs. D., all through her illness, took a great amount

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of nourishment, in the shape of beef-tea, port wine, brandy, etc. On the Friday morning I went into her room about 5 a.m., and, finding her much worse, I sent you a telegram."

Mr. Covey, of Fyfield, Andover, gave me the following history:—"I saw her for the first time on the evening of November 10; she had an inflamed face, especially the lip, which appeared to have been caused by a small boil which she had picked and scratched. Her lip had all the appearance of matter forming in it, and I recommended fomentations, at the same time clearing out the liver. Next day she was worse; and on Wednesday, the 13th, I opened the lip, and a small quantity of pus was discharged. On Thursday she was very weak, with pulse 130. A small quantity of matter again escaped with a free discharge of blood on my again opening the lip. It had then the appearance, for the first time, of a kind of erysipelatous inflammation. On Friday, the 15th, she was much worse, and had been for some time under the influence of opium, which appeared to have affected her considerably, though the dose was not large. I have been giving her bark and ammonia from the first, with occasional purgatives. I fear it is a bad case, but hope that you may suggest something to relieve her."

Case 3 was that of a nobleman, aged seventy-four, whom I was summoned to attend, some twenty miles distance, on Tuesday, October 26, 1869. His health and mind had been failing for two years. He had been walking out late in the afternoon the previous week, thinly clad, as was his wont, and was chilled. Still, he went to church twice on the Sunday. On the Monday he had a pimple and swelling below the left nostril; felt ill; and on the Tuesday, when I saw him, the whole upper lip was very swollen, livid and purple, hard as a board, with a tendency to spread up the left cheek. He was a little feverish, the eyes were yellow from bile, and the tongue much furred; his pulse 80—naturally about 60. I put a poultice on the lip, and prescribed three grains of ex. coloc. co., and one grain of blue pill, to be followed in four hours by a tablespoonful of castor-oil, and an effervescing draught of ammonia and lemon-juice every four hours.

On Wednesday, the 27th, Mr. G. R. Tatum went with me in consultation. The patient looked a little better, had a fair night, but some trouble with the poultice. The bowels had been well relieved of a large, dark, bilious motion; the water had in it some lithates; his complexion was clearer, and there was some reaction and increase of pulse; the lip seemed softer, and here and there a small pustule like acne. We applied olive oil freely; continued beef-tea and milk, with arrowroot, and added a little wine, and the effervescing medicine was continued.

On Thursday, the 28th, we found him not so well. He had had a bad night, was more feeble, and in danger. We gave him more wine, tincture of cinchona, and sal volatile every four hours, and fed him with a little minced chicken. The swelling, lividity, and hardness had extended up the left cheek; the lower lip began to swell, and there were more wandering and confusion of ideas than usual during the last two years. Dr. MacEwen, his usual medical attendant, arrived from Chester, confirmed the treatment, and remained with him. The urine this day was of specific gravity 1016, acid, with a little sugar and albumen, and a deposit of epithelium.

On Friday, the 29th, we went over and met Dr. MacEwen. Bad night, weaker; still able to walk from one room to another; restless, a little picking of the bedclothes. No alteration of treatment, except using ice, brandy, champagne, etc.; but we considered the case hopeless.

On Saturday, the 30th, I met Dr. MacEwen. Patient was weaker, but able to get in and out of bed unassisted. The eyelids were swollen; both cheeks involved, hard and purple; a few minute pustules on upper lip; mind more confused. Pulse about 80; flagging, and less food able to be given.

Sunday, the 31st.—The patient died about half-past eleven in the evening. Dr. MacEwen told me that he had had diabetes the last three years.

I will add a few remarks. Sir James Paget, in a lecture on "Carbuncle" in the *Lancet* of January 16, 1869, says at the conclusion—"Speaking of the mortality of carbuncle, however, I must remind you that I am not speaking of a disease which sometimes passes under the name of carbuncle—'the carbuncular inflammation of the lip,' which sometimes occurs in young people, a disease which you may not have seen, and may pass many years without seeing. It was described by a former house-surgeon of this hospital, Mr. Harvey Ludlow, as malignant pustule of the lip. Dr. Budd, of Bristol, has also so described it. Commencing at one spot, inflammation of the whole lip follows and spreads to the face, and then disease of the lymphatics ensues, with pyæmia as its consequence. It is a disease so unlike carbuncle that it ought not to be known under the same name. It seems to me not like the accounts given of the malignant pustule abroad, and I have seen no other disease like it in England. It attacks especially young persons from fifteen to twenty-one, and of fifteen cases that I have seen only one recovered. That disease is not carbuncle, nor is the mortality of that disease to be counted in estimating the mortality from carbuncle. Ordinary carbuncle on the lip and face has none of those special characters, and is not more fatal in those situations than in any other."

I have given this extract from Sir James Paget's lecture as bearing upon the three cases that I have narrated. I believe them to be similar to the disease which he describes as the "carbuncular inflammation of the lip." My cases differ, however, in the absence of any visible affection of the lymphatics, and also in the absence of the sequelæ of pyæmia, such as deposits of matter in different parts of the body, etc., though probably the cases ran too rapid a course, in time, for such to occur. The symptoms were like pyæmia in its severe form by the great oppression of the powers of life, the rapid poisoning of the blood, the early delirium and prostration of the nervous system, the early congestion of the lungs, and embarrassment of the circulation, with apparent hopelessness of the cases from the beginning.

2ndly. They differ with regard to age. Sir James Paget states that it occurs especially in young persons from fifteen to twenty-one, whilst mine were respectively thirty-three, thirty-four, and seventy-four; and in the case related in the *Medical Times and Gazette* of October 5, 1872, of Dr. James Chatterton, Assistant-Surgeon of the Scots Fusilier Guards, who was twenty-eight.

The prominent features that I noticed in my cases were that they occurred in either the setting in of severely cold weather at the commencement of the winter season; biting north-east winds with frost or snow, as in the last two cases; or during such weather as in the first case, which was in February, but I cannot remember whether it was then after a mild winter up to that period. This fact would ally the disease more to erysipelas, as the latter is more prone to occur in weather of this description.

3rdly. There was in each case a predisposing cause of debility—in the first, of continuous hard work with a lowered diet by recent and sudden discontinuance of stimulants; in the second, a widow, of trouble and mental worry with respect to property and anxieties about law; and in the third, the debility arising from feeble health from advancing years, in a naturally weak constitution.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF PARTIAL CONVULSION FROM ORGANIC BRAIN DISEASE, BEARING ON THE EXPERIMENTS OF HITZIG AND FERRIER.

(By Dr. HUGHLINGS-JACKSON.)

(*Continued from page* 94.)

Case 19.—*Convulsions mostly beginning in the Right Leg—Several Years later Right Hemiplegia and Aphasia—Late Onset of Double Optic Neuritis—Autopsy—Tumour of the Left Cerebral Hemisphere.*

The subjoined report is a very brief abstract of voluminous notes. The patient was under my care for about three years. For a long time he had epileptiform seizures only; he had no symptoms of tumour, no severe headache even, and, although his eyes were examined many times, optic neuritis was not discovered until very late in the case. Clinically, the case is very important as regards the diagnosis of tumour. Considering the absence of headache and of neuritis, and that the man had had fits of one kind for seven years before he came under my care in 1872, I did not diagnose tumour until late in the case. I did not make this diagnosis confidently until the neuritis set

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in. Then I thought the tumour was syphilitic; for it is in my experience that the association of double optic neuritis (with or without defect of sight) with unilaterally-beginning convulsive seizures is very strong *empirical* evidence for the diagnosis of syphilitic disease of the brain.

John B., aged thirty-seven, soldier, first came under Dr. Hughlings-Jackson's care in June, 1872; died March 29, 1875. His family and personal history were inquired into, and presented nothing worthy of remark. There was no definite history of syphilis. His first fit occurred at Gibraltar, ten years before his death, while working hard in a hot sun. From this time the fits occurred once every six or eight weeks for about six years; and then became more frequent, until, when he first came under care, he had only three or four days' interval. All these fits were of the same character, and were described by himself with great minuteness, as will be seen from the following abstract. First, he felt a sensation just at or in front of the anterior superior spinous process, which passed to the back of the great trochanter, then down the outer side of the thigh and leg to the heel. This sensation varied in character, being in one place a pain, in another a cramp, and in a third a tingling, and in others, again, combinations of these. When the sensation reached the heel it passed down the foot, and simultaneously the foot was extended and inverted, the hip and knee were flexed, and the thigh abducted so as to bring the heel nearly in contact with the left knee. After this the tingling passed up the inner side of the leg and thigh, over Poupart's ligament, up the side of the abdomen and thorax to the pectoralis major; then that muscle contracted, then the biceps and the forearm muscles. He alluded to some sensation passing back up the arm, but could not give any distinct account of it. However, after the arm had been involved, a feeling of tingling passed up the side of the neck to the head and round the head at the level of the forehead. When this sensation reached the head, the face was turned towards the right shoulder. Then, if not before, consciousness was lost. He was told that subsequently the head turned strongly to the right. The right side of the face became dusky, and he struggled a little.

After the leg had drawn up, and before the sensation had returned up the leg, there often occurred a series of flexion and extension movements, chiefly at the knee, and, after the sensation had gone up the leg, the whole limb became stiff and dead. When touched on it, he could not feel the touch. There was no sensation passing down the arm, but as it became stiff it also became dead and insensible.

When he regained consciousness, the head was straight, but the arm and leg were still stiff and dead (the leg fully extended, the arm nearly) and insensible. Almost immediately the arm began to regain power; first the shoulder-joint became movable, then the elbow, then the fingers. Simultaneously the sensibility of the limb returned. The recovery of the leg took place after that of the arm, and all parts of the leg seemed to recover at the same time. Sensibility returned with motion.

There were slight variations in the details of the fits, but this description would answer generally for them all.

In June, 1874, he again came under care, and then the fits, besides being very numerous, showed great variations both in completeness and general course. As a rule, they began in the thigh and passed down the leg, the feeling of numbness and the quivering being simultaneous. After the leg was involved, the sensation passed up his right side, and then *down* the right arm, which sometimes became dead only, and sometimes was involved in the spasm as well. After affecting the arm, the sensation "would go into his head," and then he would lose his senses. *Very frequently the leg only was affected.* As soon as he felt a fit coming on he would call out for some one to hold him, at the same time sitting down on the floor. The nurse would then press his thigh against the ground with all her force, and this usually arrested the fit.

Occasionally the fits *began* in the arm; and then they sometimes began in the shoulder and went down, sometimes in the fingers and went up the arm. When the fits were confined to one member he retained consciousness, but when they spread widely he became insensible. There was always loss of power in the affected members after the fits.

He got a good deal better, and left the hospital, but in October he returned, as he was getting worse. He now had fits daily, some beginning in the foot and travelling up; others in the groin and passing down; and similarly in the upper extremity. The loss of power which had always occurred after each fit now *began to deepen into a permanent paralysis*, which was always much worse directly after a fit, and then slowly improved until the next outbreak. The amount of improvement was roughly proportioned to the length of the interval between the fits. The leg suffered more than the arm, more absolutely and very much more in proportion. The upper part of the arm suffered very much more than the hand. Speech, articulation, and voice remained good. Sensation was slightly dulled on the right side.

On November 11, 1874, he had several fits, and in one of these he became, for the first time, aphasic. He pointed to his mouth and to his right hand, and lifted the latter with the left to draw attention to it. He spoke well after the fits. After this he usually became speechless in the fits. Sensation now became very defective on the right arm and leg.

Towards the end of November he began to show signs of aphasia in the intervals of the fits; he spoke slowly and with very great care. He made no mistakes in words, but used approximate expressions.

On December 11 the patient became rather suddenly aphasic, without having had any fit—*i.e.*, an obvious seizure. The aphasia was quite complete, below even "Yes" and "No." He could only mutter inarticulate guttural sounds. He indicated by pointing to his cards and to the ink that he wished to write, and arranged the pen in his left hand by the help of his teeth, but was unable to produce anything but some scrawling marks. He used his tongue to lick his lips. (This and other facts show that his articulatory organs were not paralysed.) He improved a good deal the next few days, but from this time remained very decidedly, but not completely, aphasic until his death.

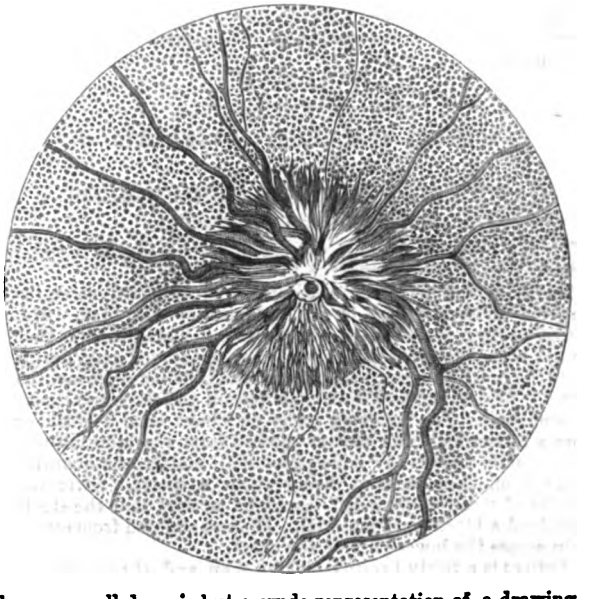
The fits now became very much less numerous, and he settled down into a chronic condition. The right arm and leg, now completely paralysed, became rigid and slightly wasted also.

On January 6, 1875, the only movement he could perform with the right leg was to lift it off the bed and keep it poised in the air. He could not move the knee, ankle, or toes in the least. Nevertheless, at this time he could walk five or six yards unassisted.

About the middle of February he was found to have double optic neuritis. He very rarely complained of headache, and then only when asked. Neither had he any vomiting during the time he was in the hospital.

His vital functions continued good, but he gradually became more and more defective in mind, and after a slight fit he died comatose, March 29, 1875.

The subjoined is a woodcut of the ophthalmoscopic appearances as delineated by Burgess. A woodcut of optic neuritis,



however well done, is but a crude representation of a drawing by Burgess. A chromolithograph of optic neuritis by this artist is published by Dr. Hughlings-Jackson in the *West Riding Asylum Reports*, vol. iv. This woodcut, it must be

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repeated, gives only a very crude notion of the actual changes to be seen ophthalmoscopically.

Autopsy.—Report on Brain by Dr. Gowers.—A large soft flabby tumour occupied the upper and hinder portion of the left frontal lobe; size from within outwards two inches and a half, from before backwards two inches. Behind it was overlapped by the narrow edge of the convolutions which lay on its margin. The posterior limit of the tumour was at the fissure of Rolando which bounded it for an inch and a half from the middle line, for which space no ascending frontal convolution was visible; the convolution then appeared, at first narrow, and lower down spreading out over the lower edge of the tumour. The extent of the tumour forwards was to the middle of the frontal lobe, and over this area it had involved the posterior part of the superior frontal and a small portion of the middle frontal convolution. The growth appeared on the inner surface of the hemisphere for a space of two inches from before back, and half an inch from above down. Below it, however, was a part of the marginal convolution, compressed, and below that the calloso-marginal fissure, so that it appeared to have displaced rather than invaded. On section the tumour was found to have extended into the substance of the hemisphere. Its transverse section was rounded in outline, 1¼ inch in transverse, 1⅛ inch in vertical diameter. Its antero-posterior diameter was 2¼ inches. It was surrounded by no capsule. Its outline was sharply defined, and the fibres of the white substance curved round it. Its substance was soft, clear, semi-translucent, almost jelly-like, reddish in tint, mottled with vessels. On its surface was a thin membrane (pia mater).

The microscopical structure was peculiar. It was composed of cells, for the most part large, which lay close together, separated only by a little granular material and broad clear fibres. The cells were some round, but most fusiform or flask-shaped, and the latter had always one, often two or three, processes resembling exactly the fibres which coursed between the cells, and which were probably derived from the processes. The largest cells were $\frac{1}{1300}$th of an inch in diameter, the average about $\frac{1}{1500}$th or $\frac{1}{3000}$th of an inch. They contained few granules, and one or two small round, often indistinct, nuclei. Some of the fusiform cells were very long and narrow. No cells presented fatty degeneration.

The ventricles had evidently been considerably distended by fluid, and the right much more than the left (probably from the tumour preventing the distension of the left). Both posterior and descending cornua were opened out, especially on the right side. The corpora striata were equal and normal, but the right optic thalamus was somewhat flatter, and a little less consistent than the left. There was a little softening also of the anterior corpora quadrigemina. On the inner surface of the thalami and on the anterior corpora quadrigemina were some small extravasations. No second tumour could be found.

(*To be continued.*)

KING'S COLLEGE HOSPITAL.

GASTRIC ULCER—FATAL HÆMATEMESIS.

(Under the care of Dr. JOHNSON.)

[For the following notes we are indebted to Mr. George Batterbury, Medical Registrar.]

G. B., aged thirty-one, a painter, was admitted as an in-patient, under the care of Dr. Johnson, on March 8, 1875, suffering from symptoms of gastric ulcer. Patient states that he has been a temperate man, and always enjoyed good health up to the present illness, which commenced about twelve months ago. At first he suffered from constipation and periodic attacks of vomiting. The vomiting came on about once a week or once a fortnight. The matter ejected from the stomach was that usually known as "coffee-grounds" matter, the quantity vomited on each occasion being about a quart. After the attacks of "coffee-grounds" vomit, he noticed that the stools contained a black tarry material. He also suffered from severe pain across the lower part of the chest.

Patient is a fairly healthy-looking man, and at present does not complain of any particular symptom of illness. He has no pain after taking food. The bowels are constipated. There is no blue line on the gums or other symptom of chronic lead-poisoning. The tongue is slightly furred. The urine is acid; contains no albumen. To take the following draught three times a day:—℞. Quiniæ sulph. gr. j., tinct. nucis vomicæ, acid. hydrochlor. dil. āā ℥x., syr. zingib. ʒss., aq. ad ʒj.

March 16.—Has had no attack of vomiting since his admission to the hospital. Takes his food regularly, and sleeps well. Bowels still constipated.

18th.—Bowels acted after a simple enema, which brought away a quantity of scybalæ; afterwards a little blood was evacuated.

25th.—There has been no vomiting; still complains of constipation.

27th.—As there had been no return of vomiting or other urgent symptoms since his admission, now nearly three weeks, the patient was allowed to leave the hospital.

29th.—Returned to the hospital suffering from an attack of hæmatemesis; was admitted at once. Ordered to suck ice constantly, and full doses of gallic acid and perchloride of iron were given alternately every hour. The hæmorrhage could not be stopped, and the patient gradually sank, and died a few hours after admission.

Post-mortem.—The organs generally were healthy. At the cardiac end of the stomach, just below the œsophagus, an ulcer about the size of half a crown was found. In it there was a perforation about the size of a fourpenny-piece; otherwise, the walls of the stomach appeared to be healthy. The peritoneum was everywhere highly injected, but there was no lymph effused.

CASE OF INJURY TO THE HEAD FROM A FALL—ESCAPE OF CEREBRO-SPINAL FLUID—RECOVERY.

(Under the care of R. YOUNG, F.R.C.S. Ed., Hong-Kong.)

Having observed that a series of cases of injury to the head have been reported in your columns, from the practice of the London hospitals, I have deemed the following of sufficient interest to place on record:—

I was called on September 14, 1874, to attend a boy aged two years and a half. When amusing himself with his sister on the landing of a staircase outside the house, part of the railing gave way, and he fell into the court below, a depth of about sixteen feet. When taken up, he was quite insensible, and blood was coming from right ear and both nostrils. Such was the history I received on my arrival about an hour after the accident. He was then in a semi-conscious state, and lying on his mother's lap; whenever his position was altered he screamed and avoided the light. There was a bruise on the right parietal bone, about an inch and a half above the ear; there were also several scratches on the right shoulder. Blood mixed with a clear fluid was coming from the right ear. Ice was applied to the head, and as his bowels were relaxed before the accident, nothing else was done further than ordering the room to be kept dark and quiet.

September 15.—Slept quietly during the night for four hours; is not so irritable. No blood coming from ear, but the clear fluid continues to run away in small quantities. He has a great objection to having the ice applied to the head, and as there is very great improvement in his condition when compared with previous day, the ice is ordered to be applied only in the event of his becoming worse, because when he cried the clear fluid came from the ear in increased quantity.

16th.—Much better to day; will not lie in bed; walks about the house from room to room; staggers a good deal; has to be watched lest he fall.

17th.—Discharge from ear nearly stopped; sleeps well; and with the exception of a little giddiness is nearly all right again.

20th.—Quite well, and running about as if nothing had ever been the matter.

Total Excision of the Larynx.—Besides the four operations enumerated in our last number, there has been a second operation performed by Billroth, on November 11, 1874, the patient dying on the sixteenth day of pulmonary complications. Dr. Bottini, of the Novara Hospital, also practised it on February 2, 1875 (*Gaz. Med. Ital. Lombardia*, 1875, No. 17). This last patient was doing well at the time of the report, at the end of February. Thus altogether this desperate operation has been performed six times.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 4, 1875.

HUMAN PROGRESS.

Probably the most generally interesting and attractive of all the addresses delivered at the late meeting of the British Association for the Advancement of Science was that given by Professor Rolleston as President of the Department of Anthropology. Sir John Hawkshaw, the President, confined himself in his able address to a review of the origin and the work of the profession in which he has himself attained to such eminence. He peered but little into the future, and when, in speaking on so interesting a subject as safety of railway travelling, he did touch on the probability or possibility of any diminution of liability to accident, his observations were not encouraging. He, a great railway engineer, appears rather to postpone any marked gain in this respect to a time when the public will be content to travel slowly, and when the human race shall have so improved that neglect, inattention, and fallibility shall be unknown. Meantime he offers us for consolation a remark which, he believes, was made by a former President of the Board of Trade to an alarmed deputation who waited on him on the subject of railway travelling, to the effect that "he thought he was safer in a railway carriage than anywhere else"; and a calculation that, according to present railway statistics, "there is only one passenger injured in every 4,000,000 miles travelled, or that, on an average, a person may travel 100,000 miles each year for forty years, and the chances still be slightly in favour of his not receiving the slightest injury." We hope this may comfort the average traveller. But the subject of Professor Rolleston's address was Man, and included considerations on the moral improvement of the human race, the duties of the present generation, and the hopeful prospects of those who are to come after us.

A large part of his discourse was devoted to craniology and craniography, and being at Bristol he was naturally, and of just necessity, led to speak of Pritchard, the "father of modern anthropology," whose works, he said, like the works of Gibbon and Thirlwall, the historians, "retain a lasting value, and will remain as solid testimonies to English intellect and English capacity for large undertakings as long as our now rapidly extending language and literature live." The increase of knowledge, he remarked, may supply us with fresh and with stronger arguments than Pritchard could command for some of the great conclusions for which he contended, and may have enabled many a weaker man than he was to bind into more readily manageable burdens the vast accumulation of facts with which he had to deal; but still "his works remain, massive, impressive, enduring—much as the headlands along our southern coast stand out in the distance in their own grand outlines, while a close and minute inspection is necessary for the discernment of the forts and fosses added to them, indeed, dug out of their substance in recent times." From this, Professor Rolleston proceeded to speak "of the possible curative application of some of the leading principles of modern anthropology to some of the leading errors of the day," and to show how positively the modern study of human progress—that is, the study of anthropology—refutes the delusion that man has degenerated and is degenerating. He did not deny that at times, as when we contemplate "the heroic conduct of Joab and Hector," it is possible to give way to the temptation to think that we "are living in a certainly deteriorated and a surely deteriorating age," and to hold that the old times were better than the present. But these were great and brilliant exceptions, standing out in history, and handed down to us because they were exceptions, while, as the Professor said, the true and scientific method of comparing the times of old with modern times is "the simple method of taking averages, and the simple rule of enumerating all the circumstances of the case."

Professor Rolleston did not speak especially of man physically, but it may surely be said also that, tested in the same way, the assertion, not seldom made, that man has degenerated physically, is shown to be without any solid foundation. The physical conditions of life have improved, and man is better fed, better clothed, and better lodged than in the times of old. His own physical powers ought, then, according to all that we know and teach of the conditions favourable to health and strength, to have improved, not degraded; and so far as we know, man is at least as big and as powerful as in any former historic period, while life is undoubtedly stronger and longer. As to great and noble actions, these, said the Professor, "when we come to count them up, were not, after all, so very common in the olden times, and side by side with them there existed, and indeed flourished, practices which the moral sense of all civilised nations has now definitively repudiated." This was illustrated by examples from the history and life of the old Romans, and it was pointed out that "much of what was most cruel, much of what was most foul in the daily life of the time, had the sanction of their State religion, and the endorsement of their statesmen and emperors to support it." Continuing the same strain of thought, the Professor concluded his most able and eloquent address by observing: "Though then, as now,

> "'Mankind were one in spirit,'

freedom of intercommunication was non-existent; no one could have added to the words just quoted from Cowell their complemental words,

> "'And an instinct bears along,
> Round the earth's electric circle the swift clash of right or wrong.'

The solidarity of nations had not, perhaps could not, have been dreamt of, the physical pre-requisites for that, as for many other non-physical good, being wanting. Under all these disadvantages, men were still found who were capable of aspiration, of hope for, and of love of better things; and by constant striving after their own ideal, they helped in securing for us the very really improved material, mental, and moral positions which we enjoy. What they did before, we have to

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do for those who will come after us." It may be true that, as has been somewhat cynically remarked, Professor Rolleston's audience can hardly have found anything new in what he told them; but it is at least well that things known should sometimes be re-stated and illustrated with such clearness and force.

THE ORIGIN OF CANCER.

Dr. Creighton's "Anatomical Research towards the Ætiology of Cancer," in Mr. Simon's late Report on Scientific Investigations, would appear to be one of the most important contributions that have been made for years on the subject of malignant growths. It is not simply that a number of new facts concerning cancer have been satisfactorily determined: the problem of the origin of the disease has been attacked from an entirely new side, and the significance of certain appearances that had not escaped the acute observation of previous pathologists has thus been discovered. Further, by judiciously employing his results, Dr. Creighton has been able to examine and discuss the present conflicting theories on the origin and nature of cancer; and to construct a theory of his own, which, without compromise in any form, has reconciled much that previously seemed irreconcilable.

It is well known that there prevail at present two leading theories of the origin of primary cancer. One of these, held notably by Waldeyer, represents cancer of epithelial structures as a growth of atypical epithelium; while the other, maintained especially by Virchow, rejects the epithelial origin, and assigns the origin of the epithelial-like cells of the tumour to an epithelial infection of the connective tissue. Again, with respect to secondary tumours—for example, in the liver—the current explanations of their origin may be said to be two: the first, that the new growth is due to the multiplication of cells that have migrated to the part; and the second, that it is due to the transformation of certain pre-existing elements of the organ. Virchow, as is well known, adheres to the latter view, and holds that the connective and not the parenchymatous element of the part is the one that is transformed. There are thus two distinct problems to be solved regarding the ætiology of cancer—the origin of primary, and the origin of secondary tumours. That the two problems are most intimately related to each other is immediately obvious; as it equally is that their solution will to a great extent answer the broader question of the essential nature of cancer.

The originality of the course pursued in the present research is here to be noted. Reversing the ordinary plan of investigation, Dr. Creighton began by selecting for examination not primary but secondary tumours. There are two advantages in this choice. The beginnings of primary tumours are most difficult, or even impossible, to discover, for their seat has too frequently undergone previous morbid alteration. Secondary tumours, on the contrary, appear in organs, such as the liver, which are probably perfectly healthy otherwise. The tissue of these organs is a "neutral ground," on which the most various of malignant tumours may manifest themselves and display their characters; and further, especially if the liver is affected, numerous separate nodules may generally be found, exhibiting every stage of development.

Dr. Creighton states, to begin with, that he uses the name "cancer" in the sense, which it conventionally conveys in this country, of malignant tumour. He then proceeds to describe the plan that he has pursued in the investigation, and the results that he has obtained from the microscopic examination of secondary cancer of the liver. These we shall now give as briefly as possible.

It may be stated in a single sentence that the liver-cells are found to be transformed into cancer-cells by a process of vacuolation of their protoplasm, with other associated changes. The process of vacuolation, which, according to Dr. Creighton, occupies such an important part in the development of secondary tumours, has long been familiar to physiologists and pathologists, although it is only within the last few years that it has attracted the attention that it deserves. Histologists have carefully described the appearance of a vacuole or cavity in the protoplasm of a cell; the lateral displacement or even disappearance of the nucleus; the disposition of the protoplasm as a distinct wall bounding the vacuole (often with a signet-ring appearance); and the development within the vacuole of various important contents, fluid or solid. Many of the first bloodvessels in the embryo are thus developed, the vacuole-wall remaining as the vessel-wall, the cavity constituting the lumen, and the contents the blood. There is also good reason for the belief that the nucleus-cavity of the ovum is an ordinary vacuole, and that the first changes on the fertilised ovum are vacuolation of the protoplasm and its results. Now, these changes in the ovum have been generally described as "endogenous cell-formation," and, as Dr. Creighton points out, this is but another name for vacuolation. Virchow demonstrated, years ago, the importance of endogenous cell-formation as contrasted with ordinary growth by division, and we will again refer to the significance of the two processes. More recently, since Cohnheim's great discovery of cell-migration, the appearance of cells within a vacuolated or mother-cell has been otherwise explained. The view has been advanced that the contained cells have migrated into that position from without—perhaps from the vessels; and there is probably little doubt that this really may occur. The attractive speculation has hereupon been raised that wandering-cells, or at least some wandering-cells, are spermatic in their nature and effects; that they wander like spermatozoa until they find a suitable soil; and that, making their way into the protoplasm, they fructify it, and so determine the changes which the cell subsequently undergoes.

To return now to the results of the present research. It was found by Dr. Creighton, on carefully examining a secondary nodule in the liver with the naked eye, that its section presented an outer zone of a different colour; this was bounded internally by the tumour-tissue proper, and externally by normal liver-tissue. This zone was found to be "liver-tissue in a state of vacuolation." Vacuolated liver-cells occurred in every stage of development, and with various contents. The position of the vacuole-cells was *primâ facie* evidence of their relation to the formation of tumour-cells. But there was also particular evidence. The vacuole-cell either remained as a small, round, indifferent cell, which had occupied the vacuole-cavity; or it broke up in such a way that the peripheral thick mass became detached from the slender ring, the latter then atrophying, and the former remaining as a tumour-cell; or it became filled with a pale, granular protoplasm, constituting a tumour-cell. Now, all these cell-products of vacuolation were in relation both with the liver-cells and with the tumour-cells—in definite local relation with both. All the varieties were observed, as a rule, lying together, as well as giant-cells. Sometimes, again, the indifferent cells became connective tissue of one or other kind.

It cannot be denied that this is very powerful evidence in favour of an intimate relation between vacuolation and the formation of tumour-cells. Accepting it as sufficient, let us estimate the importance of the conclusion. Many years ago, Virchow, in speaking of cell-growth, introduced the terms *hyperplastic* (as a substitute for *hypertrophic*) and *heteroplastic*. He writes in the "Cellular Pathologie"—"Es sind in der Pathologie zwei gesonderte Typen der Neoplasie zu unterscheiden: der Wachsthumstypus und der Zeugungstypus." There is cell-formation by division, which is a hyperplastic process, the new cell being merely a repetition of the old; and there is endogenous cell-formation, which is a metaplastic process, the product departing from the type of the parent cell, and

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acquiring differential characters of its own. Now, in Dr. Creighton's cases, it "was found that the results of the vacuolation process in the liver corresponded with the results to be looked for from endogenous cell-growth." Among the resulting cells were found giant-cells, or spindle-cells, or columnar epithelium, each being different from the parent cell. "The law of the continuity of the tissues, which would have been observed in the purely hyperplastic mode of cell-formation, was abrogated by introducing the factor of endogenous cell-growth." It is unnecessary for us to insist upon the importance of this conclusion. By the pathologist it will be eagerly received and tested; by the disciples of the school of Virchow it will be accepted with natural hesitation, for it must give a rude shock to the cellular pathology.

The question next arises, How is this process of endogenous cell-formation induced in the liver? There is abundant evidence that primary and secondary tumours bear a distinctly genetic relation to each other. The primary precedes the secondary in point of time; a remarkable family likeness can, in most instances, be traced between them; and, what is even more significant, the process of endogenous cell-growth, by which the secondary tumour is developed, bears a striking resemblance to the first changes in the ovum after impregnation. For these several reasons, it must be granted that the influence of the primary or parent tumour may be assumed in any attempt to offer an explanation of the origin of the secondary. This influence is extraneous to the seat of the secondary growth, and Dr. Creighton has shown that it operates by the mechanism of endogenous cell-formation. We cannot but acknowledge the remarkable fitness of the comparison which Dr. Creighton finds himself entitled to draw between this extraneous influence and a spermatic influence; while we confess with him that the manner in which it is produced by the parent tumour is unknown. On the whole, it must, we think, be allowed that Dr. Creighton has established his theory of the origin of secondary malignant tumours on a sound physiological basis.

The application of the theory does not stop here; it may be extended to *primary* cancers of epithelial parts. We have already given examples of the occurrence of vacuolation in the normal organism, and there are many more that may be adduced. Thus the salivary and mucous corpuscles, and, to speak more generally, all "goblet-cells" found on mucous surfaces, are probably products or stages of vacuolation. The product of the process is often fluid, and called a "secretion"; but it may be solid—for example, spermatozoa,—or both, as in most instances it is. In every case it may be considered as the result of an endogenous cell-formation, and so essentially heteroplastic. The bearing of this conclusion on the question of primary malignant tumours soon becomes apparent. The fact that the product is in some instances solid or protoplasmic, and in others partly protoplasmic—as *e.g.*, in the colostrum-corpuscles—permits of the conclusion that "in the exercise of the glandular function there may be produced, on occasion, from the epithelium, elements that are not themselves true epithelium, and that are, in fact, heteroplastic." We have already referred in the beginning of this article to the rival theories of Waldeyer and Virchow on the origin of primary epithelial cancer. There has been gradually accumulating strong evidence in favour of Waldeyer's view, that epithelium is the point of departure; but it has remained for Dr. Creighton to reconcile with this the firm belief of Virchow in "the primary heteroplasie of all cancers." Dr. Creighton has shown by the preceding argument, that the cellular product of secreting epithelium should probably be regarded as no longer epithelium, but a heteroplastic product, and that by virtue of the law of endogenous cell-formation.

Important as are the results that we have reviewed, they are manifestly but a small part of what may be expected from a thorough investigation, from the same point of view, of the different glands of malignant growths connected with them. Dr. Creighton has promised to publish the result of such a research on the mamma and mammary tumours, and we shall look with much interest for its appearance.

A MEDICAL BRANCH FOR THE BOARD OF TRADE.

It has been suggested that the time has arrived when a medical branch should be added to the Board of Trade. The War Office, Admiralty, India Office, and Local Government Board are each provided with a medical department; and when it is considered that the Board of Trade is expected to be responsible for the sanitary condition of over 400,000 seamen, in addition to about 300,000 emigrants, annually, we think it may fairly be concluded that the promoters of such a scheme, at any rate, have much reason on their side. By the terms of the Merchant Shipping Act of 1874, no person is permitted to serve in the mercantile marine as medical officer unless he is a duly qualified and registered medical practitioner; but up to the present time the Board of Trade have taken no efficient means for insuring that the terms of the Act are complied with. This was only too well shown by a Parliamentary return obtained by Captain Bedford Pim, which we noticed on June 12. From this it appeared that during the last year more than two hundred unregistered medical practitioners were serving in the mercantile marine of this country, six of whom were nineteen, and eight only twenty years of age, so that at least fourteen persons entrusted with the treatment of disease could not possibly have had any sort of qualification to practise medicine or surgery. One of the sections of the Act previously quoted orders that in all cases of illness, injury, or death, the kind of illness and the treatment, if any, adopted shall be in all cases recorded in the official log-book; but no machinery exists, either at the office of the Registrar-General of Seamen or at the Board of Trade, for seeing whether this order is obeyed; and the fact is not denied that, in the vast majority of instances, no entry of the kind is made. Another section of the Merchant Shipping Act imposes a penalty on all who manufacture, sell, or offer for sale medicines or medical stores of bad quality; but here again the necessity for official supervision is shown, as no examination of medicine-chests is ever made by the Board or any of its officers. The great advantage of such supervision is evidenced from the following fact—that, as all lime- and lemon-juice shipped for the crews of merchant vessels is officially examined by the officers of the Inland Revenue, and afterwards mixed with a small proportion of alcohol, scurvy in the mercantile marine may be said to have been reduced by about 90 per cent.

The Act further provides for the proper accommodation of seamen; but, beyond the ascertaining and marking of the cubic space for each seaman, no means are at present taken to find out whether the quarters of the crew "are securely constructed, properly lighted and ventilated, properly protected from weather and sea, and, as far as practicable, properly shut off and protected from effluvium which may be caused by cargo, or bilge-water." About two years ago, when it was considered expedient to transfer to the Board of Trade the duties which up to that time had been performed by the Commission appointed to carry out the Emigration Acts, a staff of seven medical inspectors was arranged to examine emigrants on board ship just before starting, and also to see that all medicines and medical comforts were of good quality; but it does not appear that their powers are sufficiently stringent to enable them to object to any medical man even if his diplomas are not in order; neither have they any final control over the ventilation or hygienic arrangements of

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emigrant ships. The few facts which we have enumerated will, we think, be sufficient to show that the question of the addition of a medical branch to the Board of Trade has not been considered before it is required; and, further, that its adoption will be of immense advantage to the interests of the country generally.

THE WEEK.

PROFESSOR HUXLEY'S LECTURES.

We last week concluded a short series of lectures from the pen of one who ranks high among the most accomplished and original naturalists of the day. It is not, perhaps, too much to say that the papers on the comparative anatomy of some of the lower forms of animal life, from the same distinguished author, published in these columns more than twenty years ago, have remained up to the present day the best work on the subject. To students these notes must be simply invaluable. Their studies have for years been impeded by the want of a good text-book on the subject, but these lectures will now give them all they need desire.

TOPICS OF THE DAY.

The effect of the Public Health Act, introduced by Mr. Sclater-Booth and passed last session, will be to consolidate the laws already existing for the promotion of sanitary measures of all kinds. No fewer than twenty-nine Acts bearing on this subject have been passed since the Health of Towns Commission of 1846. As these had all been prepared at different times, by various hands, and with various objects, they naturally gave rise to much confusion, some redundancy, and many apparent contradictions. All this will be remedied by the Act which has recently become law; and whatever may be its deficiencies, it at least makes its provisions intelligible, and furnishes a safe basis for future amendments. Very little that is novel has been added to it, and the few changes which it has been thought expedient to make are unimportant; these latter principally deal with the reduction of expenditure, with explanations of terms previously considered doubtful, and with the transfer of some of the clauses from the permissive to the compulsory head. Sanitary districts are now divided into urban and rural—the former being limited by the sanitary jurisdiction of corporations, improvement commissioners, and local boards; the latter by that of boards of guardians. Every place will thus have its own sanitary authority, and no more, and no two sanitary authorities can come into collision. A clause is introduced which excludes Scotland and Ireland, and, generally speaking, the metropolis also, from its operations. The principal portion of the actual sanitary provisions are embodied in the third part of the Bill, which represents the main bulk of the Act, and comprises 131 clauses. It is divided into the following heads:—1, sewerage and drainage; 2, privies, water-closets, etc.; 3, scavenging and cleansing; 4, water supply; 5, regulation of cellar-dwellings and lodging-houses; 6, nuisances; 7, offensive trades; 8, unsound meat, etc.; 9, infectious diseases and hospitals; 10, prevention of epidemic diseases; 11, mortuaries. Each head includes the corresponding statutory regulations and the penalties by which they are to be severally enforced.

It will be interesting to note whether, in the future, as education developes itself more and more in this country, credulity and a belief in fabulous nostrums will eventually die out. We are prompted to indulge in this reflection when we notice that the amount returned to Parliament as realised by the stamp duty on patent medicines for the year ending March 31 last amounted to the enormous sum of £114,322 15s. 7½d. The revenue of the kingdom must undoubtedly be kept up, and it is, perhaps, not unfair to tax credulity and ignorance, but we should certainly prefer that public revenue were not derived from a source that not only largely drains the pocket but endangers health and life.

In a return of the Registrar-General's issued during the past month, the cause of the death of an infant in Sussex-road, Islington, was certified as follows:—"Diarrhœa six days, torpor of brain two days; blood-taint from bad drainage at seaside resort." In explanation it is stated that the infant had been staying at a home in Broadstairs where the water-supply was derived from a well which was impregnated with sewage.

The recent exploit of Captain Webb, who swam across the Channel from Dover to Calais, ran some risk of not being accomplished, through the fact of the swimmer having been stung by a jelly-fish, which occasioned him considerable uneasiness. It is rather singular to note that during the past week or two the Channel has abounded with these sea-nettles, and bathers along the coast have suffered proportionately. Several instances have occurred in which the individuals stung have become sick and faint, and after enduring much agony have been compelled to have recourse to medical treatment. We learn that one or two medical men who have examined Captain Webb pronounce his health to be not in the slightest degree impaired by the extraordinary fatigue to which he was so lately subjected; some excoriations on his neck, the result of the action of the sun and waves, are the only remains which indicate that he has just accomplished the longest swim on record.

The necessity for a Public Health Act (if, as one of its clauses indicates, it is to see that mortuaries are provided wherever required) was never more clearly shown than at a recent inquest held before Mr. Langham at the "Essex Head," Strand. The body had been taken out of the Thames by the river police that morning. It had been in the water fourteen days, but on being brought to shore at Waterloo-bridge, two hours elapsed before it was removed. It was then taken to a vault, the condition of which excited the strong disgust of the jury. The want of a mortuary for the heart of London was freely commented on, and several of the jury expressed an opinion that they would prefer being fined if they were to be called upon to serve on a similar inquiry. In the end they appended to their verdict a recommendation that a mortuary should be at once provided for the West Strand District, and the Coroner promised that the same should be sent to the Middlesex magistrates.

The President of the Local Government Board, Mr. Sclater-Booth, M.P., has nominated Mr. C. S. Read, M.P., Mr. R. Rawlinson, C.B., and Mr. C. S. Smith, C.E. (Assistant Engineer Inspector), to visit certain towns on the Continent for the purpose of inspecting and inquiring into the modes of town-sewering, house-draining, and the use of sewage. These gentlemen will proceed at once to Holland, to inspect the pneumatic mode of drainage as in use at Leyden and some other places. Berlin and Dantzic are also to be visited. In the latter town water is used; and the inquiry will be principally directed to the effect of frost during severe winters on the closets, the house-drains, and on the irrigated grounds. The sewers and sewage works at Frankfort-on-the-Main, at Paris, and at Brussels are also to be inspected. The inquiries both in this country and on the Continent are to be embodied in a report, to be presented to the President, so that when the question of river pollution is again brought before Parliament he may be in possession of information as to the most recent methods of dealing with sewage, whether mechanically, chemically, or for the purposes of agriculture. Edinburgh, Glasgow, Kendal, Birmingham, Wolverhampton, Rugby, Warwick, Leamington, Doncaster, Bedford, Banbury, and Tunbridge Wells have already been inspected.

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Last week, Surgeon-General Fraser, C.B., Principal Medical Officer at Netley, and the officers of the medical staff attached to the Royal Victoria Hospital, entertained Admiral Worden, Captain Franklin, and a number of the officers from the United States frigate *Franklin*, at a dinner in the great mess-hall of the Royal Victoria Hospital at Netley.

A curious discovery has just been made at St. Albans. In excavating for the foundations of some new buildings in the Verulam-road there, the workmen engaged have just dug up a number of ancient urns, which have attracted a considerable amount of attention. The first of these urns was discovered about two feet below the surface, and several others were found in close proximity. They were very rotten, and on coming in contact with the air several of them fell to pieces. Two, however, have been carefully preserved. The best specimen is made of common clay, seven and three-quarter inches in height, and eight inches in diameter. The contents of the urn were fragments of bone, and one human patella of the right knee. Another of the urns, which is made of a light-coloured clay, contained fragments of a human skull, so far as could be ascertained, with pieces of grey glass, and a small iron nail; each of the urns was about half-filled with bones, the upper part of their contents being mould. In the almost entire absence of ornamentation it is difficult to say whether these funeral urns are British or Saxon, but, if British, the date of their construction must be before A.D. 449.

The Irish Registrar-General's return for the second quarter of the year 1875, which has just been published, shows considerably fewer deaths than in the first quarter, though the number exceeds what was shown in the corresponding quarter of last year; the rate of mortality was equal to 19·1 per 1000 per annum. The excess of births over deaths in the quarter was 12,018, but the emigration of 22,555 persons from Irish seaports (11,762 fewer than the number emigrating in the corresponding quarter of 1874) turned the natural increase into a decrease of 10,537. Small-pox is stated to be still prevalent in Connaught, being widely spread by the practice of inoculation; every effort, however, is being made by the authorities to detect and punish those who have recourse to this practice. The deaths of no less than eleven centenarians were registered during the quarter under notice, two of whom were stated to be 105, one 108, and one 118 years of age.

The Oxford main-drainage works, which have been seriously impeded by the recent floods, are now being vigorously pushed forward. A dam has been thrown across the eastern branch of the Cherwell, the water pumped out, and the excavation beneath the river made ready for the reception of the large iron tubes, surrounded by concrete, which are here to take the place of brickwork. Another of the contracts has also been commenced, which will comprise the whole of the remaining works of sewerage and surface-drainage within the city. The whole of the works, when completed, will, it is said, render Oxford one of the most perfectly drained towns in the kingdom.

Sir Duncan Gibb has resigned his office of Physician to Westminster Hospital, in consequence of ill-health.

UNQUALIFIED PRACTICE.—A DOUBTFUL VERDICT.

Last week Dr. Hardwicke held inquests in the cases of two women who had died in childbed under the hands of unqualified practitioners. In the first case, a young woman twenty-four years of age died from shock consequent on inversion of the uterus immediately after the birth of the child. The deceased was attended by a midwife, who, when she found that the uterus was inverted, called in a Mr. Cobb, who is said to carry on a large practice in Islington as an accoucheur. He, however, did not attempt to deal with the case; and before a qualified practitioner could be called to the spot the poor woman was dead. The jury returned a verdict of "Death from natural causes," and exonerated the midwife from blame; but they were silent about Mr. Cobb. The other case was particularly painful, as a young woman's life appears to have been sacrificed simply because no competent assistance was within reach. Deceased was twenty-five years of age, the wife of a labourer named Swain, and resided in Chalfont-road, Holloway. She had engaged a Mrs. Watts to attend her in her confinement, but this person appears to have told the patient that she must decline to attend if labour came on in the night. Labour commenced about ten o'clock at night on the 24th ult., and an unqualified man named Byers, who practises at St. James's-road, Holloway, as an accoucheur, was sent for. He came and examined the patient, but left again, as he said his services were not then required. At two o'clock a.m. the pains came on much worse, and Mr. Byers was again sent for. He came and again examined the deceased, who was then suffering from severe hæmorrhage, but instead of doing anything in order to check it, he left the house to fetch assistance; and before he could return, the patient died. At the inquest, medical testimony was given to the effect that no attempt had been made to deal with the case scientifically, and that had proper measures been taken, both mother and child might have been saved. After some deliberation in private, the jury returned the following verdict:—"That the deceased died from excessive hæmorrhage during labour, and that death was accelerated by neglect and want of proper skilled treatment on the part of an unqualified practitioner." After the jury had delivered their verdict, the Coroner addressed Mr. Byers, and said that he was not sure that the verdict did not amount to one of manslaughter against him, and if that construction could be put upon it, he must take the consequences. An inspector of police, who was present, said that if the verdict had been one of manslaughter against Mr. Byers he would have taken him into custody at once, but with such a verdict as had been returned he could not do so without consulting his superiors. We believe that it has been decided by the police authorities not to prosecute Byers, as it is doubtful whether the verdict of the coroner's jury would justify them in preferring a charge of manslaughter against him. It seems very unfortunate that, in such a clear case as the above appears to be, Dr. Hardwicke did not direct the jury to record a verdict about which there could have been no doubt. The public safety demands that coroners' juries should not be afraid to return verdicts of manslaughter in cases where there is reasonable ground to suppose that human life has been sacrificed in consequence of persons assuming offices for which they have not been properly trained, educated, and qualified.

THE DENTAL PROFESSION.

On the 31st ult. a largely attended meeting of dentists practising in Manchester and the surrounding towns, and including representatives of the profession from France, London, Dublin, Liverpool, Brighton, and other places, was held in Manchester for the purpose of taking steps to improve the position of the dental profession. Mr. C. J. Fox, of London, editor of the *British Journal of Dental Science*, presided, and delivered an address in which he said that the present was the first meeting that had ever taken place in Europe for the general purpose of raising the social status of the dental profession. It had become evident that, notwithstanding the establishment of societies, hospitals, schools, and diplomas, there was a gradually increasing feeling that something yet was wanting to complete the establishment of dentistry in the honourable position in the public mind which it ought to hold. Protection was required for the legitimate dentist against the men who without the least previous training were daily entering their names in the public directories as surgeon-

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dentists. If that evil could not be wholly done away with, it could, he thought, be lessened in a very great degree. The plan proposed was that all existing practitioners should be registered; that no one should be able to recover fees as a dentist unless he were so registered; and that after a fixed date none should be registered unless they were in the possession of a diploma. As matters stood at present, the people had no means of distinguishing between the real practitioner and the man who, without the slightest qualification, placed a brass-plate upon his door and called himself a surgeon-dentist. Mr. Dennant (Brighton) moved, and Mr. D. D. Wormald (Bury) seconded, the following resolution:—"That it is desirable that a committee be formed to see what steps can be taken to arrest the continued influx into the profession of illegitimate practitioners by the adoption of the principles of registration and compulsory education." The resolution was passed, as were also resolutions requesting the chairman to take steps to secure the formation of a committee, and authorising the opening of a subscription-list to defray the expenses of such committee in making an appeal to Parliament next session upon the subject. More than £200 was subscribed in the room to carry out the purposes of the meeting.

THE DIAGNOSIS OF THE POSITION OF THE LESION IN FACIAL PARALYSIS.

In a paper on facial palsy of rheumatic origin, in the *Deutscher Archiv für Klin. Medicin.*, xv., s. 6, Dr. W. Erb gives some extremely useful hints for determining the exact seat of the lesion of the nerve in any particular case, which we reproduce here for the benefit of our readers. His method depends on observing whether certain special branches of the facial nerve are affected or not simultaneously with those supplying the muscles of expression:—1. If the posterior auricular nerve is involved, the lesion is inside the canal of Fallopius. 2. If the sense of taste is diminished or destroyed on the corresponding side of the anterior portion of the tongue, the lesion is above the point where the chorda tympani leaves the facial nerve. 3. If the sense of hearing is abnormally acute for low notes and also for distinguishing small variations in musical tones, the nerve to the stapedius muscle, which is given off above the chorda tympani, is implicated. 4. If paralysis of the soft palate can be detected, we may conclude that the lesion involves the trunk of the facial from the geniculate ganglion onwards towards the brain. The application of these rules to a large number of cases has proved, according to Erb, that in the majority of instances of rheumatic facial paralysis the seat of the lesion is lower than the point of origin of the chorda tympani, and that in the mildest forms only that part of the nerve is affected which lies outside the canal of Fallopius; for, being thus surrounded with loose tissue, it cannot be seriously compressed by the swelling of the neurilemma.

REPORTS OF SOCIETIES.

We this week publish the last report of the meetings of the chief medical societies during the past session. These reports we endeavour to make as complete as possible, and, at the same time, to publish them as regularly as possible; but the great point is, after all, to publish them. We should be glad to see them in our columns at the earliest possible moment; but it is much better to bring them before the world in a perfect condition than to rush into print full of blunders. The value of these reports consists in their continuity, and in giving the whole of the transactions of the societies, thus making available for future reference much valuable knowledge, which otherwise would be lost. What, for instance, would we not give now for such reports of the earlier meetings of the Royal Medical and Chirurgical Society?

ZIEMSSEN'S "CYCLOPÆDIA OF THE PRACTICE OF MEDICINE."

Many of the subscribers to this great work are aware that the volumes of the German edition are not being issued in regular succession—some of those treating upon subjects of greatest interest having the precedence, although numbered to conform to the plan of the entire work. It has been concluded to follow the same course with this translation; and, in compliance with the expressed wish of many subscribers, Volume X., Schroeder's "Diseases of the Female Sexual Organs," is now published. Volume IV. will follow on December 1, and Volume V. on March 1, 1876. The publishers desire to state that rumours of an intended change in the plan of publication are entirely without foundation. As already announced, this work will be obtainable only by subscription for the entire set of volumes. No single volume or series of volumes will in any case be sold. This Cyclopædia is now being published in the English, German, Dutch, Italian, and Russian languages.

SCOTCH REGISTRATION RETURNS.

During the quarter ending June 30, 1875, there were registered in Scotland 32,294 births, 19,518 deaths, and 6638 marriages. The estimated population being about that of London, viz., 3,495,214, the birth-rate has been 37 per 1000, and the death-rate 22·3 for the quarter. The latter is the lowest observed during the corresponding quarter since 1871, while the former is rather above the average rate. Of the total births 8·2 per cent. were illegitimate; and in the "registrars' notes" frequent reference is made to this subject, as thus—in different districts—"Illegitimacy very prevalent;" "Illegitimacy very high, average for some years past being about 8 per cent., while the figures in this return would give 28 per cent.;" "Illegitimacy literally 2 to 1;" "Registrar cannot state particularly, or with any definiteness, the reason for the unusually high illegitimate rate for the quarter. Two of the cases, however, had been imported, the *origo mali* being clearly chargeable to other parts;" and in other instances this importation of the illegitimacy is jealously noted. In some returns the note is, however, different. "This is the first quarter, for a long time, in which no illegitimate births were registered;" "Illegitimate column being blank is quite an unusual occurrence." The general marriage-rate was above the average. The registrar for Aberdeen appends to his return the following curious note:—"Two of the births registered in April are twins—one (a boy) born on March 25, and the other (a girl) on April 16; the latter died, however, on June 15. The only marriage recorded in May was arranged for the 15th, but unfortunately on that morning the bridegroom attempted to commit suicide by shooting himself. He recovered so far, however, as to wish the ceremony solemnised on the 16th, which was accordingly done, but he died on the 18th."

THE HOSPITAL SATURDAY FUND.

The promoters of the Hospital Saturday movement have not been particularly communicative since making their annual collection on July 31 last, but we hear that the "Fund" has been a greater failure this year than it was in 1874; indeed, it is reported that when all the money has been collected it will not amount to more than about £2000. It would be idle to speculate how much of that sum will be available for distribution among the London hospitals and dispensaries.

COTTAGE HOSPITALS IN DEVONSHIRE.

A meeting of the leading inhabitants of Ashburton, Devonshire, was held last week, when it was resolved to take immediate action with a view to establish a cottage hospital for that town and the immediate neighbourhood. Cottage hospitals have been founded, and are in successful working at the neighbouring towns of Newton, Dawlish, and Dartmouth.

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THE HEALTH OF MARYLEBONE PARISH IN 1874.

Dr. Whitmore, the Medical Officer of Health for Marylebone, has just issued his annual report on the health and sanitary condition of the district for the year 1874. The only items of the report which call for comment are those in which Dr. Whitmore states that, although there has been, up to the present time, a gradual diminution in the death-rate, upon the present occasion the mortality is greater; and the opinion which the compiler expresses with regard to the working of the recently passed Artisans' Dwellings Acts Bill, so far as it affects his own district, in which he says, "Taking the Act as a whole, it is undoubtedly one of great value, as it seems on the face of it to provide effectually for the removal of the wretched tenements, and the sanitary improvement of the close and confined districts in which the working classes of the metropolis are compelled to live; but the machinery for accomplishing all this does not commend itself to favour on account of simplicity,—it is cumbrous and intricate, and a long time, I fear, must elapse before it works easily and well."

THE PHARMACEUTICAL SOCIETY OF IRELAND.

The following is a list of the gentlemen to whom the Chief Secretary for Ireland has addressed a communication proposing that they should serve on the first Council of the Pharmaceutical Society of Ireland:—Mr. William Allen, Henry-street, Dublin; Mr. N. V. Bourke, Limerick; Dr. Thomas Collins, Dublin; Sir Dominic Corrigan, Bart., Dublin; Dr. William Fraser, Dublin; Mr. J. Goodwin, Dublin; Mr. William Goulding, Cork; Mr. William Harrington, Cork; Mr. William Hayes, Dublin; Dr. Hodges, Belfast; Mr. E. M. Hodgson, Dublin; Mr. J. T. Holmes, Upper Bagot-street, Dublin; Dr. C. Leet, Dublin; Dr. Rawdon Macnamara, Dublin; Dr. George B. Owens, Dublin; Mr. R. W. Pring, Belfast; Professor J. E. Reynolds, Dublin; Dr. Ryan, Dublin; Dr. Aquilla Smith, Dublin; Mr. C. R. C. Tichborne, Dublin; Mr. H. Whittaker, Belfast.

A UNIVERSITY FOR SIBERIA.

The new Governor-General of Western Siberia has sent in a report to the Russian Government, in which he complains of the great difficulty of obtaining educated men to discharge the duties of many important posts in the public service. There is especially a want of doctors, of whom it is reported there are not more than fifty in all Siberia. He recommends the immediate creation of a University in Siberia; and the Russian Minister of Finance is said to be greatly in favour of the scheme, and disposed to grant 250,000 roubles towards its foundation. The new University will most probably be located at Torusk, and consist of two faculties—law and medicine.

THE WORCESTER INFIRMARY.

The Executive Committee have reported that there is no reason for any alteration of the rules, "feeling confident that no unfair pressure will ever be put upon any member of the honorary medical staff in consequence of unavoidable absence from duty." The medical staff being, however, still dissatisfied, have intimated their intention of bringing the subject before a general meeting of governors. In the meantime the election of a successor to Dr. Inglis is to be proceeded with.

CONVICTION OF ANOTHER UNQUALIFIED PRACTITIONER.

At the Chester-le-Street Petty Sessions, yesterday week, Mr. Percival Hall, of Holmside, was charged under the fortieth section of the Medical Act, 1858, with having signed a vaccination certificate, he having no qualification entitling him to give such certificate. No attempt was made to dispute the facts, but on behalf of the defendant it was contended that the case did not come within the Act. The magistrates, after consultation in private, inflicted a fine of £10 and costs, and, on the application of the defendant's solicitor, granted a case for a superior court.

THE CHAIR OF MEDICINE IN ABERDEEN UNIVERSITY.

It is reported that Dr. Smith-Shand, Lecturer on Clinical Medicine in the Aberdeen Royal Infirmary, has been appointed to the Chair of Medicine in the University of Aberdeen, which was vacant by the resignation of Dr. Macrobin.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

The annual meeting of the British Association, which has been held at Bristol during last week and the present, has been tolerably successful, although there has been nothing particularly sensational in its proceedings. Among the addresses which are of special interest to our profession, that of Professor Rolleston, F.R.S., delivered in the department of Anthropology (to which reference is elsewhere made), should take precedence.

In the department of Anatomy and Physiology, on Friday, Drs. Brunton and Smith presented the report of the Committee on "Intestinal Secretion." The conclusions of the Committee are given in the following summary, with which they wind up their report:—"While a problem which has baffled so many previous investigators cannot yet be considered as solved, your Committee hope that these experiments can be considered to have proved the absence of influence on intestinal secretion through the splanchnic nerve, the pneumogastrics, the sympathetic above the diaphragm, or the spinal marrow, and the probable influence of the ganglia contained in the solar plexus, though certainly not in the semilunar ganglia exclusively. Also, the independent occurrence of hæmorrhage in paralytic cases appears to point to a separate influence on the blood-vessels and the secreting structures of the intestines."

In the Section on Economic Science and Statistics, on Friday, three very interesting papers were read, one by Dr. F. J. Mouat, "On the Value of European Life in India in its Political, Social, and Economic Aspects," in which the author contended that the risk to life in India of persons sound in constitution and moderately prudent in their habits is not so much in excess of that in temperate climates as to be a source of anxiety with regard to those who went to make a temporary sojourn in India. The other two papers were by Dr. Beddoe, F.R.S., one "On the Mortality of Adolescence," and the other "On the Systematic Examination of the Physical Characters of Men in Britain." The former contained some curious statistics. In the case of males, Dr. Beddoe attributed the excess of mortality to the strain to get a footing in life; and in the case of females partially to the want of care at the critical period incident to boarding-school girl life. In the second paper Dr. Beddoe briefly indicated, by reference to questions connected with the Factory Acts, recruiting, etc., the necessity from a practical point of view, and not from that of mere scientific curiosity, of obtaining more extensive and accurate information on the subject than either he or other labourers in the field had been or would be able to collect by their private and unaided investigations. He urged the necessity of making thorough and systematic inquiry into the rates of growth, the average stature, weight, etc., of men and women under normal or abnormal conditions, so as to have a starting point for future investigation and action.

In the department of Anatomy and Physiology, on Monday, Professor Cleland delivered an opening address, in which he contended that anatomy was no mere collection of disconnected facts, no mere handmaid of the physician and surgeon, or even of physiology. It was destined, as dealing with the most complex sequences of phenomena, to take the highest place amongst the sciences as a guide to philosophy. It was most of all in anatomy and physiology that the close connexions of matter with mind were brought under review, physiology exhibiting the relations of our own mental being to our bodies, and anatomy revealing a body of organised nature whose organisation points to a source of beauty and order beyond. Although experimental philosophy was probably less cultivated in this country than in any other in

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which biology is studied, it had been practically decided by Parliament that it was quite time to put some check on investigation in that direction; for, as everyone knew, a Royal Commission had been appointed to inquire into vivisection. In the scientific world all were agreed, whatever opinions may prevail in other sections of the community, that the man who would wantonly inflict pain on a brute beast was himself a brute, and deserving to be roughly handled; and because there was no difference of opinion on that subject, and because no experimental science could well prosper if one man was to judge for another what experiments were justifiable to institute or to repeat, or were likely to give important results, he deplored the clamour which well-meaning persons had raised, and regretted that it had been so far yielded to.

At the conclusion of Professor Cleland's address, Mr. W. J. Cooper read a very interesting paper, based on two memoirs presented to the French Academy of Sciences by M. Papillon, "On some Physiological Effects of various Drinking-Waters." After detailing the results of M. Papillon's experiments with artificial drinking-waters on rats and other animals, Mr. Cooper mentioned cases where horses had been poisoned by inorganic matter held in water, and discussed the effect of such water on human beings. It is known that goître and other throat and glandular affections, and even idiocy, have been attributed to inorganic salts in drinking-water. The human system is easily deranged by a change in the drinking-water. The spa and chalybeate waters at the favourite places of resort have been renowned for ages for their medicinal virtues. If the entire organic structures of the human body are liable to alteration when excess of mineral matter is introduced into the system, it is essential that health-seekers at these medicinal springs should place themselves under medical supervision. And one of the first considerations in the inauguration of a water supply should be to insure a perfect freedom from excess of any mineral except those comparatively harmless ingredients—chloride of sodium and carbonate of lime.

Sir Robert Christison has been elected President of the Glasgow meeting, which will commence on September 6 next year. The 1877 meeting will be held in Plymouth.

THE SHAKERS.

(*From a Correspondent.*)

I was visiting some friends in the south of Hampshire last week, and eagerly availed myself of an opportunity of seeing the so-called "Shakers." These people are, as is pretty well known, making an experiment in political economy, and living under a kind of theocracy of their own devising, amongst the "Gentiles" (if I may use their own word for designating ordinary Englishmen). After having been turned out of one or two places, they are now encamped in a field in the parish of Hordle, about midway between Christchurch and Lymington, on the outskirts of the New Forest. Four large tents are erected, consisting each of a light wooden framework covered with white calico. This may stave off the wet, but will be a miserable protection against the cold. In spite of its flimsiness, I was surprised to find it an effectual barrier to ventilation, for the air inside the tents was nauseously frowsy with the odour of breath and perspiration. The members of the community are said to be 119 in number, including thirty children; one tent seems allotted to these as a sleeping-place, one to men, and two others to the women. They repudiate the title of "Shakers," which they say is a name that has been given them by the Gentiles, and call themselves "Bible Christians," or "God's Own People." They are under the direction of a Mrs. Girling—a tall, spare, powerful Meg Merrilies, whose upright figure, black hair, and flashing eye seem to indicate nervous energy exaggerated so as to border on insanity. They seem to live on the produce of a field planted with vegetables, and on the contributions of the Gentiles, who are attracted in considerable numbers by the singularity of the spectacle, and who have the opportunity given them of dropping something into a money-box placed near the entrance. The tents are occupied by day as workrooms; some women were ironing their clothes. One man was mending boots, others were patching old garments, some digging potatoes; their dress was of the ordinary sort, but shabby. The young women wore a Bloomer costume—for economy's sake, we are told. "Mother" Girling, as they call her, was quite well dressed in black silk with a gold chain, and occupied one end of a tent furnished with something like comfort. The people say they follow her; but she denies all responsibility, and merely affirms that they are brought to her by the Lord God. The theory of both the "Mother" and the community is, that they are specially elected by God; that they are exempt from sin, and from all evil; that their food and dwelling and all other necessaries will be given them by God, and that if He does not supply them, they go without contentedly. They profess themselves to be exempt from death, disease, and accident. Some say that they have already passed through death. They also profess that they believe in the hourly coming of the day of judgment and end of the world, and that, therefore, all attention to mundane affairs is foolish and unnecessary. On this account they abstain from begetting children, and say that husbands of their sect lived apart from their wives long before they joined the community. Lastly, in reply to all argument, they affirm that they are "taught of God," and that whereas there may be room for instruction in the case of other people, in theirs there is none, for all truth is revealed to them by God. They are profuse and voluble in quoting such "texts," as they are vulgarly called (*i.e.*, such isolated fragments of the Bible), as seem to support their doctrine and practices.

Several interesting medical questions arise from the consideration of these fanatics, apart from the social and political puzzle of their mere existence in this age. Their health appeared good, and there were no signs of anæmia or starvation. In complexion they have the peculiar ruddiness that I have noticed in "casuals," Hyde-park prostitutes, and the like livers in the open air. How they will withstand cold, wet, and frowsiness remains to be seen. They are not mad, although what they say is usually what is told one by a poor fellow in a lunatic asylum who believes himself to be the Holy Ghost; but, granting their fundamental doctrines, which are a burlesque and caricature of some parts of Christianity, their practice is consistent. How long, too, the separation of the sexes will be maintained is a point I am unable to prophesy, nor how the community will hang together if sickness and hunger prove to them that they are not, as they believe, exempt from "the law," in its physical department.

FROM ABROAD.

A Visit to Davos.

Under the above title Dr. Vacher gives, in the *Revue Médicale* for July 26, an account of a visit he paid last winter to the invalid stations of Switzerland, in order to examine into their asserted suitableness as a winter residence for the subjects of phthisis. Or rather, he attempted to visit them, since, owing to the great fall of snow which took place last winter, he found himself unable to proceed beyond the station of Davos in the Grisons canton. Although unable to reach the Engadine, he considers all he has to say about Davos is also applicable to Samuden, Pontresina, St. Maurice, and the other stations.

It is well known that in South America the subjects of chest affections are sent, with advantage, from the coast to the most elevated stations of Mexico and Chili; but in the highest of these the mean temperature does not sink below 15° C., while in those of Switzerland it remains constantly below zero. It is true that the celebrated Dr. Lombard, of Geneva, has written an important work in which he gives many details as to the curative agency of the mountain air, but with such incredulity were his statements received in France, that so unprejudiced a person as M. Dumas, the Secretary of the Academy of Sciences, on presenting a copy of Dr. Lombard's work, contented himself with saying that the author thought that he could cure phthisis by sending the subjects to an altitude of 1500 metres.

According to different authorities, the village of Davos is situated at 1556 or 1650 metres, and it is so surrounded by mountains that the sun is only visible from 9 a.m. to 3 p.m. The earth is covered by snow to the depth of two or three metres from November to April—*i.e.*, during the whole time of this "mountain cure." Switzerland at the present time possesses more than fifty stations at which regular meteor-

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ological observations are registered; and these are very carefully made at Davos, especially as regards the temperature. It results from these, conducted during ten years, that during the five months from November to March inclusive the mean temperature is −4·82° C. (23·8° F.), the thermometer often descending during the night to 25° C. (−13° F.) below zero. But these thermometrical observations are made in the shade towards the north, and when the thermometer is exposed in the sun towards the south very different results are observed. To give an idea of the power of solar radiation at this altitude of 1600 metres, the observations made here with a blackened bulb may be compared with those made at Paris on December 30—that day being quite clear and cloudless in both places. At the observatory of Montsouris, Paris, the maximum temperature on exposure to the sun was 19·9° C. (68° F.), the minimum temperature in the shade being −5° C. (23° F.). At Davos the maximum was 43° C. (109·4° F.), and the minimum −18·3° C. (0·4° F.). Dr. Frankland, who was at Davos in the winter of 1873-74, repeated De Saussure's celebrated experiment of placing a thermometer in a small wooden box surrounded with black cloth, and covered by a piece of glass. The thermometer attained 105° C., so that the unconcentrated rays of the sun served to raise the temperature 11° above the water-boiling point of that altitude.

The characteristic of the temperature of Davos, then, is its great elevation in the sun coinciding with its great depression in the shade. The intense solar radiation is explained by the relatively minute proportion of vapour held in solution by the air at this altitude. Tyndall has shown by his beautiful experiments that air saturated with moisture absorbs eighty-six times more caloric than dry air; and so little obscured is the atmosphere of Davos by clouds that the sky not infrequently remains absolutely pure for weeks together, a splendid sun shining the whole time. Between October 23, 1870, and February 28, 1871, there were counted at Davos sixty-four very fine days, on which the patients were able to walk out in the sun, while during the same period there were only twenty-three such days at Paris. It is this atmosphere, exempt from all mist, and especially this temperature of 40° or 50° C. (104° to 122° F.) in the sun, that explain how persons with organic affections of the respiratory organs can remain at Davos. Prior to sunrise, the temperature is as low as 15° or 20° C. below zero, and there would be great danger in patients being exposed to this. They are therefore confined to their rooms, which, by means of double doors and windows and warming apparatus, are maintained at a temperature of 15° or 20° C. As soon as the sun's rays illuminate the valley the patients issue out, often clad in very light garments; and curious is it to see them on the snowy carpet protecting themselves by umbrellas and panama hats from insolation, which at this altitude is dangerous. At about three o'clock all disappear to avoid the danger of the sudden change of temperature about to take place.

Illegal Midwifery in France.

We have heard a good deal lately of the necessity of educating midwives, and the example of what is done in France in this respect is often held up for our imitation. Certainly, the means of education existing there are ample, and there are laws which, at all events on paper, are stringent enough for the prevention of women from following the occupation who are not qualified, and prohibiting those who are qualified from performing obstetrical operations. Whatever be the best course to insure our future improvement in this matter, certain we are that so gross a case of malpraxis by a woman as one that has recently been tried before the Correctional Tribunal at Grenoble never could have occurred in this country, nor, if it were possible, would it have been met with by a punishment so utterly inadequate as that inflicted. According to the report furnished to the *Union Médicale* of August 5 by one of the experts employed, a woman has been practising midwifery at or near Grenoble during the last three years, and has been so free with the use of forceps that she has employed them twenty-four times in thirty cases. For anything that appears to the contrary in the report, she might have gone on in this active career, but two of her patients having been exhumed, were both found by the experts to have died from the violence done to the pelvic organs during the application of the forceps. Through the peculiar, but often effectual, process of the French law of interrogatory, the culprit not only admitted the applications in question, but further testified to her own criminality by showing, on a mannikin which was brought from the Obstetrical School, that she had not the least idea of how the application of the forceps ought to be made. Here, then, were at least two lives wantonly sacrificed, and probably forming only a portion of those terminated in the same way. And yet the punishment awarded for thus "involuntarily causing death by want of skill, imprudence, inattention, negligence, or non-observation of rules," was only fifteen months' imprisonment and 50 fr. fine. The prisoner was also convicted of twenty-four other infractions of the law, but whether these were for illegally practising or for illegally using instruments, we do not gather from the report. However, they were charged at the moderate rate of 10 fr. per case, making altogether 240 fr. and the expenses.

Excision of the Elbow.

Dr. Ashhurst, after narrating eight cases of this to the Philadelphia College of Physicians (*Phil. Med. Times*, May 22), gave a summary of the results which may be expected from the operation. These depend much on the age and constitutional condition of the patient. With regard to age, Dr. Hodges' table of 119 cases of excision for disease shows the mortality of all ages under thirty to be about 9 per cent., while for all ages above thirty it is about 24 per cent. The constitutional condition exercises a very important effect upon the result, for while there is less immediate risk of life from the operation than after amputation, the patient, owing to the much longer period required for convalescence, is exposed for a longer time to the risk of erysipelas, pyæmia, &c., and any tuberculous or amyloid degeneration he may be the subject of has a greater opportunity for development and aggravation. So that if there be reason to suspect serious disease of the lungs, liver, or kidneys, amputation, if interference is peremptory, as a rule would be the better operation. In performing the operation, Dr. Ashhurst prefers to the operations of Syme and Butcher the single longitudinal incision on the inner and posterior side of the joint, as originally suggested by Park, the length of the incision varying from two to five inches, according to the size of the arm. The most important points are, to save the ulnar nerve from injury, and not to interfere with the tubercle of the radius, so as to preserve the attachment of the biceps. In excision for disease the nerve need give no trouble, as it is so embedded in inflammatory tissue that it can be readily drawn from its position into the groove between the olecranon and inner condyle, and held to the inner side—and, indeed, need not be seen during the operation. In traumatic cases, of course, more difficulty may exist. Provided that the tubercle of the radius be preserved, the more bone (within certain limits) that is removed, the better will be the result of the operation. The risk of anchylosis is much greater than that of flail-like union; and hence the saw may be used freely, without any dread of interfering with the future utility of the limb.

In the after-treatment the most important point is to guard against anchylosis, and this may be best done by abandoning the splint at a very early period—as soon as the external wound has united, and the inflammatory swelling has subsided. Some go so far as to advise that no splint should be employed, the limb being from the first simply laid on a pillow. This Dr. Ashhurst regards as injudicious, particularly in children. By putting the limb on a well-padded splint for a week or ten days, the risk of consecutive hæmorrhage is much lessened, the inflammatory action is diminished, and the part is placed in the most favourable condition for rapid repair.

When performed for traumatic causes in civil life this operation would seem ordinarily to be attended with very little risk, twenty-one cases referred to by Hodges having given but one death. In military practice the results are not so favourable, 286 terminated cases, noted in the "United States Army Circular, No. 6," having been attended by sixty-two deaths—a mortality of nearly 22 per cent. Nevertheless, it is in military practice that excision of the elbow has obtained some of its most brilliant successes.

The Clayton Hospital and Wakefield General Dispensary is to be removed to a new site, and £8750 has already been subscribed towards the cost of the land and new building, for which the Committee ask of the public £15,000. Amongst the subscriptions are two of £1000 and several of £500.

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REVIEWS.

The Royal Tiger of Bengal: his Life and Death. By J. Fayrer, M.D., F.Z.S., Bengal Medical Service. London: J. and A. Churchill. 1875. 8vo, pp. 99.

This treasonable, but attractive and interesting little book, has for its object, in part certainly, if not chiefly, to depose the lion from his place of pride as "king of beasts," and place the royal tiger of Bengal on his throne; and it must be allowed that Dr. Fayrer produces excellent evidence in support of his assertion that his *protégé* "really surpasses the lion in size, strength, activity, and beauty." Dr. Fayrer does not even offer in excuse of his treason that "it is not that he loves the lion less, but that he loves the tiger more," for he doubts "whether the evidences of a more noble and generous nature sometimes ascribed to the lion are really genuine," and even suggests that, if true, "they may be the result of a more apathetic and less energetically savage nature, which, in this respect, makes the lion appear a more amiable savage than the tiger." The lion might, indeed, growl the poetic complaint—

> "It may be right to dissemble your love,
> But why should you kick me downstairs?"

Dr. Fayrer has, however, no personal acquaintance with the lion, while he has enjoyed numerous opportunities of fighting and overcoming the tiger of tigers—the royal tiger of Bengal; and he brings forward proof in plenty of the magnificent size, strength, and prowess of the latter. He has measured tigers, "as they lay dead on the spot where they had fallen, more than ten feet in length, from the nose to the end of the tail, and there is little doubt that they exceed even this length." The full-grown tiger is not wantonly destructive; he kills only to eat, and when not hungry, unless provoked, animals about him are safe, and he will remain near or pass close to men and cattle without molesting them. But the young tigers are far more destructive: "they will kill three or four cows at a time, while the older and more experienced rarely kill more than one, and this at intervals of from three or four days to a week." The tigress is "a most affectionate and attached mother," guarding and training her young with the most watchful solicitude. They remain with her till nearly full grown, or about the second year, when they are able to kill for themselves, and begin life on their own account. During this period of training she is most aggressive and vicious; and "is wanton and extravagant in her cruelty, killing apparently for the gratification of her ferocious and bloodthirsty nature, and perhaps to excite and instruct the young ones." But the tiger is, nevertheless, a great destroyer of human life, especially when it has once tasted human blood, and become a man-eater. One is reported to have "attacked a party and killed four or five at a time. Once it killed a father, mother, and three children; and the week before it was shot it killed seven people. It wandered over a tract of twenty miles, never remaining in the same spot two consecutive days." In another instance a single tigress is reported to have "caused the desertion of thirteen villages," and to have thrown out of cultivation 250 square miles of country; and again, that in 1869 one tigress killed 127 people, and stopped a public road for many weeks. The destruction these beasts cause to property and human life in India is enormous, and we are told that Captain Rogers calculated "that the loss of property which the ravages of the carnivora entailed amounted annually to ten million pounds." Dr. Fayrer hopes that this is over-estimated, but he admits that his "*amis les ennemis*" are terribly destructive, and must be destroyed; though, if possible, this should be done in a *legal* way. His enthusiasm as a hunter makes him say: "I should regard the complete extinction of tigers with a regret something akin to that with which annihilation of the fox would be regarded in England. So far as the sportsmen and their followers are concerned, serious and fatal accidents are not more frequent from the claws and teeth of tigers than they are in fox-hunting in England, from falls, and the chances of the field;" and while he states that he "certainly would not preserve tigers, and would encourage their destruction," he would have this compassed "by hunting, rather than by poison or the snare." He adds, however, that "of course, when no sportsmen are at hand, they (the tigers) should be destroyed without law, when and where they could be found." The Indian Government seems, happily for the natives and their property, to think more of getting rid of tigers, and less of the "sport" they may afford, than Dr. Fayrer makes himself appear to do when writing as a sportsman. The book may be heartily recommended as excellent holiday reading for both men and boys.

A Practical Treatise on Diseases of the Eye. With numerous Illustrations. By Robert Brudenell Carter, F.R.C.S. London: Macmillan and Co..

Under this title Mr. Carter has given to the profession a collection of essays descriptive of the more important diseases of the eye. The series is obviously incomplete, inasmuch as it contains no account whatever of any of the affections of the orbit. Many of the essays have already appeared elsewhere, and, taking them throughout, they are very unequal in merit, in some instances being little more than an historical sketch of the subject of which they treat, although it must be admitted that the outlines of the sketches have been drawn by a master-hand. The diagnosis of orbital aneurism has lately been brought prominently before the surgical profession, and it is hard to understand why the subject should be altogether ignored in a work of this kind. In his preface, Mr. Carter says that he has "not thought it necessary to dwell upon details which are interesting only to specialists"; but if this has been his aim he has not been altogether successful, as there is hardly a chapter in the book which does not give an account of some improved method of examination, or of some considerable modification in the details of an operation—details of minute importance, and which can be appreciated only by those who have made ophthalmology a study; and a careful perusal of the whole series must give rise to the reflection that, in spite of the smooth and flowing English in which they were delivered, and the admirable clearness of most of the demonstrations, the lectures are far more fitted for a class at Moorfields than for average surgical students at St. George's Hospital.

The introductory chapter gives a concise account of the anatomy and physiology of the eyeball, but merely alludes to the observations of Michel and other anatomists to the effect that the generally taught view of the structure of the optic commissure is incorrect, and that it is probable that the decussation of the fibres from the optic tracts is complete, instead of being only partial.

The chapter upon the principles of ophthalmic therapeutics will be read with interest by very many, and it could hardly be excelled in its graphic description of some of the varieties of faulty innervation. In that next succeeding, many surgeons will be glad to read Mr. Carter's opinion upon anæsthetics in ophthalmic surgery. There are several, of equal eminence with Mr. Carter, who are as yet by no means convinced that ether is as advantageous during the performance of ophthalmic operations as chloroform, and this, too, after they had operated themselves, and had seen others operate, upon patients who had been etherised by no less an expert than Dr. Jefferies himself, at Moorfields—not only on account of the difficulty in obtaining complete immobility of the patient's face, but also because of the undoubted increase of bleeding after squint operations and the like. The first of these objections may be met by the skill of the operator; and with regard to the second objection Mr. Carter is silent. It is a question whether, in the long run, those who think they secure an immunity from risk by inhaling ether, may not do so at the expense of some impairment of vision. There is no doubt that ether appears to be less suited to children than is chloroform, and after the extraordinary expression of extreme opinion on the part of a very distinguished colleague, it is satisfactory to hear that the experience of Mr. Carter has led him to the belief that in the cases of young children chloroform may be safely employed.

There are, no doubt, instances in which the sympathetic affection which so often appears in the second eye would appear not to overstep what may be called the stage of irritation, and in which structural changes, such as those of iritis, are not developed; but as long as the insidious nature of the disease is so unrecognised as at present, it seems hardly safe to lay stress upon one or two isolated cases, which, by being taken as precedents, may lead to a fatal delay. If the surgeon has to fear sympathetic ophthalmia after such an injury as the passage of a needle, it is obvious that no operation of any kind whatever upon the eyeball can be absolutely free from risk, and it is difficult to understand in what way Mr. Carter's very complicated modification of the simple operation of abscission can be said to be an improvement. The whole of

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this part of the book is just what a specialist, and he alone, can thoroughly appreciate. The same remark applies to the description of glaucoma: the whole chapter is good from beginning to end; but while glaucoma is so often unrecognised as at present, the sketch which Mr. Carter gives us of four or five varieties will not avail much to clear up the fog which obscures the diagnosis between it and cataract.

In the most interesting and the most ably written chapter of the book Mr. Carter sums up the various morbid appearances met with in the fundus oculi. This portion of his work will be eagerly read by many, including those who, while they must admire the candour and the boldness with which Mr. Carter confesses his inability to recognise any change in the termination of the optic nerves beyond those which may be considered due to mere passive congestion or swelling, are yet unable to sweep away with him all the so-called varieties of neuritis in which an active inflammatory process has been at work. It is probable that, in thus simplifying matters, Mr. Carter has done real and good service to the ophthalmoscope, by limiting in plain terms and within a restricted area the changes which can be revealed by its use; and when all has been said that can be fairly said against the book, it must be stated that it is in every sense an original work, and one which could have been produced only by a surgeon whose hand must be as delicate and ready with an instrument as with a pen. It would be difficult to surpass the choice of language and the smoothness which mark Mr. Carter's English; and whilst there are many who will not always accept his surgical dicta, there are but few who will not wish that they could have written his book.

Pocket Temperature Charts, prepared for the "Practitioner's Visiting List." Suggested by Dr. Foster, Physician to the General Hospital, Birmingham; and published by Salt and Son, Bull-street, Birmingham.

This book is composed of a number of single-leaved charts bound together, but having a perforated line along the attached border, so that each can be easily separated. The face of each leaf has a space for the name, age, and disease of the patient, and columns for recording the morning and evening temperature, the pulse and respiration morning and evening, and the quantity and specific gravity of the urine. The temperature is marked according to the Centigrade scale as well as Fahrenheit's; and two dotted lines mark, moreover, and very usefully, the health-limits of variation. On the back of the leaf are spaces for short notes of the signs and symptoms, the daily progress, and the treatment. Dr. Foster's suggestion has been well carried out, and the Charts will, we have no doubt, be found very convenient, handy, and useful.

Posological and Therapeutic Tables. By Alexander Henry, M.B., Assistant to the Professor of Materia Medica in the University of Edinburgh. Maclachlan and Stewart, South Bridge, Edinburgh; Simpkin, Marshall, and Co., and R. Hardwicke, London. 1875.

These tables, which "are intended as a pocket companion to those beginning the important study of materia medica," will be found, we should think, a very handy and trustworthy little book of reference and memory-refresher by many a practitioner. A very short explanation of the action of medicines is first given; then follow the posological and therapeutic tables, in which the doses and actions are given; while in the case of the more important medicines, the principal uses are also mentioned, and sometimes the mode of administration. An "index of diseases, with appropriate remedies," is added, and short notes on "the more important poisons," giving "fatal dose," "fatal period," symptoms, antidotes, and tests. The work seems to have been carefully and well done.

Commentary on the British Pharmacopœia. By Walter G. Smith, M.D. Dub., Fellow of the King and Queen's College of Physicians in Ireland, Assistant-Physician to the Adelaide Hospital. London: Smith, Elder, and Co. 1875. Pp. 766.

Dr. Smith has succeeded in producing a very useful "Explanatory Commentary" on the drugs and preparations in the British Pharmacopœia, in a volume of a reasonable and manageable size. And this has been achieved, not by the omission of anything of practical importance, but by not reprinting the text of the Pharmacopœia, by dealing only very briefly with the natural history of the animal and vegetable substances; and by giving details of such plants only as are indigenous to Great Britain and Ireland, or are commonly cultivated in those countries. A marked feature in the work, and one likely to be very useful to students, is the free employment of tabular arrangements. Under each of the principal metals is given a genealogical table or pedigree of its preparations, by which their mutual relations are seen at a glance. Thus, in the arsenical genealogical table, arsenical ore, or mispickel, is the source of *acidum arseniosum*; from this the arseniate of soda is derived, and from this, again, the arseniate of iron. We have only one fault to point to, which is the rather long list of *corrigenda*. But the work is handsomely and well got up, and is issued with cut leaves. The matter seems to be brought thoroughly up to date: the recent additions to the Pharmacopœia have been incorporated into the text, and notices are given of some of the most popular or most promising non-officinal drugs. Altogether the book is one that deserves hearty commendation.

PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, August 30.

Meeting of the Medico-Psychological Association.

The thirtieth annual general meeting of the Medico-Psychological Association was held at the King and Queen's College of Physicians, Kildare-street, on Wednesday, August 11, under the presidency of Dr. James Foulis Duncan. Many distinguished psychologists were present, including Drs. Clouston, Maudsley, Paul, Rogers, Rhys Williams, J. Murray Lindsay, D. Hack Tuke, H. H. Stewart, J. Eustace, McCabe, Ashe, James Stewart, etc. At 10.30 a.m. the Council of the Association met, and at 11 a.m. the morning sitting of the Association took place. Dr. Rogers, the outgoing President, resigned the chair, which was taken by Dr. Duncan, President of the King and Queen's College of Physicians, the incoming President. The appointment of officers was the first business transacted. Dr. Parsey, Resident Physician and Superintendent of the Warwick County Asylum, was unanimously chosen President for 1876, and it was arranged that the next meeting should be in London. The following important resolutions were adopted:—

1. Proposed by Dr. James Stewart, seconded by Dr. J. Murray Lindsay, and resolved unanimously—"That, in the opinion of this Association, the resident medical superintendents of the Irish district asylums are unfavourably placed for the discharge of their strictly professional duties. That their disadvantageous position in this respect is due chiefly to the following facts, viz.:—1. The majority of Irish district asylums—eighteen out of twenty-two—have not a resident assistant medical officer. 2. The superintendents of the Irish district asylums are overburdened with non-professional duties unknown in the similar institutions of England and Scotland. That a deputation of this Association, to be nominated by the President, wait on the Chief Secretary for Ireland, and also on the Inspectors of Lunatic Asylums, for the purpose of drawing their attention to the importance of the foregoing resolutions."

2. Proposed by Dr. Clouston, seconded by Dr. Rhys Williams, and unanimously resolved—"That, in the opinion of this Association, the study and treatment of insanity and of other diseases of the nervous system would be advanced if a three-months course of clinical study in an asylum were accepted instead of attendance for three months at a general hospital, at present required by the various examining boards of the United Kingdom."

3. Proposed by Dr. Hack Tuke, seconded by Dr. Clouston, and resolved—"That a committee of this Association should be appointed to take into consideration the question of devoting a portion of the funds of the Association for the advancement of medico-psychology, and report to the next annual meeting." The members of this committee are—Drs. Duncan, Maudsley, Clouston, Lalor, Crichton Browne, and Paul.

The standing orders were suspended, and the Rev. Professor Haughton, M.D., Fellow of Trinity College, Dublin, was elected an honorary member of the Association.

The reading of two valuable papers, one by Dr. James Stewart, Bristol, on "Obstacles to the Advancement in Ireland

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of Psychological Medicine," and one "Remarks on General Paralysis," by Dr. Isaac Ashe, of Londonderry, completed the business of the morning session.

The afternoon meeting took place at three o'clock. The President delivered an admirable address. He recalled the fact that the Association had met in Dublin fourteen years ago, and expressed a hope that a comparison of the present state of the institutions here with their condition then would convince the members that the spirit of improvement had been abroad. The deaths of Dr. Shiel, of Enniscorthy; Dr. Eaton, of Ballinasloe; Dr. Murphy, of Killarney; and Dr. Robert Stewart, of Belfast, were matters for deep regret. The necessity for the appointment of an assistant resident medical officer in each district asylum was dwelt upon. Only four out of twenty-two district asylums were provided with such an officer. It was most desirable that instruction in mental diseases should be required in the medical curriculum of each of our licensing bodies. The progress of the Lunatic Asylums (Ireland) Act of the present session through Parliament was referred to. The President regretted that Clause 47 of the original Act, declaring that no further protection is given by the Act to parties confining a lunatic beyond what previously existed under the common law, was unrepealed; and also that Irish superintendents became entitled to a retiring allowance only after forty years' service, whereas their more fortunate English brethren could obtain a pension after fifteen years. The question as to the increase or otherwise of insanity of late years must be answered in the affirmative, although allowance should be made for increase of population, the smaller number of harmless lunatics who are now permitted to be at large, and the lessened opportunities for concealment of lunatics by their friends.

Dr. Duncan then entered at length into the consideration of the predisposing causes of this increase. They may be summarised as follows—advance of civilisation; development of mental activity; increased strain on the faculties of the mind from anxiety or effort; the substitution of machinery for handicraft labour; the aggregation of the sexes in mills and factories, leading to premature development of the passions and sexual appetite; the loosening of the family bond dependent on the earning of wages by its younger members; the principle of association or co-operation, which often caused strikes and the resulting misery of individuals; the accumulation of wealth in the hands of capitalists; the spirit of speculation so rife at present; the passion for horse-racing; and the vice of intemperance. The President observed: "In calling attention to the mental and moral aspects of society as it exists at present, and in assigning to them some influence in increasing the amount of insanity, I wish it to be understood that I regard them merely as predisposing causes, which operate solely by inducing a state of the nervous system that is more easily affected by other agencies than it would naturally be. In my opinion, the monster evil of intemperance, with its associated vices and its accidental accompaniments, is the greatest of all the causes producing the estimated increase. Sometimes it alone is accountable for the overthrow of reason; on other occasions it aggravates and intensifies other causes operating along with it. How to destroy this hydra-headed monster is the one social problem of the day; and when this has been satisfactorily solved (but not till then, I fear), we may hope, not unreasonably, to see a mighty reformation effected, not as regards insanity alone, but every other ailment that afflicts our race."

The discussion on the President's address was very interesting, but in this letter I could not do justice to it.

In the evening the Association dined at the Shelbourne Hotel, Stephen's-green, the Rev. Professor Haughton (the newly-elected honorary member) and Dr. Aquilla Smith being among the numerous guests who were invited.

The meeting is considered to have been very successful. With respect to the proposal that a three-months course of practical study of mental disease should be *substituted* for an equal period of study in a general hospital, I am in a position to state that it is regarded with disfavour by the University of Dublin and the King and Queen's College of Physicians. These bodies think justly that the present hospital course of twenty-seven months is short enough as it is. I also believe that the University of Dublin might be prepared to grant a special diploma in psychology and mental disease to those of her own graduates who are Doctors of Medicine, if such a proposal were to be made by the Medico-Psychological Association.

GENERAL CORRESPONDENCE.

THE NATURE OF SERPENT-WORSHIP.

LETTER FROM MR. EDWARD NICHOLSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—In the last of the interesting "Letters from Madras" there is a slight error which it may be worth while to correct. The three stones which your correspondent has observed under trees are not ordinary objects of worship, but are placed there on occasions which have a medical interest; and the anthropomorphic figure on one of the stones can hardly be "Krishna strangling a snake," for that would be at variance with the Sivaite rite which the stone commemorates. The following extract from a little work of mine on Indian snakes, published last year by Messrs. Higginbotham and Co., of Madras, throws a light on the subject of your correspondent's letter:—

"In Mysore there is everywhere to be found most distinct evidence of serpent-worship being of a phallic nature. Nearly every tope of trees about Bangalore contains a group of stones with figures of snakes sculptured on them: most people observing these would imagine them to be sämy-stones, mere peace-offerings to demons. They are, in reality, votive offerings, set up under the following circumstances:—A barren woman desirous of offspring has three stones carved and deposited with certain votive ceremonies in the well of the house. Should her barrenness cease, the stones are taken up and placed with much ceremony (including presents to priests) on a mound made between a peepul (*Ficus religiosa*) and a neem(a) tree (*Azadirachta indica*); for this purpose a young neem tree is generally planted near a full-grown peepul tree. The middle stone bears the image of the goddess Balyama, or Minächi (the fish-goddess), a personification of Pärwadi, wife of Siven; the lower half of her body is scaled, and ends in a fish's or serpent's tail. One of the side stones is sculptured with the figure of the *sesha*, a five or seven-headed cobra (a representative of Ananden), the other bears the twin-serpents of Mercury's caduceus. On one of the figures, generally in the uppermost of the rings formed by the entwined pair of snakes, is the *lingayoni*, the combined generative emblem of both sexes; and in another ring is a radiated circle, which, I imagine, represents a cluster of snakes eggs.(b)"

The fish, or serpent-goddess, clasps a snake in each arm, and I surmise that this, allied, perhaps, to rudeness of sculpture, has caused your correspondent to take the figure to be Krishnen strangling a snake. I admit, however, a possibility of the sculptor of the stones, peradventure a Vishnuvite, having committed a pious fraud in substituting Krishna, a god of his own sect, for the Sivaite goddess; but the above explanation is more probable. And on matters of folk-lore the educated class of Hindus are often very untrustworthy authorities; moreover, they are not fond of gratifying our curiosity on such matters, and will palm off any specious explanation on persons who are not well up in their Protean mythology, and able to cross-examine them in their own tongue.

For instance, let your correspondent try to find out from Vishnuvite Hindus the origin of the caste mark, or rather sect mark, which they wear on their foreheads. It looks like the upright head of a trident, the outer prongs of which are white and very broad at the top, the middle prong being thin and red. He will find it difficult to elicit that the outer prongs are Vishnu's feet (as seen foreshortened with the soles towards the observer), and the middle prong a *phallus*. Indeed, few Hindus know it. And this illustrates the laudable tendency, alluded to by your correspondent, of Hindus to divest these symbols of any anatomical precision which might suggest indecent ideas. Yet this ignorance, real or affected, loses us much valuable folk-lore. I have never but once seen the Vishnuvite symbol represented in full; it was in a back street in Madras, and on my last visit to that city it had disappeared. It explains the frequent allusions to the feet of Vishnu or his incarnations, which are to be found in folk-lore. Take, for instance, the beautiful hymn which the children sing in Malabar at nightfall, when the lamp is lit and hung in the verandah for a few minutes, as a homage of

(a) Also known as the margosa tree.

(b) According to some accounts, Minachi was an avatar of Ananden (the eternal serpent), who accompanied Vishnu in his fish-avatar, as in the Ramen and Krishna avatar.

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prayer, before being brought into the house. The second verse runs—

"In the evening of life, when the angel of death approaches me,
May I see your feet! for this I always worship you, Rama,
Rama, Rama,
Favourable-eyed Rama!"

How much Englishmen in India lose by their contempt for the people and their languages!

I am, &c., EDWARD NICHOLSON,
Surgeon Army Medical Department.

Carlisle Castle, August 14.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, MAY 15.

Dr. LETHEBY, President, in the Chair.

THE SECRETARY read the report of the Council, with certain suggestions to be forwarded to the Government with reference to the Public Health Acts now undergoing consolidation and amendment; as also a memorandum explaining the nuisance and injury to health occasioned by the putrescent odours emitted from the catgut-spinning factories now forbidden under the recent Act of Parliament.

Dr. DUDFIELD drew attention to the recent alteration of the regulations for the control of slaughterhouses. These modifications had just been made by the Metropolitan Board of Works at the suggestion of the Local Government Board. Dr. Dudfield considered the alterations beneficial, as they were more concise. Everything which referred to the proposed inspection by the Board of Works instead of the vestries had been struck out, and left precisely as before to the vestries, probably on account of the legal pressure which had been put upon the Board of Works. The Metropolitan Board will have the control over the new licences, and therefore to some extent will control the manner of erection, paving, etc. There is no mention about layerage or separate entrance, probably because of the difficulty of enforcing such provisions—especially in the City—where no "separate entrance" exists.

Dr. McRae, Medical Officer of Health for Pennicuick, was elected an extra-metropolitan member, and Mr. Netten Radcliffe was nominated an honorary member.

ON THE PUBLIC HEALTH BILL, 1875, IN ITS RELATIONS TO THE SANITARY REQUIREMENTS OF RURAL DISTRICTS.

Dr. FRANCIS T. BOND read a paper with the above title, of which the following is a summary:—Anyone who peruses, however cursorily, the present Bill, can hardly fail to be struck at the numerous and important restrictions with which it hampers the action of rural authorities compared with the much more minute, comprehensive, and effective powers which it bestows upon those which are designated urban. The distinction thus created is in a large degree quite fallacious. There are scores of urban authorities that have to deal with districts of which the sanitary conditions differ in no whit from those of most rural districts; whilst, on the other hand, the greater number of rural authorities have under their jurisdiction one or more centres of population of sufficient size and compactness to require for their supervision all the powers which the law has provided for effective local government in any district. It is based upon an entire misconception of the requirements of rural districts, of the work which has to be done in them, and of the character of the bodies to whom that work has been entrusted. It assumes that rural sanitary authorities, are generally not so capable of undertaking the work of local government, and are not so fairly provided with the machinery for carrying it on effectively, as the majority of urban authorities are. It may be said that every rural authority can apply to the Local Government Board for urban powers for any part of its district which may require them. In the first place, there is not only a good deal of unwillingness on the part of most rural boards to voluntarily invest themselves with functions of which they have no experience, and which may prove troublesome; but, in the second, it is, practically, extremely difficult to say what parts of a rural district require these so-called urban powers, and what do not. This distinction, then, between the powers granted to urban and rural authorities is the first and most palpable blot on the face of the existing sanitary law, and it is scarcely conceivable how those who framed the Public Health Bill should, in the amendments which have been introduced into it, have omitted to include such as would sweep away these unnecessary distinctions, which are not only not founded on any essential differences, but are vexatious and perplexing. The proper policy is, in my opinion, to abolish altogether the titles "urban" and "rural" in connexion with local authorities; to style such authorities "local authorities"; to give them all the powers which the Legislature considers necessary for efficient local government; and to provide, as suggested above, through the supervising action of the Local Government Board, or of the power of appeal to courts of first instance, such as the petty sessions, or, preferably, the county court, where there is no stipendiary magistrate, the checks which are necessary to prevent these powers being either abused or neglected. The poor and sanitary laws are only two out of several functions which are essential to efficient local self-government in every district, whether rural or urban; and the true policy in order to insure those functions, which are so intimately connected with one another, being adequately discharged, is, not to distribute them amongst several district authorities, thereby increasing the difficulties of obtaining efficient administrators, and introducing all sorts of confusion, but to place them all in the hands of a single local authority, constituted upon the broadest possible basis, and invested with the widest possible powers. We are already advancing rapidly in that direction, one step in which has been made by the Government during the present session, in the passing of the Purification of Rivers Bill, making the rural sanitary authorities equally responsible with the urban for seeing that the duties imposed by the Bill are carried out. It would be another important step in the same direction to use the opportunity which the Public Health Bill offers for gradually accustoming both rural boards and the public to the more comprehensive duties which those boards must, ere long, be called upon to discharge. To do so would not be to delay or to complicate the final solution of this great social problem, but rather to facilitate it, since it would be in harmony with that law of organic evolution upon which the whole of our system of government, whether imperial or local, is founded. The parish, though a very ancient, is in many cases a very heterogeneous and artificial form of territorial subdivision. It may represent a thinly scattered and purely rural population; or it may be a large village with a few straggling houses in the neighbourhood; or it may be a good-sized town, with a pretty numerous rural population dwelling for some miles around it; or it may be only a fraction of a town. It is obvious that, under these circumstances, the cases in which the whole of a parish could directly share in the benefits of any structural works must be very few. Indeed, it may be said that, in the case of water-supply especially, if even half of the houses in the kingdom which are without a supply of drinkable water were provided with one, the cost of doing so would fall upon a far larger number of persons who would derive no benefit from it than of those who would. Now, when it is remembered that in rural districts the chief contributory to the rates is land, and that the occupiers and owners of the land are the sole administrators of sanitary law, it will be seen what a powerful inducement to inertia the law has provided in this arrangement. The device of a "private improvement rate," which was first instituted in the Public Health Act, 1848, seems to have been originally intended to apply only to improvements made on individual premises, and not to those made for the common benefit of two or more houses, though Section 90 of that Act apparently enlarges the scope of the provision by enacting that local boards may declare "any expenses" incurred by them to be private improvement expenses. This power, which by the Sanitary Act, 1868, was inferentially extended to sewer authorities, and by the Public Health Act, 1872, was granted to rural sanitary authorities, is, however, so ill-defined that it is very doubtful what it is meant to cover, and I very much question whether there are half a dozen rural districts in the kingdom where it has been used. It is much to be desired that the Public Health Bill should set forth more distinctly than it does the nature and extent of the works which can be carried out as private improvements, for it is probable that if the power is capable of being applied to works undertaken in common for a number of houses, as would seem to be intended, it will be much more largely availed of by rural authorities

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than has been the case hitherto. In order, however, to facilitate this being done, another provision is required, the nature of which will be best exemplified by an instance such as is of very common occurrence. A row of cottages, which belong to different owners, are entirely devoid of any means of drainage, and probably also insufficiently supplied with privy accommodation. The cottages have no sufficient amount of land in the shape of gardens to allow of their occupiers dealing in a simple way with their slops; possibly also they have not even enough spare space about them to admit of the construction of such additional closets as may be required. What is to be done in such a case? It is of no use to give notice to the owners to provide drainage, as they naturally ask where they are to carry it. It is equally useless to order them to provide closet accommodation. If a sewer is constructed to receive their drainage, this must be done at the expense of the parish, upon which would also be thrown the responsibility of dealing with the sewage at the outfall in such a way as to prevent it being a nuisance. There may be abundance of land close to the cottages on which tanks for the reception of the sewage could be constructed, and on which the sewage itself could be advantageously dealt with; but to do this requires combination on the part of the owners, as well as certain powers for the purpose of acquiring land, which they do not possess. Now, the sanitary authority does possess those powers, and it has, or is supposed to have, in its service officials who can draw up a scheme by which the sewage can be carried to the land. There may be no special difficulties about the case, except this one—that the law makes no provision for it. Why should not the owners of the cottages be empowered to go to the sanitary authority, and request it to draw up and carry out a scheme for providing for their requirements? and why should not the sanitary authority be able to exercise those powers in their behalf, which it can exercise, if, instead of charging the cost of these improvements upon the owners of the cottages which do require it, they were to be charged on the parish at large, which does not? Why, again, should not the sanitary authority, if, in such a case as this, it is of opinion that the requirements of the cottages in question can only be effectually met by a combined plan of dealing with them, be required to carry out such a scheme, and charge the cost upon the owners of the cottages to be benefited? There are hundreds, probably thousands, of such cases in most counties, and they are and will remain a standing opprobrium to sanitary law, of derision to the opponents, and of disgust to the administrators of it, until the simple machinery is provided which is required to deal with them. The instances I have cited in illustration of the defects of the existing law, and of the Public Health Bill which consolidates it, have been drawn exclusively from the field of drainage; but they may be quite paralleled by those which characterise the provisions dealing with water-supply. If a well has to be provided for a few houses, or a reservoir dug, or pipes laid on from a spring at some little distance, it must be done at the expense of the parish. If a cottage is unprovided with water, and a public water-main runs close by—a highly probable state of things, by the way, in the country!—the owner can be compelled to lay the water on, if it can be supplied at the rate of 8s. 8d. per annum, or, as the Public Health Bill now provides, "at such other rate as the Local Government Board may, on the application of the local authority, determine under all the circumstances of the case to be reasonable." And yet, where there is no such supply, an owner of a house similarly situated can be compelled to do nothing; although, probably, for less than £5, a good well might be dug, or, at any rate, a cistern for rain-water might be constructed. Half a dozen words added to section 57 of the Bill would be quite sufficient for this purpose, and would involve no very revolutionary addition of powers to those already possessed by sanitary authorities. The requirements of the existing law, in regard to the prevention of the pollution of streams, are already sufficiently stringent; and the pressure thus very properly put upon sanitary authorities will be in a considerable degree augmented by the Bill just brought in by the Government for the express purpose of dealing generally with this subject. But whilst a sanitary authority may be driven to its wits' end to know what to do with the liquid filth which flows from the sewers which, under pressure of public opinion or of the Local Government Board, it has been compelled to construct; and whilst it may be put to extravagant expense to purify the huge volumes of polluted water which are delivered over to it at their outfall, it has no sort of power whatever to modify or restrain in any degree the manufacture of this embarrassing liquid. Seeing the enormous pressure which is put upon sanitary authorities, not simply to use the best practicable means, within the limits of reasonable expenditure, to keep their sewage out of streams, but to do so at any cost, they are quite entitled to ask the Legislature to give them the corresponding power of preventing the unnecessary manufacture of sewage by those who claim access to their sewers, and to compel all persons, whether householders or not, to adopt any practicable expedients which can be suggested either to meet this object or to defæcate their refuse before it is put into the sewers. There is scarcely any kind of manufacturing refuse, whether solid, liquid, or gaseous, which cannot be utilised, or at least rendered innocuous, by a very moderate expenditure of ingenuity or money. So long as we can get rid of our refuse by pitching it into a sewer, or over a wall, or anywhere out of our own sight and smell, we most of us care nothing what becomes of it. Until the same pressure is put upon individuals that is now put upon sanitary authorities to comply with the combined dictates of science, economy, and common sense, I see no prospect of our getting out of the muddle into which we have drifted by beginning at the wrong end—viz., attempting to deal with the tail of the nuisance instead of attacking both head and tail together. Both the etymology and the common acceptation of the word "nuisance" are so expressive of its meaning that it would seem that there could not be much difference of opinion as to its intent when applied to designate certain objectionable conditions of which the statute law takes cognisance. If we interpret the phrase which is so frequently used in the statutes—namely, "a nuisance, or injurious to health"—by the unassisted light of nature, we shall have no difficulty in coming to the conclusion that it was intended to cover not only conditions which could be shown to be distinctly prejudicial to health, but also such as, by their general offensiveness, are prejudicial to the comfort and enjoyment of life. There is certainly little doubt that this was the sense in which the Acts were generally read until the ruling of the Court of Queen's Bench, in the well-known case of Bishop *v.* the Great Western Railway, restricted their operation to those nuisances only which could be shown to be distinctly prejudicial to health. If the mere opinion of a medical officer of health were of itself sufficient to define what is prejudicial to health, it might present something like a trap for those officers whose highly analytic minds prevent their swallowing difficulties of proof with the same facility that persons of less training in habits of exact ratiocination do; but a medical witness is always liable to cross-examination, and also, unfortunately, as the experience of the last few years has shown, to have the opinions of other medical witnesses brought in opposition to his own. The abatement of such nuisances is the primary object of local self-government, and one of the most important functions of a local authority and its officers should be to detect these nuisances and to act as a public prosecutor in procuring their abatement. Why an urban sanitary authority should have the power to prohibit a form of nuisance which has so little in it that is prejudicial to health as the act of throwing orange-peel on the pavements, whilst a rural sanitary authority is unable to deal with a stinking ditch by the roadside, or an equally offensive pig-stye, unless it can demonstrate in each case that the nuisance is prejudicial to health, is a mystery which none appear able to understand, except, perhaps, those highly subtle intellects who established the singular distinctions which differentiate the powers of urban and rural sanitary authorities. The requirements of all districts in regard to provisions for arresting the spread of infectious diseases are so nearly identical, that any criticisms which may be offered on the imperfections of the Public Health Bill in this matter must not be considered as made from an exclusively rural point of view. The provisions which appear indispensable for the above purpose are as follows:—1. That the occupier of a house in which a case of any of the more serious forms of infectious disease occurs should be required, under a penalty in case of neglect, to report it to the local authority. 2. That the local authority should then be required, in the person of its proper officers, to visit the house which is infected for the purpose of giving any advice or assistance that might be required, unless the occupier shall have forwarded, with the notice, a certificate from a duly qualified medical practitioner that the sick person was so lodged as not to be likely to spread the disease, and that all practicable precautions were being taken for this purpose. 3. That where the local authority had provided

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hospital accommodation, any sick person should be removed to it, either on the wish of himself or his friends, or on the certificate of a medical practitioner that he was so lodged as to be likely to spread the disease; and that where the local authority had not chosen to provide hospital accommodation, it should be the duty of its officers, and, in case of their default, within the power of any ratepayer, on such a certificate to provide accommodation for isolating the sick person, if this could possibly be done, at the expense of the local authority. 4. For a similar reason it is both expedient and just that where a local authority has neglected to make proper arrangements for the disinfection of infected clothes and bedding, it should be compelled to give compensation in every case in which the medical officer of health might certify that clothes must be destroyed in default of proper appliances for effectually disinfecting them. 5. That the words "in charge of," in the second clause of Section 119 of the Bill, should be so defined as to cover the case of servants, pupils at schools, and trade assistants, all of whom are now frequently sent away from the houses in which they have been residing when attacked with infectious disease, and are thus the means of spreading it over the country. 6. No occupier of premises, upon which a person is sick of infectious disease, should be allowed, under a stringent penalty, to admit other persons on his premises for purposes of trade, hire, or employment, unless he can produce a medical certificate to the effect that the sick person is so lodged as not to be likely to spread the disease. Such are some of the more important defects in existing sanitary law which a Bill professing to amend that law might have been expected to deal with. What, then, shall be said of a Bill which, whilst assuming thus an emendatory character, fails to remedy any one of these most serious defects? Has it any claim to be considered an amending Bill at all? And have not all who are interested in sanitary progress a right to insist that, if the Government refuse to deal in this Bill with these matters, the measure shall be regarded simply as a consolidation of the numerous sanitary Acts at present in existence, and as in no degree cancelling the draft which they drew upon the public faith when they came into office, on the strength of being prepared to carry out, amongst other branches of domestic legislation, the reform of our sanitary laws? It is the more important that this position should be firmly taken up by all who are interested in promoting, whether in the House of Commons or out of it, the cause of efficient local self-government, because there has been an evident tendency exhibited in certain quarters to make political capital out of the Bill, to represent that it confers a great boon on sanitary authorities, and that it is a discharge, on the part of the Government, of one of the numerous promises with which the Conservative party came into office. Anything would be preferable to a misunderstanding which might shunt the question of sanitary reform to an indefinite future.

Dr. LETHEBY, in opening the debate, suggested that the five subjects more prominently alluded to in Dr. Bond's paper should be discussed as follows:—1st. The different regulations for urban and rural sanitary districts. 2nd. The reconstruction of local boards. 3rd. The pollution of rivers. 4th. The control of the manufacture of sewage, and amount of nuisance caused thereby, and how far it is a positive injury to health. 5th. The absolute necessity for the more general use of disinfectants, and the management and disposal of the sick, especially those suffering from contagious complaints, including the necessity for the immediate transference of servants, etc., to district hospitals, rather than to their own homes, when stricken with fever.

Dr. CHILD considered it a mistake to suppose that boards of guardians were the only possible sanitary authority for rural districts. He thought highway boards could undertake the work better, because the districts were the same as the petty sessional districts; there would then be less variety of laws and conflict of opinion upon questions of legal difficulty. The guardians, having first to discharge their poor-law business, are liable to shirk or hurry through sanitary business, about which they have but little knowledge. Such difficult questions as water-supply and drainage, where opposition is encountered from landowners, would be best managed by the highway boards. He agreed with Dr. Bond's proposal for the assimilation of the laws for the guidance of urban and rural sanitary authorities. He feared lest the Government should, after passing this consolidation Act, delay to carry out further reform. If, according to Dr. Edward Smith, we must cite a distinct case of injury to health from a supposed nuisance before we can obtain a conviction, we are worse off than ever. He regretted to find that there was no power in the Bill for giving to the sanitary officer increased facilities for dealing with infectious diseases; and with regard to checking the spread of small-pox, he thought that the sanitary officer should have more direct dealings with the vaccination officer.

Dr. ROSS was of opinion that as so much difference of opinion exists among sanitary officials with respect to amending the law, the question is not yet ripe for settlement. He agreed with Dr. Bond that too often the local board is under the control of a village autocrat, and with Dr. Child in considering that some control should be exercised by the local authority over the erection of houses upon bad sites, but thought such regulations should be introduced into a Buildings Act. With regard to water-supply, he thought that the proposal which emanated from the Birmingham authorities, to put a tax upon water-closets, so as to limit their number, was not desirable. He would not care to make the definition of nuisances wider than it is, because it is desirable that the medical officer of health should have a definite understanding of the Acts against the defaulter.

Dr. WOODWARD stated that he always dealt with the fact of overcrowding as a nuisance, whether it be caused by one family in a house or several. In the one case it may be dealt with as a misdemeanour, and in the other as non-compliance with the requirements of the local authority. He thinks we shall fail to exercise due control over the spread of infectious diseases until more harmonious action is brought about between the medical officers of health and the medical practitioners, so that information may be sent with as little delay as possible.

Dr. BOND, in reply, said that he was sure the country would not be satisfied until the Government undertook to further amend the Public Health Act as soon as practicable. He thought the Government were very ready to receive suggestions, and he urged the Society to make further representations. He preferred that the inspectors of nuisances should deal with obstructionists on their own account before coming to the medical officer of health. He thought the Government might with advantage exercise some control upon the appointment of guardians, so that efficient men only might be elected, and then it would not be necessary to transfer the sanitary work to a highway board.

NEW INVENTIONS.

NEW ETHER INHALER,

AS SUGGESTED BY MR. GOLDING BIRD.

THE advantages claimed for this inhaler are its simplicity and cheapness, as compared with the usual ether inhalers. The waste of the anæsthetic by evaporation is reduced to a minimum by the fact that the inspired air enters by the aperture at the apex, guarded by a valve opening inwards; and the expired air passes out by that just above the nose, where there is a valve which opens outwards. The mouthpiece includes all, from the bridge of the nose to the chin, and is so arranged as to be practically air-tight to all faces. The instrument is light; it is lined with a waterproof material, and its edge is bound with soft leather, either of which will wash; but, if desired, a thin flannel bag, carrying the sponge, can be inserted, and its mouth be turned up all round outside the mouthpiece of the inhaler, and so each patient can have the advantage of a clean instrument. It is used, not only for ether, but also for the mixture of alcohol (1 pint), chloroform (2 pints), and ether (3 pints), for which it is admirably adapted. It is designed to embrace some of the advantages of the more elaborate inhalers, and to do away with the waste of the anæsthetic that is always caused where a sponge and towel, or felt inhaler are employed.

The inhaler is manufactured by Mr. J. Millikin, of 3, St. Thomas's-street, Borough, S.E.

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OBITUARY.

D. TOLER T. MAUNSELL, M.B. Dub., M.R.I.A.

The death of this gentleman occurred on August 17, after a short illness. Himself a member of the Poor-law Medical Service of Ireland, Dr. Maunsell for many years employed his great talents as a writer in advocating the claims of that service to a just recognition by the Government and the public. He was an ardent sanitarian, and, indeed, in every way he strove to advance the cause of sanitary science in Ireland. He was one of the Physicians to the South Dublin Dispensary District, as well as Lecturer on Botany in the Ledwich School of Medicine. He had been for some years the indefatigable Secretary of the Irish Poor-law Medical Officers' Association, to which his death will be an irreparable loss.

MEDICAL NEWS.

Apothecaries' Hall. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, August 26:—

Dobbie, Robert John Algernon, Budleigh, Salterton.
Laird, John, 4, Palace-street, Pimlico.
Lewis, Edwin Alaric, Loraine-road, Holloway.
Oldham, Samuel, Burslem, Staffordshire.
Sargent, Arthur Francis, Lancaster-place, Belsize.
Upton, Alfred, Petworth, Sussex.

The following gentlemen also on the same day passed their primary professional examination:—

Archer, Robert Kendray, Westminster Hospital.
Cox, William Laird, St. Mary's Hospital.
Creswell, William George, Queen's Hospital, Birmingham.

At the recent examination for the Prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were—

First.—Robertson, Frederick Freer Leslie, St. Bartholomew's Hospital, the Gold Medal.
Second.—Whitney, Neville Scott, University College, the Silver Medal and Book.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Doran, Alban H. G., F.R.C.S. Eng.—Surgeon to the Westminster General Dispensary, *vice* Mr. William Rose, F.R.C.S., resigned.

Walter, William, B.A., M.B. Univ. Dub., L. & L.M.K.Q.C.P., L.R.C.S. Ire., etc.—House-Physician to the North Staffordshire Infirmary, Stoke-upon-Trent.

BIRTHS.

Brown.—On August 26, at Broadstairs, the wife of Charles R. Brown, M.D., of Beckenham, Kent, of a daughter, prematurely.

Hopkins.—On August 30, at Esbourn, The Avenue, Beckenham, the wife of Alfred Boyd Hopkins, M.R.C.S. Eng., L.S.A., of a son.

Lupton.—On August 13, at Stratford-on-Avon, the wife of Harry Lupton, L.R.C.P., of a son.

Lynes.—On August 26, at 9, Priory-row, Coventry, the wife of Edward Lynes, M.D., of a son.

Marshall.—On August 24, at Oak Bank, Lamberhurst, Kent, the wife of John J. Marshall, L.R.C.S.I., of a son.

Sweeting.—On August 28, at Basingstoke, the wife of Thomas Sweeting, M.D., of a son.

MARRIAGES.

Davis—Lawson.—On August 26, at St. Mary's Roman Catholic Church, Norwood, John Norman Davis, Surgeon Army Medical Department, to Mary Emily Barron, only daughter of the late John Lawson, Esq., of Dangan House, co. Kilkenny.

Gould—Orr.—On July 26, at the Roman Catholic Cathedral, Bangalore, C. D. Gould, 18th Hussars, eldest son of C. Gould Esq., Brighton, to Annie Emmeline, eldest daughter of Dr. J. H. Orr, C. B., Surgeon-General (Retired List) Madras Army.

Garstang—Buckley.—On August 26, at St. Anne's, Lydgate, Thomas Walter Harropp, only son of Walter Garstang, M.D., of Dobcross, to Sara Margarette, only daughter of the late David H. Buckley, of Carrhill, Mossley.

Kidd—Rouse.—On September 1, at Balham, Joseph Kidd, M.D., of Brooklands, Blackheath, to Frances Octavia, daughter of R. J. Rouse, Esq., of Balham House.

Thomas—Young.—On August 24, at St. John the Baptist's, Isleworth, Middlesex, Edmund Frederick Thomas, M.R.C.S., of Shepperton, youngest son of the late Francis Henry Thomas, Esq., J.P. and D.L. for the County of Hereford, to Jane, youngest daughter of the late Charles Young, Esq., of Newington, Surrey.

DEATHS.

Commins, Henry, M.R.C.S. Eng., at Bombay, on July 21, of heat-apoplexy, while on his journey to Calcutta to take charge of a Government emigrant ship, aged 38.

Epps, Emma, wife of Richard Epps, M.R.C.S. Eng., of Great Russell-street, at Henley Villa, Hendon, on August 25, aged 41.

Fleming, Alexander, M.D., F.R.C.P., of 121, Hagley-road, Edgbaston, Birmingham, at Buxton on August 21, aged 51.

Richards, Sarah, beloved wife of Samuel Richards, M.D., 36, Bedford-square, on August 26.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bristol General Hospital.—House-Surgeon. Candidates must be M.R.C.S. and L.S.A., and be registered. Applications, with testimonials, to the Secretary, on or before September 23.

Dispensary for Sick Children, Gartside-street, Manchester.—Assistant Medical Officer. Candidates must be duly qualified and registered. Applications, with testimonials, to the Chairman of the Medical Staff, Gartside-street, Manchester, on or before September 15.

Dover Hospital and Dispensary.—Resident Medical Officer. Candidates must possess both a medical and surgical qualification. Applications, with testimonials, to Mr. Elwin, 13, Castle-street, Dover, on or before September 14.

Essex and Colchester Hospital, Colchester.—House-Surgeon and Apothecary. Candidates must be duly qualified. Applications, with testimonials, to the Committee at the Board-room, before October 7.

Hospital for Sick Children, Pendlebury, Manchester.—Assistant Physician. Candidates must be F.R.C.P. and registered. Applications, with testimonials, to the Chairman of the Medical Staff, Children's Dispensary, Gartside-street, Manchester, on or before September 15.

Middlesex Hospital Medical College. — Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

Queen's College, Cork.—Professor of Anatomy and Physiology. Applications, with testimonials, to the Under Secretary, Dublin Castle, on or before September 11.

Royal South Hants Infirmary, Southampton.—House-Surgeon. Must be duly qualified. Applications, with testimonials, to William Beer, Assistant-Secretary, on or before September 6.

Royston Union.—Medical Officer for No. 5 District. Applications on or before September 6.

Swaffham Union.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, Swaffham, Norfolk, before September 13.

Worcester General Infirmary.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, Mr. A. P. Watkins, 50, Foregate-street, Worcester, on or before September 25.

York Dispensary.—Resident Medical Officer. Candidates must be duly qualified and unmarried. Applications, with testimonials, to S. W. North, Esq., Castlegate, York, on or before September 16.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Gateshead Union.—Dr. A. Meggett has resigned the Winlaton District; area 5029; population 7494; salary £35 per annum.

Henley Union.—Dr. Munro has resigned the Nettlebed District; area 9679; population 1870; salary £80 per annum.

Martley Union.—Mr. Benjamin D. Taplin has resigned the Leigh District; area 12,838; population 5837; salary £85 per annum.

Oswestry Incorporation.—The Llansilin District is vacant; area 12,735; population 1867; salary £35 per annum.

Solihull Union.—Mr. Francis Warner has resigned the Yardley District; area 7430; population 5359; salary £17 per annum and fees.

APPOINTMENTS.

Atcham Union.—James O. Smith, L.R.C.P. Edin., M.R.C.S. Eng., to the St. Chad District.

Bradford (Yorks) Union.—James Crawford, M.D., C.M. Glasg., to the Manningham District.

Carnarvon Union.—J. T. Griffith, L.R.C.P. Edin., L.F.P.& S. Glasg., to the Llandwrog District.

Tiverton Union.—Richard R. G. Thomas, M.R.C.S. Eng., L.R.C.P. Edin., M.D. St. And., to the Western District.

Laborious French Savants.—It seems it is the custom of the Académie des Sciences and the Académie de Médecine to deprive themselves of all holidays, the weekly meetings continuing uninterruptedly throughout the year. One of the journals recently recommended these learned bodies to do what other societies do—suspend their labours during the summer, seeing that their meetings are so poorly attended, and that they are often obliged to be adjourned before the usual hour, on account of the order of the day being exhausted. A former secretary of the Academy of Medicine used to keep in store a series of long and dry papers, in order to meet this annual emergency. A writer who defends this negation of holidays says that the numerous foreigners who frequent Paris when all its own inhabitants have left it naturally have a strong desire to be present at these assemblies of illustrious *savants*, and it would be highly ungracious to shut the doors in their faces; but it has been replied that when these wanderers repair to the Academies,

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and find that bodies which they regard as ruling the scientific world can hardly muster half a dozen sleepy auditors, a terrible revulsion of feeling is produced that had much better be avoided.

VITAL STATISTICS OF SWEDEN FOR 1873.—The population, which, with an absolute increase of 47,560 persons in the year 1873, may be estimated at 4,297,972, had increased from the previous year to the amount of 1·12 per cent.—the largest annual increase since 1866. The excess of births was 58,118—nearly as great as in the preceding year (58,181). Of the population, 86·42 per cent. are rural, 13·58 dwell in cities. The number married within the year was 31,257, equal to 7·31 per 1000 of the population annually. The births of living children were 131,643, or 30·82 per 1000 of the population annually. The death-rate was higher than in 1872—the deaths numbered 73,525, equal to a rate of 17·2 per 1000 annually. The rural rate of mortality was 15·9, that of the towns was 25·7 per 1000 (58,743 and 14,782 deaths respectively). Zymotic diseases caused 13·85 of all the deaths throughout the kingdom. The most fatal zymotics during 1873 were cerebro-spinal meningitis and nervous fever, with 2137 deaths; whooping-cough, 1754 deaths; diphtheria and croup, 1262 deaths; scarlatina, 1244 deaths; and small-pox, 1122 deaths.—*Nordiskt Med. Arkiv.*, vol. vi., part 2, 1875.

THE NEW HÔPITAL MENILMONTANT IN PARIS.—This new Hospital, erected in a poor quarter at the north-east of the town, between the Lariboisière and the St. Antoine, will be opened before the end of the year. Its cost has amounted to 9,343,000 fr.—viz., 1,600,000 fr. for purchase of land, 6,743,032 fr. for building, and 994,679 fr. for technical works. It is to contain 150 beds, and is built upon the separate pavilion principle. The wards are spacious, and are to contain only twenty-two beds, and there are numerous rooms containing only two, three, or four beds. Each ward has its own special staircase, and in the centre of each pavilion is another staircase for the general service of the house. A great chimney is employed in aid of the system of ventilation. On the first floor of each pavilion there are galleries laid out as terraces, of which the patients can avail themselves in fine weather. There is also a lying-in establishment, quite apart from the Hospital, and consisting of separate rooms three metres and a half in breadth and four metres and a half in length. Another building on the opposite side, likewise separated from the Hospital, consists of three small wards; each of these services has its separate garden.—*Union Méd.*, August 24.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

H.S.—Not to our knowledge.

The Odorator.—The principle of this useful and ingenious toy is well explained in John Knox Laughton's work on "Physical Geography in its relation to Prevailing Winds and Currents," published by Potter, 31, Poultry. Friction is the mechanical means whereby the column of liquid is drawn up into the upright tube. The friction of the air blown through the horizontal tube drags up, first the air, then the liquid from the vertical tube.

C., Cheltenham.—Celsus is the first native Roman physician whose name has been transmitted to us. Prior to his time all those who arrived at any eminence were either Greeks or Asiatics.

H. Pollard F.—The application of percussion to the surface of the body, with the view of producing sounds, was made first about the middle of the last century by Leopold Auenbrug, or Auenbrugger, a German physician, then residing at Vienna. This method was announced to the world in a small volume in Latin, first published in 1761.

Alcohol.—According to the finance accounts for the year ending March 31 last, the total Excise duty on strong drink was £31,917,849, an increase of nearly £800,000 over the amount in the preceding year.

Leo.—The mineral springs from which Epsom salts are extracted were discovered in 1618. The Royal Medical College was established in 1851. But we do not think the two events can be in any way connected, though the founder of the College was a medical man.

Como.—The Royal College of Chemistry was founded in London in July, 1845.

W. C. T.—Dr. Priestley's directions for impregnating water with fixed air were published in 1772.

T. Murray S.—Dr. Helenus Scott died on November 16, 1821, during his voyage to New South Wales. He was in the service of the Honourable East India Company, and first member of the Medical Board at Bombay.

Mercurius.—1. In 1846. 2. The first patient was received into Guy's Hospital, London, on January 6, 1725. Its founder died December 17, 1724.

Eusebius.—"The Elements of Pathology," by Dr. Cobb Parry, published in 1816.

Dr. C.—The first lease of the Apothecaries' Garden at Chelsea was taken by the Company in 1673, of Charles Cheyne, Lord of the Manor of Chelsea. The term was for sixty-one years, at a ground rent of £5 per annum. The garden contained three acres one rood.

Quod, Manchester.—In consideration of his contributions to zoological science and literature, Mr. Andrew Wilson, Lecturer on Zoology in the Edinburgh Extra-Academical Medical School, has had the degree of Doctor of Philosophy conferred on him by the University of Zürich.

I. I.—"Philosophy, like medicine, has abundance of drugs—few good remedies, and scarcely any specifics."—*Literary Magnet.*

W. F. D.—Bills of mortality took rise, says Pennant, in 1592, in which year began a great pestilence which continued till December 18, 1595. But when the plague ceased the bills were discontinued. They were resumed again in 1603. At the original institution there were only 109 parishes; others were gradually added, and by the year 1681 the number was 132.

L. Stafford.—See the account of the dissection in *Guy's Hospital Reports*, vol. i.

Adulteration.—The hop planters of Kent and Sussex have resolved to offer £100 to analysts for the discovery of a test whereby the presence of cheap and injurious bitters in beer might be proved.

*** What say our lady-medicals to the following *jeu d'esprit*?—

THE MEDICAL WIFE.
By F. I.

I'm the queerest of husbands; the wife I have chose
The practice of physic pursues:
There are not many men would have dared to propose,
Or be standing just now in my shoes.
Our wedding, no doubt, was the talk of the town;
My position's unique, as you see,—
For if other men's wives wear a cap and a gown
They're not got by a Doctor's degree.
O! Be-ware, ye young men, of a medical wife,
For Eliza's M.D. is the plague of my life.
O! Be-ware, ye young men, of a medical wife,
For Eliza's M.D. is the plague of my life.

Our card-plate's a puzzle, for who shall decide
In what form our joint-names should appear;
Her's, I fear, must stand first, and mine on the wrong side;
At me, e'en the flunkies will jeer.
The tables are turned, *she* is Darby, *I'm* Joan;
"Professional duties," you see,
Can always be urged in an absolute tone;
I dare n't e'en refuse a latch-key!
O! Beware, etc.

We sit down to breakfast, when lo! an express
Comes to summon the Doctor away;
A man ne'er can brew tea without making a mess,
And there's nought but discomfort all day.
At night 'tis still worse,—there's the surgical bell
Every moment is given to ring;
For although very often it's only a sell,
Yet it *might* be a serious thing.
O! Beware, etc.

Says "the Doctor," when starting her patients to see,
"My dear love, you have got a sad cough,
A prescription I'll write when I come back to tea;
Meantime . . . . I've a leg to take off."
When at table, 'tis hard, I declare on my life,
To feel myself quite in the way,
To hear technical talk 'twixt my guests and my wife,
And not know a word that they say.
O! Beware, etc.

Study's all very well, but then everyday life
Must provided for be, as you know;
Yet just before lunch my professional wife
To a clinical lecture must go.
On my shoulders now fall all the household affairs,
All the tradespeople's books come to me;
I'm by no means at home in these womanish cares,
Yet they're now the sole books that I see.
O! Beware, etc.

Still, there'll come certain duties as time toddles on
That she *can't* well by proxy achieve,
And, how busy so e'er, our small daughter or son
She *must* stay at home to receive!
How she'll manage things then, 'tis not easy to know,
Nor yet, what with the babe *I'm* to do
When mamma to a long consultation must go,
And his next feeding time is at two.
O! Beware, etc.

I see other men with sweet ladylike wives
Whose homes like a paradise shine;
O dear! how I envy their common-place lives,
And I well know how *they* look on mine!
Now, when you for a prize matrimonial compete,
Be warned by a desperate man;
And if ever a surgeon in skirts you should meet,
Run away, friends, as fast as you can.
O! Be-ware, then, young men, of all medical wives,
Let no female M.D.'s be the plague of your lives.

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Allen S.—Dr. William Cullen was born at Lanark in 1712. He was Lecturer on Chemistry in the University of Glasgow, and subsequently became Medical Professor in the University of Edinburgh. He died in 1790.

Wynter P.—The infirmary about to be erected by the guardians of the Holborn Union, between Highgate-hill and the Archway-road, will provide accommodation for 566 patients.

Dr. Malcolm.—The physicians who attended Queen Caroline (1737) received 500 guineas each, and the surgeons 300 guineas.

F.R.C.S. Eng.—The fault is your own in not acquainting the Secretary of the College with your address. If you have not already done so you will be again too late, as the Calendar is now passing through the press.

M.B., M.A.—The gentleman who made the "funny" application to Sir R. Christison respecting Scotch music, dancing, dinners, and dress, was an eccentric Cornishman.

Dr. Cawley.—John Freke, then Assistant-Surgeon to St. Bartholomew's Hospital, was previously Serjeant-Surgeon to Queen Anne.

COMMUNICATIONS have been received from—

Mr. R. M. Cerly, Twickenham; The Registrar of Apothecaries' Hall, London; A Constant Reader; Dr. J. Wilkin, London; Dr. Sparks, London; Mr. Spencer Watson, London; Dr. Bathurst Woodman, London; Mr. J. B. Vernon, London; Dr. J. Hughlings-Jackson, London; Mr. J. Chatto, London; Dr. Eustace Smith, London; Dr. Davey, Redland; H. S.; The Registrar-General, Edinburgh; Sir Duncan Gibb, Bart., London; The Secretary of the Howard Association; Dr. Griffiths, Sheffield; Dr. Haviland, Northampton; Dr. J. W. Moore, Dublin; Dr. E. Lynes, Coventry; Mr. J. W. Kenyon, Billingborough; Dr. Williams, Whitstable.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Hastings and St. Leonard's Observer—Western Daily Mercury—Obstetrical Journal of Great Britain and Ireland—Monthly Microscopical Journal—Pacific Medical and Surgical Journal—Dublin Journal of Medical Science—Students' Journal and Hospital Gazette—Edinburgh Medical Journal—Manchester Guardian.

BOOKS AND PAMPHLETS RECEIVED—

Maclagan on the Pathology of the Contracting Granular Kidney—Annual Report of the Broadmoor Criminal Lunatic Asylum—Morton on Vaccination and its Evil Consequences—Report of the Commissioners of Lunacy to the Commonwealth of Massachusetts—Ross's Annual Report on the Health of St. Giles's District—Cobbold on Tapeworms, third edition—Homes of the London Poor, by Octavia Hill—Willson's Chemical Notes for Pharmaceutical Students—On Stricture of the Male Urethra, its Radical Cure, by F. N. Otis, M.D.—A Description of the Instruments and Apparatus of the Author, with Directions for their Use in Operations on the Genito-Urinary Organs, by F. N. Otis, M.D.—De Méricourt's Modern Naval Hygiene, translated by J. Buckley, Staff Surgeon R.N.—Griffith's Annual Report on the Sanitary Condition of the Borough of Sheffield—Quarterly Return of Marriages, Births, and Deaths registered in Ireland—Thomas on Diseases of the Hip, Knee, and Ankle Joints—Annali Clinici dello Ospedale dei Pellegrini di Napoli, vol. iii.

APPOINTMENTS FOR THE WEEK.

September 4. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

6. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

7. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

8. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

10. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, August 28.

BIRTHS.

Births of Boys, 1180; Girls, 1122; Total, 2302.
Average of 10 corresponding years 1865-74, 2089·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	738	702	1440
Average of the ten years 1865-74	717·0	670·9	1387·9
Average corrected to increased population	...	...	1495
Deaths of people aged 80 and upwards	...	...	43

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	...	16	2	6	1	3	...	29
North	751729	1	7	13	2	10	...	2	1	46
Central ...	334389	...	1	6	...	6	1	2	1	18
East	639111	...	7	9	...	12	...	1	2	51
South	967692	...	7	27	6	19	1	8	1	71
Total	3254280	1	22	71	10	53	3	16	5	215

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·864 in.
Mean temperature	62·3°
Highest point of thermometer	75·8°
Lowest point of thermometer	49·1°
Mean dew-point temperature	55·8°
General direction of wind	S.W.
Whole amount of rain in the week	0·34 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, August 28, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Aug. 28.	Deaths Registered during the week ending Aug. 28.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2302	1440	75·8	49·1	62·2	16·78	0·34	0·86
Portsmouth ...	122632	27·3	68	54	...	...	...	...	...	...
Norwich	82842	11·1	56	42	76·5	53·0	63·0	17·22	0·00	0·00
Bristol	196186	44·1	147	78	74·2	46·0	60·0	15·56	0·09	0·23
Wolverhampton ...	71718	21·1	38	36	76·2	49·9	60·7	15·95	0·31	0·79
Birmingham ...	366325	43·6	277	212	74·7	50·3	61·5	16·39	0·00	0·00
Leicester	109830	34·3	77	84	75·8	49·5	61·7	16·50	0·17	0·43
Nottingham ...	92251	46·2	56	46	73·7	48·1	60·9	16·06	0·01	0·03
Liverpool	516063	99·1	364	257	67·8	52·4	58·5	14·94	0·35	0·89
Manchester ...	356628	83·1	262	172	75·0	49·0	60·9	16·06	0·19	0·48
Salford	135720	96·3	139	78	71·8	47·0	58·7	14·83	0·24	0·61
Oldham	87437	18·7	70	27	...	...	...	...	...	...
Bradford	168305	23·3	113	68	70·3	52·6	60·1	15·62	0·12	0·30
Leeds	285118	13·2	217	159	74·0	51·0	61·1	16·17	0·01	0·03
Sheffield	267881	13·6	222	166	73·5	48·4	59·8	15·45	0·17	0·43
Hull	133932	36·8	90	82	73·0	48·0	60·0	15·56	0·10	0·25
Sunderland ...	106342	32·2	81	50	78·0	51·0	62·1	16·73	0·44	1·12
Newcastle-on-Tyne	137665	25·6	102	92	68·0	50·0	58·0	14·44	0·37	0·94
Edinburgh	211626	50·5	114	94	...	...	...	...	...	...
Glasgow	534564	88·6	358	258	64·7	43·6	58·3	14·61	1·23	3·12
Dublin	314666	31·3	200	152	74·4	48·0	61·6	16·45	0·16	0·41
Total of 21 Towns in United Kingdm	7742889	37·0	5353	3647	78·0	46·0	60·5	15·81	0·24	0·61

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·86 in. The highest was 30·14 in. at the beginning of the week, and the lowest 29·71 on Tuesday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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THE STUDENTS' NUMBER

OF THE

MEDICAL TIMES AND GAZETTE

FOR

1875-76.

IN the present number of the *Medical Times and Gazette*, which is specially intended for Students of Medicine and those about to become students, we have departed widely from our former plan. This we have been induced to do for various reasons, the chief of which has been the constantly accumulating mass of material to be handled, which has now become too large to be easily manageable so as to be at once easy of reference and of understanding. At the same time, it has seemed to us that a scheme which should be a guide to a young man from the time of his entering the ranks of student-life up to the period of qualification and registration, would be far more generally useful. Each stage being mapped out, the student, of whatever year, has but to look to see what the line of his studies should be, and what is expected of him by his examiners. To this end we begin with the period of preparatory education, passing thence to the selection of a school for the first year's studies, thence on to the second year and its appropriate studies, culminating in the first professional examination. With the third year's studies comes the second, and in some instances final, examination, which in the case of other examining bodies only comes at the end of the fourth year. In our remarks we shall have in mind for the most part the English Examining Bodies, but those of Scotland and Ireland shall have due attention.

I.—PRELIMINARY EDUCATION.

By the rules and regulations of the General Medical Council, every Student of Medicine must be registered, and before being registered he must produce a certificate of having passed a competent examination in preliminary education. Certificates of many bodies are accepted by the Council, but the examining bodies which give the qualification to practise vary considerably in their requirements. Thus, the authorities of the University of Oxford simply say that each candidate for their degree must have graduated in Arts—that is, attained at least to the rank of B.A. The University of London insists on all men who want to enrol themselves as candidates for their degrees passing the somewhat stiff matriculation examination of the University. Though almost all the other examining bodies have preliminary examinations of their own, nevertheless the certificate of passing one of them is in almost every case accepted as evidence of a due knowledge of the subjects of preliminary education, so that practically a student may pass when and where he chooses. Nevertheless, the great majority of students select the body whose final qualification they seek; hence it comes that in England the great bulk of students select the preliminary examination of the Royal College of Surgeons or of the Apothecaries' Society. The former is conducted by the College of Preceptors, the latter by selected examiners. As the preliminary examination of the Royal College of Surgeons of England is that most largely frequented, and is a very fair sample of the several requirements from gentlemen desiring to enter the profession, we give their programme, which is as follows:—

For the year 1875, and until further notice, the following are the compulsory subjects of examination—

1. Writing from dictation.
2. English Grammar.
3. Writing a short English Composition, such as a description of a place, an account of some useful or natural product, or the like.
4. Arithmetic. No candidate will be passed who does not show a competent knowledge of the first four rules, simple and compound, of vulgar fractions and of decimals.
5. Questions on the Geography of Europe, and particularly of the British Isles.
6. Questions on the outlines of English History; that is, the succession of the sovereigns, and the leading events of each reign.
7. Mathematics. Euclid, Books I. and II., or the subjects thereof. Algebra, to simple equations inclusive.
8. Translation of a passage from the second book of "Cæsar's Commentaries—De Bello Gallico."

PART II.—OPTIONAL SUBJECTS.

Papers will also be set on the following six subjects; and each candidate will be required to offer himself for examination on one subject at least, at his option; but no candidate will be allowed to offer himself for examination on more than four subjects:—

1. Translation of a passage from the first book of the Anabasis of Xenophon.
2. Translation of a passage from X. B. Saintine's "Picciola."
3. Translation of a passage from Schiller's "Wilhelm Tell."

(Besides these translations into English, the candidate will be required to answer questions on the grammar of each subject, whether compulsory or optional.)

4. Mechanics. The questions will be chiefly of an elementary character.
5. Chemistry. The questions will be on the elementary facts of Chemistry.
6. Botany and Zoology. The questions will be on the classification of plants and animals.

(The quality of the handwriting and the spelling will be taken into account.)

N.B. Each candidate (who has not at a previous examination paid the amount) is required to pay a fee of £2 on the morning of the first day of the examination prior to his admission thereto. The next examinations will be held in June and December. The exact dates of the examinations will be duly advertised, when fixed, in the journals. Candidates are required to send in the prescribed forms of application not less than three weeks before the commencement of the examination.

Note.—A candidate, in order to qualify for the Fellowship, is required, in addition to the subjects included in Part I., to pass in Greek and in French or German, and in one, at his option, of the remaining subjects in Part II.

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At the Apothecaries' Hall the examination is in all respects similar as regards the subjects of English, Latin, and Mathematics; but besides these the student must pass in one of the following:—Greek (Xenophon's Anabasis, Books I. and II.), German (Schiller's "Wilhelm Tell"), French (Molière, "Le Médecin Malgré lui").

The following is an outline of the subjects for the Matriculation Examination of the University of London:—

Candidates are examined in the following subjects:—

Mathematics.—Arithmetic: The ordinary Rules of Arithmetic; Vulgar and Decimal Fractions; Extraction of the Square Root. Algebra: Addition, Subtraction, Multiplication, and Division of Algebraical Quantities; Proportion; Arithmetical and Geometrical Progression; Simple Equations. Geometry: The First Four Books of Euclid, or the subjects thereof.

Natural Philosophy.(a)—Mechanics: Composition and Resolution of Statical Forces; Simple Machines (Mechanical Powers)—Ratio of the Power to the Weight in each; Centre of Gravity; General Laws of Motion, with the chief experiments by which they may be illustrated; Law of the Motion of Falling Bodies. Hydrostatics, Hydraulics, and Pneumatics: Pressure of Liquids and Gases, its equal diffusion and variation with the depth; Specific Gravity, and modes of determining it; the Barometer, the Syphon, the Common Pump and Forcing Pump, and the Air Pump. Optics: Laws of Reflection and Refraction; formation of Images by Simple Lenses. Heat: its Sources; Expansion; Thermometers—relations between different Scales in common use; difference between Temperature and Quantity of Heat; Specific and Latent Heat—Calometers; Liquefaction; Ebullition; Evaporation; Conduction; Convection; Radiation.

Chemistry.—Chemistry of the Non-Metallic Elements, including their compounds as enumerated below, their chief physical and chemical characters, their preparation, and their characteristic tests. Oxygen, Hydrogen, Carbon, Nitrogen; Chlorine, Bromine, Iodine, Fluorine; Sulphur, Phosphorus, Silicon. Combining Proportions by weight and by volume; General Nature of Acids, Bases, and Salts; Symbols and Nomenclature. The Atmosphere—its constitution; effects of Animal and Vegetable Life upon its composition. Combustion; structure and properties of Flame; nature and composition of ordinary Fuel. Water; chemical peculiarities of Natural Waters, such as rain-water, river-water, spring-water, sea-water. Carbonic Acid; Carbonic Oxide; Oxides and Acids of Nitrogen; Ammonia; Olefiant Gas; Marsh Gas; Sulphurous and Sulphuric Acids, Sulphuretted Hydrogen. Hydrochloric Acid, Phosphoric Acid and Phosphuretted Hydrogen; Silica.

Classics.—The Greek and Latin Languages.(b) The Classical Subjects for 1876 are—for January, 1876: *Xenophon*, Anabasis, Book VI.; *Cicero*, De Amicitia and Pro lege Manilia. For June, 1876: *Xenophon*, Anabasis, Book II.; *Horace*, Odes, Books I. and II. The papers in Greek and Latin shall contain passages to be translated into English, with questions in Grammar, and with questions in History and Geography arising out of the subjects of the books selected. Short and easy passages shall also be set for translation from other books not so selected. A separate paper shall be set containing questions in Latin Grammar, with simple and easy sentences of English to be translated into Latin. Special stress is laid on accuracy in the answers to the questions in Greek and Latin Grammar.

The English Language.—Orthography, Writing from Dictation, the Grammatical Structure of the Language.

Outlines of English History and Modern Geography.—History of England to the end of the seventeenth century, with questions in Modern Geography.

The French or the German Language, at the option of the candidate.

The papers in French and German shall contain passages for translation into English, and questions in Grammar, limited (except when German is taken as an alternative for Greek) to the Accidence.

Candidates shall not be approved by the Examiners unless they have shown a competent knowledge in each of the following subjects, according to the details specified under the several heads:—1, Latin; 2, any two of the following languages:—Greek, French, and German; 3, the English Language, English History, and Modern Geography; 4, Mathematics; 5, Natural Philosophy; 6, Chemistry.

(a) The questions in Natural Philosophy will be of a strictly elementary character.

(b) Candidates may substitute German for Greek.

The examinations of the College of Surgeons take place in June and December, so that a student desirous of entering a medical school in October must take the former examination. It is, however, important to know that if the student passes his examination in December he is allowed by the rules of the College of Surgeons to enter a school at the end of the Christmas vacation, and so to count a certain number of months towards the time to be spent in his education prior to qualification. The examinations of the University of London take place in January and June, those of the Apothecaries' Society at the very convenient periods of April and September (this year 24th and 25th), giving the student a longer period for preparation, and yet allowing him to procure his certificate in time for registration.

Thus far we have dealt with the mere rules and regulations of the various bodies, but it behoves us also to give the young candidates some advice on the subject. There can be no doubt of the exceeding great value of these examinations in the upholding of the dignity of our profession. Nothing has done so much good in raising the general status of medical men as the institution and general enforcement of these. It becomes everyone who desires to enter our profession and to fight his way to its highest posts of honour, to do everything he can to maintain this status or to raise it even to a higher pitch.

To those who can by any possibility afford it, we should say, Take a degree in Arts before entering upon the study of Medicine. The training acquired at a University is simply invaluable, and the possession of a degree in Arts gives a man a start which can be obtained in no other way. It at once gives him the chances of those higher appointments so eagerly sought for, and gives him a stamp through life which is at once acknowledged and respected.

Should this be impracticable, we should recommend as the next best qualification the Matriculation Examination of the University of London. This, too, is of great value, and is acknowledged by students among themselves, to say nothing of the outer world, as the mark of superior educational acquirements. It is notorious, too, that the medical graduates of this University, who constitute its real glory, number among their ranks the greater part of the most distinguished men of the day. Moreover, the possession of such a professional qualification as is given by the University of London is looked upon as the stamp and seal of superior professional acquirements. For all these and other reasons which could be adduced, we would strongly urge intending students of Medicine to pass their preliminary examination here; for, should they do so, they have the option at any future time of going on to take their degree in the University; but, according to the rules and regulations of the University, no part of medical education counts prior to the passing of the Matriculation Examination. For this reason, therefore, a student must pass this examination at the very beginning of his medical career. He cannot turn back in the middle of his studies; his chance is gone.

By the note above it will be seen how little difference there is, as regards preliminary education, between the requirements demanded by the Royal College of Surgeons of those who look forward to the qualification of Membership, and those who aspire to the Fellowship. As the Fellowship of this body is looked upon as giving the same stamp to a surgeon as the M.D. of London does to a physician, we would earnestly urge all who can attain to it to take up the additional preliminary subjects required for this qualification. For should they at any future time desire to become Fellows of the College by examination, they will, in all probability, find that it is hard indeed to begin again the studies requisite for the passing of this preliminary examination.

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APPRENTICESHIP.

In former days the mode of access to the profession was by apprenticeship to some regular practitioner, and was till recently the rule at Apothecaries' Hall, but practically it has been almost completely departed from. Then the plan was for the young apprentice to enter his master's dispensary or surgery, where he would learn to compound medicines, make a pill, and spread a plaster; by-and-by coming in due course to see and prescribe for patients of various ranks, and suffering from various maladies. With a good master, no course of instruction could be better, and with it men were apt to make better practical practitioners than now, especially as regards the prescribing of medicines and their compounding. But with a careless master the system only tended to perpetuate routine practice, and to produce careless, ignorant, and self-conceited practitioners. Undoubtedly the plan rendered students, when they came to the hospital—which they did towards the close of their apprenticeship—much more at home and much more able to appreciate what they saw and heard around them. The system is not yet wholly forgotten, and, with the proviso above mentioned, we heartily commend it. In a modified form it may still be usefully intercalated into the modern system of medical education. The number of years prescribed for this education is four, whilst most hospital courses are so arranged as to be got over in three, leaving a year unoccupied by class work. This year may be spent with advantage, either before entering the medical school, or after having finished the course. Of the latter we shall speak hereafter, but the young student may spend it well, before joining a hospital, in working in the laboratory of a general practitioner, learning something of Chemistry and Pharmacy, and thus preparing himself to enter the school with advantage. This gives him a decided pull over those who come straight to the hospital from a public school. Moreover, this is to be said: it is a good thing for a young man to feel his own weight, his responsibilities and duties, before entering a medical school. The change is so sudden and so violent, from the strict discipline of a school, to the almost unrestricted liberty of the medical student, that sometimes young lads lose their heads for awhile; but the almost uniform good behaviour of the medical students of the present day has a decidedly beneficial effect upon the newly entered candidates for medical qualification.

At all events, we would strongly urge on all intending students to acquire, before entering a medical school, some knowledge of Chemistry and Physics, and, if possible, an acquaintance with Human Osteology, commonly known as "the bones."

REGISTRATION.

As soon as the student has passed his preliminary examination, he ought to register his certificate at the office of the General Medical Council, 315, Oxford-street, W., or of the Branch Registrars, which will save him all further trouble as regards preliminary education. This is necessary, if the student desires to spend the first year with a general practitioner or at a country hospital, so as to make the time thus spent count. But when the student comes to enter a medical school, he must register the actual commencement of his hospital studies. In London the plan is this: On entering a school the student receives certain class-tickets or other certificate of having joined the school; with these in his hands he goes to the College of Surgeons, and is there registered as a Student of the College. This is necessary for admission to the examinations of the College as far as metropolitan students are concerned. The same kind of thing is done at Apothecaries' Hall; but it is now common for the return required by the General Medical Council to be sent in by the school authorities. *All registration must be made within fifteen days of the beginning of the session or other mode of study, or the year will be lost.*

II.—PRELIMINARY SCIENTIFIC EDUCATION.

Speaking of general education, we have incidentally referred to the importance of certain scientific acquirements. These, though not absolutely essential to some knowledge of Medicine, are so important as to be held in the first rank of subsidiary subjects. Thus, by the rules of the College of Surgeons, a student may be examined on the following subjects, but the examination is not compulsory: these are—Mechanics, Chemistry, Botany, and Zoology. Of these, the first three are of most importance to the student, and every effort ought to be made to acquire a knowledge of them sufficient at least to pass this examination. The University of London, however, has instituted an examination known as the Preliminary Scientific, dealing with these and allied subjects. This examination is a very powerful test of a man's acquirements, and many break down under it. We strongly counsel all to pass it, if possible, before entering on their purely medical studies It is sad to see the loss of time implied by a man being forced to devote his attention to purely scientific subjects when he ought to be attending to others which belong to later periods of his career, and which he will have to work up under like unfavourable auspices. The following are the regulations relating to this examination in the University of London:—

MECHANICAL PHILOSOPHY.

[The subjects marked with an asterisk are to be treated independently of mathematical symbols, or only by simple geometrical methods.]

**Statics.*—Elementary statics, including the resolution of forces, the mechanical powers, and the centre of gravity.

**Dynamics.*—Elementary dynamics, including the laws of motion, and propositions required for determining the rectilinear motion of a body, whether free or along inclined planes.

**Hydrostatics, Hydraulics, and Pneumatics.*—Elementary propositions respecting the nature, transmission, and intensity of fluid pressure, and the conditions of equilibrium of floating bodies; specific gravity, and modes of determining it; the common pump and forcing-pump; the hydrostatic press; the barometer; the air-pump; the steam engine.

**Optics.*—Laws of reflexion and refraction; reflexion at plain mirrors; reflexion at spherical mirrors, and refraction through lenses, the incident pencils being direct. Description of the eye. Simple instruments; camera obscura and simple telescope.

NATURAL PHILOSOPHY.

Heat.—Sources of heat; Conduction—convection. Effects of heat; expansion generally—of water—of gases and vapours; liquefaction; vaporisation; latent heat; expansive force of steam; dew-point; gases and vapours compared. Specific heat. Thermometers; pyrometers. Heat in the radiant state.

Electricity.—Sources of electricity. Static electricity; dual character—insulation—induction—specific inductive capacity—equivalent antithetic states—disruptive discharge—convection; electroscopes—Leyden jar, etc. Dynamic electricity; conduction—the electric current—derived currents—induction of currents; voltaic pile and other voltaic arrangements. Thermo-electricity; electro-thermometer.

Magnetism.—Magnets, the earth, etc.; induction—communication—retention—magnetic relations of iron, steel, etc. Electro-magnetism—as in the spark—in conducting media—in soft iron; magneto-electricity; principle of electro-magnetic and magneto-electric machines. Terrestrial magnetism.

INORGANIC CHEMISTRY.

Matter; simple and compound. Elementary bodies classed; metallic and non-metallic bodies. Chemical combination and mechanical mixture; solution. Outlines of crystallography; isomorphism; dimorphism; allotropic conditions of matter; chemical affinity; laws of combination by weight and by volume, as deduced from the history of the individual elements; equivalent numbers; equivalent volumes; symbolical notation, including questions on the unitary system; formulæ; nomenclature. Chemical actions produced under the influence of heat; nature of combustion; structure and properties of flame; principles of illumination; chemical action of light; photography. Oxygen; ozone. Hydrogen; water. Nitrogen; chemical constitution of the atmosphere; diffusion of gases; the oxides of nitrogen—nitric acid, ammonia. Chlorine, bromine, and iodine—their compounds with oxygen and hydrogen; theory of bleaching. Fluorine and hydrofluoric acid. Sulphur; sulphurous acid; manufacture and chemical applications of sulphuric acid; other oxygen compounds of sulphur; sulphuretted hydrogen. Phosphorus; oxygen and hydrogen compounds of phosphorus; theory of acids; monobasic, dibasic, and tribasic acids. Carbon; carbonic oxide and carbonic acid; the principal hydrogen compounds of carbon; manufacture of coal gas. Silicon and boron—their compounds with the elements previously enumerated. Metals; characters of metals as a class; metallurgical processes; alloys; classification of the metals. Potassium; nitre; gunpowder; theory of the action of gunpowder. Sodium; manufacture of carbonate of soda. Barium; strontium; calcium; mortars; cements. Magnesium; aluminum; glass; porcelain. Manganese; iron; composition and properties of cast iron, wrought iron, and steel; chromium. Cobalt; nickel; zinc; cadmium. Lead; manufacture of white lead. Copper; mercury; bismuth; tin; arsenic; antimony. Silver; gold; platinum. Principal compounds of the metals with the non-metallic elements; theory of salts. Principles of mineral analysis. Principles of electro-chemistry.

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BOTANY AND VEGETABLE PHYSIOLOGY.(a)

Elementary tissues and chief chemical constituents of plants. Respiration, endosmose, ascent of sap, fixation of carbon. Cell-formation and cell-contents; starch, gum, oil, sugar, wax, alkaloids. General characters and functions of root, stem (wood and bark), leaf, stamen, pistil, fruit, seed. Fertilisation of cryptogams and phænogams; germination; propagation by division. Phyllotaxis, metamorphosis, vernation, æstivation, stipulation, placentation. Classification of plants into phænogams and cryptogams—cellular and vascular;—acotyledons, monocotyledons, and dicotyledons (angiosperms and gymnosperms); endogens and exogens. Distinctive characters of the principal British natural orders, viz.:—*Dicotyledons*, Ranunculaceæ, Cruciferæ, Caryophyllæ, Leguminosæ, Rosaceæ, Umbelliferæ, Compositæ, Scrophulariaceæ, Labiatæ, Amentaceæ; *Monocotyledons*, Orchideæ, Liliaceæ, Cyperaceæ, Gramineæ; *Acotyledons*, Filices, Musci, Lichens, Algæ, Fungi, Demonstration of the botanical characters of plants upon large and conspicuous specimens (provided by the examiners). Derivation and meaning of the following terms, and demonstration of their application on specimens (provided by the examiners):—Thalamiflora, calyciflora, corolliflora: hypogynous, perigynous, epigynous: monandrous, diandrous, etc.: individual, variety, species, genus, order, class, kingdom.

ZOOLOGY.

The differences between animals and plants. General structure and chemical constitution of the animal body. Distinctive characters and chief peculiarities of the following groups of animals:—Mammalia, Aves, Reptilia, Amphibia, Pisces, Cephalopoda, Gasteropoda, Pteropoda, Lamellibranchiata, Brachiopoda, Polyzoa, Tunicata.—Insecta, Myriapoda, Arachnida, Crustacea, Annelida, Vermes (Turbellaria, Trematoda, Tæniada, Acanthocephala, Nematoidea, Gordiacea), Rotifera.—Echinodermata.—Anthozoa or Actinozoa, Hydrozoa.—Infusoria.—Spongiada, Rhizopoda, Gregarinida.

Reference of specimens (provided by the examiners) to any of the groups named above.

Candidates shall not be approved by the examiners unless they have shown a competent knowledge in the fundamental principles of—1. Mathematics; 2. Mechanical and Natural Philosophy; 3. Chemistry; 4. Biology, including Botany and Vegetable Physiology and Zoology.

PRACTICAL CHEMISTRY,

Including qualitative analysis of inorganic acids and bases in solutions containing each other.

III.—PROFESSIONAL EDUCATION.

THE COURSES NECESSARY FOR QUALIFICATION.

THE object of medical education may be said, though inaccurately, to be twofold. The final end is, of course, to enable a man to practise his profession with advantage to himself and safety to the public. But the only criterion or test of this capability available to men not specially qualified is the *testamur*, certificate, or diploma of some responsible body, which is accepted and registered by the General Medical Council. These bodies are somewhat numerous, and their requirements very diversified; consequently, the young student must take care, provided he wants a given diploma, to make his course of instruction correspond with that required by the body whence he desires his qualification. Moreover, it often happens that after a time a man may, for certain reasons, desire the diploma of another body besides that he originally contemplated; and for this reason alone, were it for no other, a wide curriculum is most desirable. In strict logic, therefore, these rules should be here given, and we shall try to indicate them as briefly and clearly as possible.

(A.) REGULATIONS OF BODIES GRANTING THE DEGREE OF DOCTOR OF MEDICINE.

1. UNIVERSITY OF OXFORD.

DEGREES IN MEDICINE.

EVERY student in Medicine is required to pass all the examinations for the degree of B.M., and to reckon the time of his medical study from the final examination for Arts.

1. Candidates for the degree of B.M. are required to pass two examinations, each of which is held yearly in full Michaelmas Term, usually at the end of November, due notice being given, in the usual manner, by the Regius Professor of Medicine.

The subjects of the first examination are Human Anatomy and Physiology, Comparative Anatomy and Physiology to a certain extent, and those parts of Mechanical Philosophy, Botany, and Chemistry which illustrate Medicine. The subjects of the second examination are the Theory and Practice of Medicine (including Diseases of Women and Children), the Materia Medica, Therapeutics, Pathology, the Principles of Surgery and Midwifery, Medical Jurisprudence, and General Hygiene. Every candidate at this second examination is to be examined in two of the ancient authors, Hippocrates, Aretæus, Galen, and Celsus; or in one of those four, and in some more modern author approved by the Regius Professor, as Morgagni, Sydenham, or Boerhaave.

Before a candidate is admitted to the first of these two examinations, he must have spent two years in professional studies after having passed the examinations required for the degree of B.A., unless he was placed in the first or second class in the School of Natural Science, in which case, if he received from the public examiners a special certificate of his attainments in Mechanical Philosophy, Chemistry, or Botany, he may be admitted to this examination at once, and need not then be examined again in any science specified in such certificate.

Before a candidate is admitted to the second examination, he must have completed sixteen terms from the date of the same *testamur* and two years from the date of his *testamur* in the first medical examination, and must deliver to the Regius Professor satisfactory certificates of his attendance at some first-class hospital.

No one from another University can be incorporated as a Graduate in Medicine without passing these two examinations, as well as having previously passed all examinations for the B.A. degree at his own University.

2. A Bachelor of Medicine wishing to proceed to the degree of Doctor is required to read publicly within the precincts of the Schools, in the presence of the Regius Professor, a dissertation composed by himself on some medical subject approved by the Professor, and to deliver to him a copy of it.

2. UNIVERSITY OF CAMBRIDGE.

REGULATIONS FOR DEGREES IN MEDICINE AND SURGERY.

Degree of Bachelor of Medicine.—Before a student can become a Bachelor of Medicine he must have resided nine terms (three academical years).

Five years of medical study are required, of which time six terms (two academical years) shall be spent in the University after the student has passed the previous examination in Arts. In the case of those who have graduated with honours as Bachelor of Arts, four years of medical study are deemed sufficient, and four terms only of medical study in the University are required.

There are three examinations for M.B.

The first examination is in—1. Chemistry and other branches of Physics; 2. Botany. Before presenting himself for it the student must have attended lectures on Chemistry, including manipulations, and on Botany.

The second examination is in—1. Elements of Comparative Anatomy; 2. Human Anatomy and Physiology; 3. Pharmacology. The student must have completed two years of medical study; and must also produce certificates of attendance on lectures on the Elements of Comparative Anatomy, Human Anatomy and Physiology, Materia Medica and Pharmacy; and of one year's hospital practice, and of one season's dissections.

The third examination is in—1. Pathology and Practice of Physic (two papers); 2. Clinical Medicine (in the wards of the Hospital); 3. Medical Jurisprudence. The candidate must have completed the course of medical study, and must produce certificates of attendance on one course of lectures on each of the following subjects:—Pathological Anatomy, Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and Midwifery; and of having attended hospital practice during three years, and of having been clinical clerk for six months at a recognised hospital, or of having had special charge of hospital, dispensary, or union patients under a qualified medical practitioner.

After the third examination an Act has to be kept, which consists in reading an original thesis, followed by a *viva voce* examination on the subject of the thesis, as well as on other subjects of the Faculty.

The Degree of Doctor of Medicine may be taken three years after M.B. An Act has to be kept, with *viva voce* examination, and an essay has to be written extempore. A Master of Arts of four years' standing can proceed direct to M.D. provided he produces the same certificates and passes the same examinations as for M.B.

Degree of Master in Surgery.—The candidate must have passed all the examinations for the degree of M.B., and must produce certificates of having attended a second course of lectures on Human Anatomy, one course of lectures on the Principles and Practice of Surgery, one year's clinical surgical

(a) Candidates for this and other botanical examinations are expected to bring with them a pocket-lens or simple microscope of two powers, and also a sharp penknife.

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lectures, ten cases of midwifery, a second season of dissections, three years' surgical practice of a recognised hospital, and of having been House-Surgeon or Dresser for six months. The subjects of the examination are—1. Surgical Anatomy; 2. Pathology and the Principles of Practice of Surgery; 3. Clinical Surgery; and 4. Midwifery.

The examinations are partly in writing and party *viva voce* in the dissecting-room and in the hospital. They take place in the Michaelmas and Easter Terms, an interval of two days being allowed to intervene between the first and second examinations for M.B.

3. UNIVERSITY OF LONDON.

This University grants degrees both in Medicine and Surgery. Those available for young students are the Bachelorships of Medicine and Surgery.

Every candidate for the degree of Bachelor of Medicine shall be required—

1. To have passed the matriculation examination in this University (unless he has taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras, and Latin was one of the subjects in which he passed).

2. To have passed the preliminary scientific examination, which is in Mechanical and Natural Philosophy, Inorganic Chemistry, Practical Chemistry, Botany and Vegetable Physiology, and Zoology. (Candidates for the degree of M.B. are strongly recommended by the Senate to pass the preliminary scientific examination before commencing their regular medical studies.)

3. To have been engaged in his professional studies during four years subsequently to matriculation or graduation in Arts, at one or more of the medical institutions or schools recognised by this University; one year, at least, of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom.

4. To pass two examinations in Medicine.

FIRST M.B. EXAMINATION.

No candidate shall be admitted to the first M.B. examination unless he have passed the preliminary scientific examination at least one year previously,(a) and have produced certificates to the following effect:—

1. Of having completed his nineteenth year.

2. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts in one of the before-named universities, been a student during two years at one or more of the medical institutions or schools recognised by this University; and of having attended a course of lectures on each of three of the subjects in the following list:—

DESCRIPTIVE AND SURGICAL ANATOMY, GENERAL ANATOMY AND PHYSIOLOGY, COMPARATIVE ANATOMY, PATHOLOGICAL ANATOMY, MATERIA MEDICA AND PHARMACY, GENERAL PATHOLOGY, GENERAL THERAPEUTICS, FORENSIC MEDICINE, HYGIENE, OBSTETRIC MEDICINE AND DISEASES PECULIAR TO WOMEN AND INFANTS, SURGERY, MEDICINE.

3. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts, dissected during two winter sessions.

4. Of having, subsequently to having passed the matriculation examination, or taken a degree in Arts, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of general and pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, etc.

5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines.

The fee for this examination shall be five pounds.

Candidates shall be examined in the following subjects:—

ANATOMY, PHYSIOLOGY, MATERIA MEDICA and PHARMACEUTICAL CHEMISTRY, ORGANIC CHEMISTRY.

Law of substitution; compound radicals; homologous series; principals of ultimate analysis. The chemical history of the cyanogen group; cyanogen; hydrocyanic acid; cyanic acid and urea; sulphocyanic acid; uric acid. Amylaceous and saccharine substances; fermentation; alcohol, wine, beer, bread, etc. Homologues of alcohol; ethers, simple and mixed; oxidation of alcohol; aldehyd and acetic acid and their homologues. Glycol and oxalic acid and their homologues. Glycerine; fatty and oily bodies; saponification. Principal vegetable acids. Ammonia and its derivatives; ammonium and ammoniacal salts. The chief natural organic bases. The chief constituents of the vegetable organism; cellulose; vegetable fibrin; albumin, casein, glutin, etc. The chief constituents of the animal organism; animal fibrin, albumin, casein, gelatin; blood, milk, bile, urine, etc. Decay, putrefaction; destructive distillation. The chemical principles of the processes of nutrition and respiration in plants and animals.

SECOND M.B. EXAMINATION.

No candidate shall be admitted to the second M.B. examination within two academical years of the time of his passing the first examination, nor unless he have produced certificates to the following effect:—

1. Of having passed the first M.B. examination.

2. Of having, subsequently to having passed the first M.B. examination, attended a course of lectures on each of two of the subjects comprehended in the foregoing list, and for which the candidate had not presented certificates at the first M.B. examination.

3. Of having conducted at least twenty labours. (Certificates on this subject will be received from any legally qualified practitioner in Medicine.)

4. Of having attended the surgical practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery.

5. Of having attended the medical practice of a recognised hospital or hospitals during two years, with clinical instruction on and lectures on Clinical Medicine. N.B.—The student's attendance on the surgical and on the medical hospital practice may commence at any date after his passing the preliminary scientific examination, and may be comprised either within the same year or within different years; provided that in every case his attendance on surgical and medical hospital practice be continued for at least eighteen months subsequently to his passing the first M.B. examination. Attendance during three months in the wards of a lunatic asylum recognised by the University, with clinical instruction, may be substituted for a like period of attendance on medical hospital practice.

6. Of having, subsequently to the completion of his attendance on surgical and medical hospital practice, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, union, during six months.

7. Of having acquired proficiency in vaccination. (Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council.)

The candidate shall also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended.

The fee for this examination shall be five pounds.

Candidates shall be examined in the following subjects:—

GENERAL PATHOLOGY, GENERAL THERAPEUTICS, AND HYGIENE; SURGERY, MEDICINE, OBSTETRIC MEDICINE, FORENSIC MEDICINE.

The examinations shall include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry.

BACHELOR OF SURGERY.

No candidate shall be admitted to the examination for the degree of Bachelor of Surgery, unless he have produced certificates to the following effect:—

1. Of having passed the second examination for the degree of Bachelor of Medicine in this University.

2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject.

Candidates are examined on Surgical Anatomy and surgical operations, by printed papers; examination, and report on cases, of surgical patients; performance of surgical operations upon the dead subject; application of surgical apparatus; *vivâ voce* interrogation.

MASTER IN SURGERY.

The examination for the degree of Master in Surgery shall take place once in each year, and shall commence on the fourth Monday in November.

No candidate shall be admitted to this examination unless he have produced certificates to the following effect:—

1. Of having taken the degree of Bachelor of Surgery (b) in this University.

(a) Candidates who matriculated previously to January, 1861, will not be required to pass the preliminary scientific examination in any other subjects than Chemistry and Botany; and they will be allowed to pass the preliminary scientific examination and the first M.B. examination in the same year, if they so prefer.

(b) Candidates who have obtained the degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor in Surgery; and in the case of such candidates, the attendance on surgical practice required by Regulation 2 may commence from the date of the M.B. degree.

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2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University—*a*. To Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University. *b*. Or to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University; and of having been engaged during three years in the practice of his profession. *c*. Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. (One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. examination have been placed in the first division.)

3. Of moral character, signed by two persons of respectability.

These certificates shall be transmitted to the Registrar at least *fourteen days* before the examination begins.

4. UNIVERSITY OF DURHAM.

Candidates for the degree of M.C., M.B., and M.D., in the University of Durham, are required to reside for three terms as students in Arts at the University, either in Durham or in Newcastle.

For the Licence in Surgery.—The regulations are the same as those for the licence in Medicine, except that the final examination is directed more particularly to Surgery, and may or may not be passed at the same time as the final examination for the licence in Medicine.

For the Licence in Medicine.—A candidate must produce certificates of registration as a student in Medicine; of having, after registration, spent four years in medical study at one or more of the schools recognised by the licensing bodies named in Schedule (A) of the Medical Act, 1858, one of the said four years being spent at the University College of Medicine, Newcastle-on-Tyne; of good moral conduct, and of having attained the age of twenty-one years. There are two examinations; one after the second winter session, the other after the fourth winter session, of medical study. The first is directed to Anatomy, Physiology, and Chemistry; the second to the other branches of medical education, and more particularly to the Practice of Medicine.

For the Degree of Master in Surgery.—A candidate must be a Licentiate in Surgery, and also a Licentiate in Medicine, of the University, and of the standing of eighteen terms (six years) at least from the date of his registration at Durham, and of three terms at least from the date of his admission to the licence in Surgery. He must be a Bachelor of Arts, or have passed the final examination for B.A., or one equivalent thereto, and must have kept one year's residence in Arts, either at Durham in the University, or at Newcastle-upon-Tyne in the Durham University College of Medicine. The examination for this degree is directed chiefly to the Practice of Surgery.

For the Degree of Bachelor of Medicine.—A candidate must be of the standing of one year at least as a Licentiate in Medicine, and of six years at least from the date of his matriculation. He must either be a Bachelor of Arts or have kept one year's residence in Arts, either at Durham in the University, or at Newcastle-upon-Tyne in the Durham University College of Medicine, and have passed the final examination for the degree of B.A., or an equivalent thereto. The examination for this degree is directed chiefly to the Practice of Medicine.

For the Degree of Doctor in Medicine.—A candidate must be of the standing of one year at least as a Bachelor of Medicine of the University of Durham, and of the standing of seven years from the date of his matriculation at Durham, and must perform such exercises as the Warden and Senate require.

The examinations for the licences and degrees in Medicine and Surgery are conducted in Newcastle. Those for the licences: 1. By printed papers of questions. 2. Practically in Anatomy, Physiology, Chemistry, Materia Medica, Pharmacy, Surgery, Medicine, Midwifery, and Medical Jurisprudence. 3. *Viva voce* on all the subjects. The examinations are held, except in special cases, yearly in the month of June at the close of the Easter Term, and are open to members of the University. The licences and degrees are conferred in Convocation at Durham.

Fees for Examination and Degrees: For senior middle class examination, £1; for examination at the end of first year, £1; for registration examination, £1; for registration, 5*s*.; for a certificate in Chemistry, 10*s*.; for each public examination in Medicine or in Surgery, £1; for a licence in Medicine, £3; for a licence in Surgery, £3; for a degree of Master in Surgery, £6; for a degree of Bachelor in Medicine, £6; for a degree of Doctor in Medicine, £6.

5. UNIVERSITY OF ST. ANDREWS.

ORDINARY DEGREES.

The degrees in Medicine granted by the University of St. Andrews are those of Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum and examinations for these degrees are generally the same as those of the Universities of Edinburgh, Aberdeen, and Glasgow. The following regulations, however, for candidates for the degrees of Bachelor of Medicine and Master in Surgery present some difference:—

No one shall be received as a candidate for the degree of Bachelor in Medicine or Master in Surgery unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities and colleges, viz.:—The University of St. Andrews; the University of Glasgow; the University of Aberdeen; the University of Edinburgh; the University of Oxford; the University of Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the School of the College of Surgeons in Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court.

Attendance on the lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen shall not be reckoned for graduation in St. Andrews if the fee for such lectures be of less amount than is charged for the like course of lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in Edinburgh, Glasgow, or Aberdeen.

Fees for Graduation.—For the degree of Bachelor of Medicine, five guineas in respect of each of the three divisions of the examination on professional subjects; and if the candidate desires to be admitted to the degree of Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the fifteen guineas so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of five guineas; and every candidate for the degree of Doctor of Medicine, who has previously obtained the degree of Bachelor of Medicine, shall pay, in addition to the fees paid by him as a candidate for the degree of Bachelor of Medicine, a fee of five guineas, exclusive of any stamp duty which may for the time be exigible.

SPECIAL DEGREES.

The degree of Doctor of Medicine may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years, whose professional position and experience are such as, in the estimation of the University, entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always, that degrees shall not be conferred under this section to a greater number than ten in any one year.

Regulations as to Special Degrees.—As regards registered medical practitioners above the age of forty years, the examinations are held in the University Library, annually, in April. The graduation fee is fifty guineas. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A certificate of age, being a baptismal certificate, or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the profession, or in the medical schools, recommending the candidate to the Senatus for the degree of M.D., and testifying to his professional position and skill. As only ten can graduate in each year, candidates are selected whose service and certificates seem, to the Medical Faculty, to present the highest professional claims; but where these seem equal, preference is given to priority of application and to age. 3. Candidates, when notified for examination, will remit a portion of the graduation fee—viz., £10 10*s*. This sum shall

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be forfeited should the candidate fail to appear, or to graduate, at the time appointed. 4. A satisfactory examination, written and *viva voce*, must be passed in the following departments:—(1) Materia Medica and General Therapeutics, (2) Medical Jurisprudence, (3) Practice of Medicine and Pathology, (4) Surgery, (5) Midwifery and Diseases of Women and Children.

6. UNIVERSITY OF EDINBURGH.

This University grants degrees in Medicine and Surgery.

No one is admitted to the Degree of Bachelor of Medicine or Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course, and two courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

Every candidate for the degrees of M.B. and C.M. must give sufficient evidence by certificates—

1. That he has studied each of the following departments of medical science—viz., Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children (two courses of Midwifery of three months each being reckoned equivalent to a six months' course, provided different departments of Obstetric Medicine be taught in each of the courses), General Pathology (or, in schools where there is no such course, a three months' course of lectures on Morbid Anatomy, together with a supplemental course of Practice of Medicine or Clinical Medicine), during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures above described; Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery, courses of the same duration as those of not less than one hundred lectures above prescribed, or two courses of three months' lectures being given at least twice a week; Medical Jurisprudence, Botany, Natural History (including Zoology), during courses including not less than fifty lectures.

2. That he has attended for at least two years the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons.

3. That he has been engaged, for at least six months, by apprenticeship or otherwise, in compounding and dispensing drugs at the laboratory of a hospital, dispensary, member of a surgical college or faculty, licentiate of the London or Dublin Society of Apothecaries, or a member of the Pharmaceutical Society of Great Britain.

4. That he has attended for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary, physician, surgeon, or member of the London or Dublin Society of Apothecaries.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to the following regulations:—

1. One of the four years of medical and surgical study required must be in the University of Edinburgh.

2. Another of such four years of medical and surgical study must be either in the University of Edinburgh, or in some other university entitled to give the degree of Doctor of Medicine.

3. Attendance during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on courses of lectures as above prescribed.

4. One year's attendance on the lectures of teachers of Medicine in the hospital schools of London, or in the school of the College of Surgeons in Dublin, or of such teachers of Medicine in Edinburgh or elsewhere as shall from time to time be recognised by the University Court, may be reckoned as one of such four years, and to that extent shall be held as attendance on courses of lectures as above prescribed.

5. Candidates may, to the extent of four of the departments of medical study required, attend in such year or years of their medical and surgical studies, as may be most convenient to them, the lectures of the extra-academical teachers of Medicine specified in the foregoing Sub-section 4.

6. All candidates not students of the University availing themselves of the permission to attend the lectures of extra-academical teachers in Edinburgh must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University.

Every candidate must deliver, before March 31 of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year (or that he will have done so on or before the day of graduation), and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

Each candidate is examined, both in writing and *viva voce*—first, on Chemistry, Botany, and Natural History; secondly, on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; thirdly, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; fourthly, clinically on Medicine and on Surgery in a Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates.

The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of Medicine, and is of the age of twenty-four years, and produces a certificate of having been engaged, subsequently to his having received the degree of Bachelor of Medicine, for at least two years in attendance on a hospital, or in the Military or Naval Medical Services, or in medical and surgical practice: provided always that the degree of Doctor of Medicine shall not be conferred on any person, unless he be a graduate of Arts in one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall, before or at the time of his obtaining the degree of Bachelor of Medicine, or thereafter, have passed a satisfactory examination in Greek, and in Logic or Moral Philosophy, and in one at least of the following subjects—namely, French, German, higher Mathematics, and Natural Philosophy: and provided also that the candidate for the degree of Doctor of Medicine shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the degree of Bachelor of Medicine, which he may have made a subject of study after having received that degree. The candidate must lodge his thesis with the Dean on or before April 30 of the year in which he proposes to graduate. No thesis will be approved by the Medical Faculty which does not contain either the results of original observations in Practical Medicine, Surgery, Midwifery, or some of the sciences embraced in the curriculum for the Bachelor's degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the degree of M.D. (under the new statutes), but who cannot appear personally to receive the degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the degree conferred on them in absence.

NOTICE TO CANDIDATES FOR GRADUATION IN MEDICINE.

1. Candidates who commenced their medical studies by attendance on qualifying classes before February 4, 1861, are entitled to appear for examination for the degree of Doctor of Medicine, after four years' study, on completing their twenty-first year, and without having taken the degree of Bachelor of Medicine. They are also exempted from the preliminary examinations, and require only to undergo an examination in Latin. They are also exempted from attendance on Practical Chemistry and Practical Midwifery, and require only three months of Clinical Surgery, and eighteen months of hospital attendance.

2. An *Annus Medicus* is constituted by at least two winter courses of one hundred lectures each, or by one such course, and two summer courses of fifty lectures each, all being duly certified.

3. Four *Anni Medici* are required for graduates in Medicine. Two at least of these years must be passed at a university which grants degrees in Medicine, one of the two being at Edinburgh.

4. One or two of the *Anni Medici* may be taken at qualified extra-academical schools, in the manner stated in the succeeding paragraph:

5. In University College, in King's College, in the hospital schools of London, in the extra-academical School of Edinburgh, in the School of the College of Surgeons of Dublin, and in certain medical schools where at least two lecturers have been qualified by the University Court, a candidate may make *two Anni Medici*—one of which must be constituted by hospital attendance and Practical Anatomy, and the other by at least two courses of one hundred lectures, or one such course, and two courses of fifty lectures. The classes at these schools only qualify to the extent of four, and one of the four must be Practical Anatomy.

6. In provincial schools where there are no lecturers qualified by the University Court, a candidate can make *one Annus Medicus only*, and this is constituted by attendance on a qualified hospital, along with a course of Practical Anatomy.

The Fees are—For the degree of M.B., three Examinations, £5 5s. each, £15 15s.; for the degree of C.M., £5 5s. additional; for the degree of M.D., £5 5s. additional to that for M.B., exclusive of £10 Government stamp.

The fees for C.M. and M.D. required to be paid on or before July 15.

Note.—Total fees and stamp for graduating as M.D. only, by regulations, for students commencing before February, 1861, £25.

N.B.—The above fees include all charges for the diplomas.

RIGHTS OF THE MEDICAL GRADUATES OF SCOTLAND ACCORDING TO THE MEDICAL ACT.

Before the passing of the Medical Act of 1858, the degree of Doctor of Medicine granted by the universities of Scotland (as the possessor underwent a complete education and examination in all departments of Physic and Surgery), qualified the graduate to practise every branch of the medical profession throughout Scotland. One principal purpose of the Medical

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Act was to extend local rights of practice over the whole of her Majesty's dominions. But according to the hitherto accepted reading of a dubious clause in the Act, no one can practise both Medicine and Surgery without possessing two distinct diplomas—one for Medicine, and another for Surgery. The universities were thus compelled, in justice to their graduates, to give them the additional title of Master in Surgery, not as implying any additional study or examination, but as declaring more distinctly their qualifications, and to permit registration as regularly qualified practitioners in the whole field of their professional education. The Secretary for War some time ago issued an order that candidates for admission into the Medical Service of the Army should obtain their qualifications in Physic and Surgery from two different sources; the effect of which would have been to prevent any one university from qualifying for this purpose. The Scottish Universities' Commissioners, recognising the serious evils of such a system, followed up a remonstrance which had been offered on the part of the University of Edinburgh, and obtained the rescinding of all restrictions in the source of qualification. Consequently, any single university in Scotland can now qualify candidates for the military service as well as for any other public medical service in the country.

The Medical Faculty have resolved that the written and oral examinations on Chemistry, Botany, and Natural History, in October, 1875, and April, 1876, shall be restricted in the following manner:—

1. *Chemistry.*—The principles of chemical combination and action, as illustrated in the simpler compounds of the more commonly occurring elements. The classification of organic compounds, and the general and distinctive characters of each group.

2. *Botany.*—The structure and functions of plants, vegetable organography and physiology, the principles of classification, classes, sub-classes, and sections of the natural system. (See Balfour's "Class-book," or his "Manual of Botany.") Botanical characters to be demonstrated on conspicuous specimens of the following natural orders:—Ranunculaceæ, Papaveraceæ, Cruciferæ, Caryophyllaceæ, Malvaceæ, Leguminosæ, Rosaceæ, Onagraceæ, Umbelliferæ, Dipsacaceæ, Compositæ, Campanulaceæ, Sterculiaceæ, Boraginaceæ, Labiatæ, Scrophulariaceæ, Primulaceæ, Euphorbiaceæ, Salicaceæ, Corylaceæ, Coniferæ, Cycadaceæ, Orchidaceæ, Amaryllidaceæ, Liliaceæ, Palmæ, Cyperaceæ, Gramineæ, Filices, Musci. The student will be examined practically on the microscopical structure of plants, and he will be required to describe the organs of fresh plants put into his hands.

3. *Natural History.*—The general principles of zoological classification. The characters of the classes of the Vertebrata, founded upon anatomical and physiological characters. The general characters of the vertebrate orders. The morphological, anatomical, and physiological characters of the sub-kingdoms of the Invertebrata, and the general characters of the invertebrate orders.

7. UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

Three medical degrees are conferred by this University, viz.:—Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.); all of which are recognised by the Medical Act as qualifying for practice throughout the British Dominions.

The degree of Bachelor of Medicine may be obtained by candidates of the age of twenty-one years who have complied with the regulations as to education and examination. The degree of Master in Surgery is only conferred upon those who at the same time obtain the Bachelorship of Medicine; and the degree of Doctor of Medicine may be conferred on candidates of not less than twenty-four years of age who have obtained the Bachelorship two or more years previously, and have fulfilled certain conditions to be afterwards mentioned.

The medical curriculum is as nearly as possible the same as that in the University of Edinburgh.

The following is the order of the course of study recommended to Students:—

First Winter Session: Anatomy, elementary or descriptive and practical; Chemistry.

First Summer Session: Botany, Practical Chemistry, Anatomy.

There may be advantages in beginning study in a summer session preceding the first winter, in which case instruction should be sought in Botany, elementary Anatomy, or elementary Chemistry.

Second Winter Session: Advanced Anatomy and Practical Anatomy, Physiology, Surgery; hospital attendance, surgical wards and clinical lectures.

First Professional Examination in April or October.

Second Summer Session: Zoology, Practical Anatomy or Practical Chemistry, Practical Pharmacy; hospital attendance, surgical wards and clinical lectures.

Third Winter Session: Surgery, second course; Materia Medica; Practice of Physic; hospital attendance, medical wards and clinical lectures; Pathology.

Second Professional Examination in April or October.

Third Summer Session: Hospital attendance, medical wards and clinical lectures; Surgical Anatomy, Operative Surgery.

Fourth Winter Session: Practice of Physic, second course; Forensic Medicine, Midwifery; hospital attendance, medical or surgical wards and clinical lectures; Midwifery practice.

Final Examination in April or July.

PROFESSIONAL EXAMINATIONS.

The professional examinations are conducted in writing, orally and practically, in three divisions, as follows:—

First Division: On Chemistry, Elementary Anatomy, Botany.

Second Division: On Advanced Anatomy, Physiology, Zoology with Comparative Anatomy.

Third or Final Division: On Materia Medica, General Pathology, Surgery, Practice of Medicine, Midwifery, Forensic Medicine, Clinical Surgery, Clinical Medicine.

DEGREE OF DOCTOR OF MEDICINE.

The degree of Doctor of Medicine may be conferred on any candidate of not less than twenty-four years of age, who has obtained the Bachelorship two or more years previously, provided he possesses a degree in Arts, or has, in addition to the Preliminary Examination in General Education required for the Bachelorship, also passed before obtaining the Bachelorship, or within three years thereafter, an examination in Greek, and Logic or Moral Philosophy, together with any one of the other optional subjects belonging to the Examination in General Education. He must also produce evidence of having been engaged in professional study or avocations for two years after having obtained the Bachelorship, and must lodge an inaugural dissertation composed by himself on a medical, surgical, or allied subject. Theses for the degree of M.D. to be lodged with the Registrar on or before March 20, June 20, or October 20. As the granting or withholding of the degree depends chiefly on the character of the dissertation, candidates are advised to bestow both time and care on its preparation.

The fees for degrees are the same as in Edinburgh.

The Examinations in General Education take place twice yearly—viz., in October and April. The examinations for Session 1875-76 will be held on Thursday and Friday, October 7 and 8, 1875, and Friday and Saturday, March 31 and April 1, 1876. Those who intend to present themselves for either of these examinations are required to send in their names to the Registrar on or before September 28 or March 21. A fee of 10s. must be paid on entering their names by those who are not matriculated students—which fee will be returned on matriculation within the year.

The Professional Examinations are held at the following periods—viz.: The first in October (October 12, 1875) and April (April 7, 1876); the second in October (October 13, 1875) and April (April 8, 1876); the third in July (July 19, 1875) and April(a) (April 10, 1876).

8. UNIVERSITY OF ABERDEEN.

The following are the degrees in Medicine granted by this University—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

The preliminary examination and professional curriculum, and examination for the degrees of B.M., C.M., and M.D. being in conformity with the Ordinances of the Scotch Universities Commissioners, are nearly the same as those of the Universities of Edinburgh, Glasgow, and St. Andrews.

The studies of candidates for the degrees of Bachelor of Medicine and Master in Surgery are subject to these regulations:—

One at least of the four years of medical and surgical study must be in the University of Aberdeen.

Another of such four years must be either in this University or in some other university entitled to give the degree of Doctor of Medicine.

FEES FOR GRADUATION.

1. Each candidate for the degree of M.B. shall pay a fee of £5 5s. in respect of each of the three professional examinations.

2. If the candidate desires to be admitted to the degree of

(a) The April Examinations will be discontinued in 1877.

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Bachelor of Medicine only, he shall not, on admission thereto, be required to pay any further fee in addition to the £15 15s. so paid by him; but if he desires to be admitted to the degree of Master in Surgery also, he shall, on being admitted to such degree, pay a further fee of £5 5s.

3. And every candidate for the degree of Doctor of Medicine shall pay, in addition to the fees paid by him for the degree of Bachelor of Medicine, a fee of £5 5s., exclusive of any stamp duty which may for the time be exigible.

EXEMPTION FROM THE FOREGOING REGULATIONS.

Students who shall have begun their medical studies before the first Tuesday of November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been at the University of Aberdeen.

9. UNIVERSITY OF DUBLIN.

DEGREES AND LICENCES IN MEDICINE AND SURGERY.

The degrees and licences in Medicine and Surgery granted by the University are—1. Bachelor in Medicine. 2. Doctor in Medicine. 3. Master in Surgery.

1. *Bachelor in Medicine.*—A candidate for the degree of Bachelor in Medicine must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement, provided the requisite medical education shall have been completed. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on the following courses of lectures, viz:—Courses of five months' duration (November to April)—Anatomy, Practical Anatomy (with Dissections), Surgery, Chemistry, Practice of Medicine, Midwifery. Courses of three months' duration (April to July)—Botany, Practical Chemistry, Medical Jurisprudence, Materia Medica and Pharmacy, Institutes of Medicine.

Hospital Attendance.—1. Nine months' attendance on the clinical lectures of Sir Patrick Dun's Hospital. 2. Nine months' additional attendance on the clinical lectures of any hospital recognised by the Board. 3. Instruction in practical Midwifery, including not less than six deliveries. 4. Certificate of personal attendance on fever cases, stating name and date of each case.

Any of the above-named six or three months' courses may be attended at any medical school in Dublin recognised by the Provost and Senior Fellows (and three of them, at the discretion of the candidate, may be attended in the University of Edinburgh), provided the candidate has kept an *annus medicus* in the School of Physic.

The schools recognised are—1. The School of the Royal College of Surgeons in Ireland. 2. The Carmichael School. 3. The School of Dr. Steevens' Hospital. 4. The St. Peter-street School. 5. The School of the Catholic University.

An *annus medicus*, or a year's attendance, in the School of Physic may be kept in three ways:—1. By attending at least two, or not more than three, of the foregoing courses which are of six months' duration. 2. By attending one course of six months' and two of three months' duration. 3. By nine months' attendance on Sir Patrick Dun's Hospital and clinical lectures; together with one course of six months', or, in lieu thereof, two courses of three months' duration.

The fee for nine months' attendance at St. Patrick Dun's Hospital is £12 12s. The fee for each course of lectures is £3 3s. The fee for the *Liceat ad Examinandum* is £5. The fee for the degree of M.B. is £11.

2. *Doctor in Medicine.*—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

3. *Master in Surgery.*—The degree of Master in Surgery can only be obtained by students who are of Masters in Arts standing, and who have completed the professional curriculum and passed the examinations required. The curriculum extends over a period of four years, and comprises attendance upon the following courses of lectures:—viz., Anatomy, one course; Demonstrations, three courses; Dissections, three courses; Theory and Practice of Surgery, two courses; Practice of Medicine, one course; Chemistry, one course; Materia Medica, one course; Midwifery, one course; Practical Chemistry, one course; Botany, one course; Medical Jurisprudence, one course.

Hospital attendance for three sessions, each of nine consecutive months' duration, in any recognised hospital, together with attendance on the clinical lectures on Medicine and Surgery there delivered, are required. Any of the above-named courses may be attended at any of the medical schools of Dublin recognised by the Board, provided the candidate has kept an *annus medicus* in the School of Physic. The following hospitals are recognised by the Board:—1, Sir Patrick's Dun's School of Physic Hospital; 2, Meath Hospital; 3, Richmond, Whitworth, and Hardwicke Hospitals; 4, Dr. Steevens' Hospital; 5, Jervis-street Infirmary; 6, City of Dublin Hospital; 7, Mercer's Hospital: 8, St. Vincent's Hospital; 9, Adelaide Hospital; 10, Mater Misericordiæ Hospital. Of the courses of lectures, which are of five months' duration, not more than three can be attended during any one session. Candidates will also be required to perform surgical operations on the dead subject. Candidates for the degree of Master in Surgery, who have already passed the examination for the degree of Bachelor of Medicine, will be examined in Anatomy and Surgery only. Fee for the *Liceat ad Examinandum*, £5. Fee for the degree of M.Ch., £11.

UNIVERSITY LICENCES.

Candidates for the licences in Medicine or Surgery must be matriculated in Medicine, and must have completed four years in medical studies. Candidates for the licences in Medicine or Surgery must pass the following examination in Arts, unless they be students in the Senior Freshman or some higher class:—Homer's Iliad, Books I., II. (omitting catalogue of ships), III.; Lucian's Dialogues (Walker's edition); Xenophon's Anabasis, Books I., II., III.; Virgil, Æneid, Books I., II., III.; Sallust; Horace, Satires; Latin Prose Composition; English Prose Composition; English History; Modern Geography; Arithmetic; Algebra to the end of Simple Equations; Euclid, Books I., II., III. Students who have passed the foregoing examination will be required to pay the admission fee of £15.

1. *Licentiate in Medicine.*—The medical course and examination necessary for the licence in Medicine is the same as for the degree of M.B., with the exception that any general hospital approved by the Board of Trinity College may be substituted for Sir Patrick Dun's. Candidates who are already Licentiates in Surgery of the Royal College of Surgeons in Ireland, or Members of the College of Surgeons of England, on passing the foregoing Arts Examination, will be admitted to examination for the licence in Medicine. Fee for the *Liceat ad Examinandum*, £5. Fee for the licence in Medicine, £5.

2. *Licentiate in Surgery.*—The surgical course and examination necessary for the licence in Surgery are the same as for the degree of Master in Surgery. Fee for the *Liceat ad Examinandum*, £5. Fee for the licence in Surgery, £5.

Total Expenses of obtaining the Degrees of Bachelor in Medicine and Master in Surgery.—I. Lectures: 1. Anatomy (one course), £3 3s. 2. Practical Anatomy (three courses), £9 9s. 3. Dissections (three courses), £15 15s. 4. Surgery (two courses), £4 4s. 5. Practice of Medicine, £3 3s. 6. Chemistry (two courses), £4 4s. 7. Materia Medica and Pharmacy, £3 3s. 8. Midwifery, £3 3s. 9. Botany. 10. Medical Jurisprudence, £3 3s. 11. Institutes of Medicine, £3 3s. Matriculation fee, 5s. II. Hospitals: Sir P. Dun's (first year), £9 9s.; ditto (second year), £9 9s.; ditto (third year), £9 9s.; Practical Midwifery, £3 3s. Ophthalmic Surgery, £2 2s. III. Degrees: 1. *Liceat ad Examinandum in Medicinâ*, £5. 2. *Liceat ad Examinandum in Chirurgiâ*, £5. 3. M.B. degree, £11. 4. M.Ch. degree, £11. Total Expenses: 1. Lectures, £52 15s. 2. Hospitals, £33 12s. 3. Degrees, £32. Total, £118 7s.

N.B. As no degrees in Medicine or Surgery are conferred except upon graduates in Arts, the expense of the degree of Bachelor in Arts, amounting altogether to £83 4s., should be added to the foregoing, making the total £281 11s.

10. QUEEN'S UNIVERSITY IN IRELAND.

This University confers the degrees of M.D. and M.Ch. Students who wish to obtain the degree of M.D. or of M.Ch. in the Queen's University must be matriculated students of one of the Queen's Colleges at Belfast, Cork, or Galway, and must pursue the courses of study prescribed by the Senate of the University.

Each candidate for the degree of Doctor in Medicine or Master in Surgery is required—1. To have passed in one of the Colleges of the Queen's University the entrance examination in Arts, and to have been admitted a matriculated student of the University. 2. To have attended in one of the

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Queen's Colleges lectures on one modern continental language for six months, and lectures on Natural Philosophy for six months. 3. To have also attended, in some one of the Queen's Colleges, at least two of the courses of lectures marked with an asterisk. For the remainder of the courses, authenticated certificates will be received from the professors or lecturers in universities, colleges, or schools recognised by the Senate of the Queen's University in Ireland. 4. To pass the University examinations—the first and second University examination, and the degree examination. The curriculum shall extend over at least four years, and shall be divided into periods of at least two years each. Candidates are recommended to pass the matriculation examination prior to entering on the second period. It is recommended that the first period shall comprise attendance on the following courses of medical lectures:—*Chemistry; *Botany, with Herborisations for practical study, and Zoology; *Anatomy and Physiology; *Practical Anatomy; *Materia Medica and Pharmacy. And that the second period shall comprise attendance on the following courses of medical lectures:—Anatomy and Physiology (second course), Practical Anatomy (second course), *Theory and Practice of Surgery, *Midwifery, *Theory and Practice of Medicine, *Medical Jurisprudence. In addition to the above courses of lectures, candidates shall have attended, during either the first or second period, a course of lectures on a modern continental language (in one of the colleges of the University), and Experimental Physics (in one of the colleges of the University). Also, during the first period—Practical Chemistry (in a recognised laboratory), and medico-chirurgical hospital (recognised by the Senate) containing at least sixty beds, together with the clinical lectures therein delivered, at least two each week—a winter session of six months. And during the second period—Practical Midwifery, at a recognised midwifery hospital, with the clinical lectures therein delivered, for a period of three months in a hospital containing not less than thirty beds, or six months in a hospital containing not less than fifteen beds; medico-chirurgical hospital (recognised by the Senate) containing at least sixty beds, together with the clinical lectures therein delivered, eighteen months, including either three winter sessions of six months each, or two winter sessions of six months each, and two summer sessions of three months each. Medical examinations are held in June, and in September and October. The June examinations are pass examinations. The honour examinations commence on the last Tuesday in September, and are followed by pass examinations. Each candidate for examination in June must forward to the secretary, on or before June 1, notice of his intention to offer himself as a candidate, along with his certificates, and each candidate for examination in September or October must forward similar notice, along with his certificates.

(B.) BODIES GIVING LICENCES OR OTHER FORMS OF QUALIFICATION NOT BEING DEGREES IN MEDICINE.

1. THE ROYAL COLLEGE OF PHYSICIANS, LONDON.

In the Royal College of Physicians there are three grades—Fellows, Members, and Licentiates. Of these the first is purely honorary, and so in a certain sense is the second. The third is that taken by the student on leaving his studies, and is valuable as being at once a qualification to practise Medicine, Surgery, and Midwifery, and is recognised by the Poor-law Board as a qualification in Surgery as well as in Medicine.

The College will, under its charter, grant licences to practise Physic, including therein the Practice of Medicine, Surgery, and Midwifery (which licences are not to extend to make the Licentiates Members of the Corporation), to persons who shall conform to the following by-laws:—

Every candidate for the College licence (except when otherwise provided by the by-laws) is required to produce satisfactory evidence to the following effect:—

1. Of having attained the age of twenty-one years.
2. Of moral character.
3. Of having passed, before the commencement of professional study, an examination in the subjects of general education recognised by the College.
4. Of having been registered as a medical student in the manner prescribed by the General Medical Council. ["After October, 1870, every candidate (not exempted from registration) is required to have been registered at least four years previously."]
5. Of having been engaged in professional studies during four years, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—*a.* Attending the practice of a hospital or other institution recognised by the College for that purpose. *b.* Receiving instruction as the pupil of a legally qualified practitioner holding any public appointment which affords opportunities, satisfactory to the examiners, of imparting a practical knowledge of Medicine, Surgery, or Midwifery. *c.* Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced *before* the candidate shall have passed an examination in the subjects of general education will not be recognised by the College.
6. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals, of having discharged the duties of clinical clerk at a recognised hospital for a period of not less than three months; of having performed the duties of dresser at a recognised hospital for a period of not less than three months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women.
7. Of having studied the following subjects:—Anatomy (with dissections) during two winter sessions; Physiology during two winter sessions; Chemistry during six months; Practical Chemistry during three months; Materia Medica during three months; Practical Pharmacy during three months (by Practical Pharmacy is meant instruction in the laboratory of a registered medical practitioner, or of a member of the Pharmaceutical Society of Great Britain, or of a public hospital or dispensary recognised by the College); Botany during three months (this course of lectures may be attended prior to the commencement of professional studies; and any candidate producing satisfactory evidence that Botany formed one of the subjects of his preliminary examination will be exempt from attendance on this course); Morbid Anatomy during six months (this includes attendance and instruction in the post-mortem-room during the period of clinical study); Principles and Practice of Medicine during two winter sessions (it is required that the Principles of Public Health should be comprised in this course of lectures, or in the course of lectures on Forensic Medicine: the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Principles and Practice of Surgery during two winter sessions (the attendance on these lectures must not commence earlier than the second winter session at a recognised medical school); Clinical Medicine during two winter sessions and two summer sessions (the attendance on these lectures must not commence until after the first winter session at a recognised medical school); Clinical Surgery during two winter sessions and two summer sessions (the attendance on these lectures must not commence until after the first winter session at a recognised medical school: by Clinical Medicine and Clinical Surgery are meant special study and instruction at the bedside, with lectures on cases); Midwifery and the Diseases peculiar to Women during three months (certificates must also be produced of attendance on not less than twenty labours, and of instruction and proficiency in vaccination); Forensic Medicine during three months.
8. Of having passed the professional examinations.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule (A) to the Medical Act, and recognised by the College as requiring a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Medicine at a university recognised by the College, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on the subjects of the primary examination. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery. Any candidate, being a "registered medical practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been with the consent of the College admitted a candidate for the licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the examiners to render in his case unnecessary.

Licentiates of this College shall not compound or dispense medicines except for patients under their own care.

BY-LAWS AND REGULATIONS RELATING TO THE EXAMINATION FOR THE LICENCE.

Every candidate for the College licence, before he is admitted to examination, will be required to sign a declaration, stating that he has not been rejected within three months by any of the examining boards included in Schedule (A) to the Medical Act.

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Any candidate who shall be rejected at the first examination, will not be readmitted to examination until after the lapse of three months, and will be required to produce a certificate of the performance of dissections, or other professional study satisfactory to the examiners, during that time.

Any candidate who shall be rejected at the second or pass examination, will not be readmitted to examination until after the lapse of six months, and will be required to produce a certificate of attendance on the practice of a recognised hospital, and also of attendance on clinical lectures, or other professional study satisfactory to the examiners, during that time.

The fee for the College licence is fifteen guineas, of which five guineas are to be paid on admission to the first examination, which fee will not be returned to any candidate rejected at this examination, but will be allowed in the fee for the licence, and he will be admitted to one subsequent first examination without the payment of an additional fee.

Any candidate who shall be rejected at the second or pass examination will have the fee paid on admission to this examination returned to him, less three guineas.

2. ROYAL COLLEGE OF SURGEONS, ENGLAND.

By far the most important qualification in this country is that of the Royal College of Surgeons of England, inasmuch as almost every English, and many Scottish and Irish students become candidates for the Membership of that body. The College consists of two grades—Fellows and Members. The Fellowship is partly honorary, being obtained by the election of Members of a certain standing, but is now only obtainable by examination. The Membership is the qualification sought by students leaving their hospitals, hence the importance of the following regulations :—

I. Professional studies prior to the date at which the candidate shall have passed an examination in general knowledge are not recognised.

II. The following will be considered as the commencement of professional education :—

1. Attendance on the practice of a hospital, or other public institution recognised by this College for that purpose.
2. Instruction as the pupil of a legally qualified surgeon, holding the appointment of surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.
3. Attendance on lectures on Anatomy, Physiology, or Chemistry, by lecturers recognised by this College.

The commencement of professional study, otherwise than by attendance on lectures in recognised medical schools, or by attendance on the practice of recognised hospitals, will not be admitted until a certificate thereof shall be furnished to the Secretary for registration at the College, by the practitioner whose pupil the candidate shall have become, or by the medical superintendent of the hospital or other institution to the practice of which he shall have entered, and will, consequently, date only from the reception of such certificate by the Secretary; the certificate to be accompanied by proof of having passed the necessary preliminary examination in general knowledge.

III. Candidates will be required to produce the following certificates, viz :—

1. Of being twenty-one years of age.
2. Of having been engaged, subsequently to the date of passing the preliminary examination, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge.
3. Of having attended lectures on Anatomy during two winter sessions.
4. Of having performed Dissections during not less than two winter sessions.
5. Of having attended lectures on General Anatomy and Physiology during one winter session.
6. Of having attended a practical course of General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class.

Note A.—By the practical course referred to in Clause 6, it is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, &c.; but it is not hereby intended that the learners shall perform vivisections.

7. Of having attended lectures on Surgery during one winter session.
8. Of having attended a course of Practical Surgery during a period occupying not less than six months prior or subsequent to the course required by the preceding Clause 7.

Note B.—The course of Practical Surgery referred to in Clause 8 is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to surgery, on the living person, or on the dead body. The methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person, or on the dead body. The performance, where practicable, of the operations of surgery on the dead body. The use of surgical apparatus. The examination of diseased structures, as illustrated in the contents of a museum of morbid anatomy and otherwise.

9. Of having attended one course of lectures on each of the following subjects, viz. :—Chemistry, Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours); Pathological Anatomy during not less than three months.

Note C.—The course of lectures on Chemistry included in Clause 9 will not be required in the case of a candidate who shall have passed a satisfactory examination in this subject in his preliminary examination.

10. Of having studied Practical Pharmacy during three months.
11. Of having attended a three months' course of Practical Chemistry (with manipulations), in its application to medical study.
12. Of instruction and proficiency in the practice of Vaccination.

Note D.—In the case of candidates who commenced their professional education on or after the 1st of October, 1868, the certificate of instruction in Vaccination will only be received from recognised vaccine stations, or from recognised vaccine departments in medical schools or hospitals, or other public institutions, where the appointed teacher of vaccination is not liable to frequent change, and where ample means for study are provided by not less than such a number of cases (eight or ten on an average weekly) as may be found, after due inquiry, to be sufficient for this purpose at each place.

Note E.—The certificates of attendance on the several courses of lectures must include evidence that the student has attended the practical instructions and examinations of his teacher in each course.

13. Of having attended, at a recognised hospital or hospitals, the Practice of Surgery during three winter (a) and two summer (b) sessions.
14. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised teacher, during not less than three months.

Note F.—It is intended that the candidate should receive the instruction required by Clause 14 at an early period of his attendance at the hospital.

15. Of having, subsequently to the first winter session of attendance on surgical hospital practice, attended, at a recognised hospital or hospitals, clinical lectures on Surgery during two winter and two summer sessions.
16. Of having been a dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery.
17. Of having attended, during the whole period of attendance on surgical hospital practice (see Clause 13), demonstrations in the post-mortem rooms of a recognised hospital.
18. Of having attended, at a recognised hospital or hospitals, the practice of Medicine, and clinical lectures on Medicine, during one winter and one summer session.

Notice.—Clauses 6, 8, 11, 14, and 17, and Notes A, B, C, E, and F, together with the courses of lectures on Forensic Medicine and Pathological Anatomy mentioned in Clause 9, are applicable to candidates who commenced their professional education on or after October 1, 1870.

N.B. Blank forms of the required certificates may be obtained on application to the Secretary, and all necessary certificates will be retained at the College.

Section II.

I. Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be considered as one branch of science.

II. Certificates will not be recognised from any hospital in the United Kingdom unless the surgeons thereto be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any school of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom; nor from any school of Surgery, unless the teachers in such school be members of one of the legally constituted Colleges of Surgeons in the United Kingdom.

III. No metropolitan hospital will be recognised by this College which contains less than 150, and no provincial or colonial hospital which contains less than 100 patients.

IV. The recognition of colonial hospitals and schools is governed by the same regulations, with respect to number of patients and to courses of lectures, as apply to the recognition of provincial hospitals and schools in England.

V. Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for a period of at least six months will be required.

VI. Certificates will not be received from candidates who have studied in London, unless they shall have registered at the College their cards of admission to attendance on lectures and hospital practice within fifteen days from the commencement of the session; nor from candidates who have studied in

(a) The winter session comprises a period of six months, and, in England, commences on October 1, and terminates on March 31.

(b) The summer session comprises a period of three months, and, in England, commences on May 1, and terminates on July 31.

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the provincial schools in England, unless their names shall be duly returned from their respective schools.

N.B. At their first registration in October, candidates will be required to produce a certificate of having passed one or other of the preliminary examinations in general knowledge recognised by this College.

VII. Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

VIII. Members or licentiates of any legally constituted college of surgeons in the United Kingdom, and graduates in surgery of any university recognised for this purpose by this College, will be admitted to examination on producing their diploma, licence, or degree, together with proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

IX. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will be admitted to examination on adducing, together with their diploma or degree, proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the preliminary examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

The following are regulations as to the examination for the qualification of Membership:—

The examination is divided into two parts.

1. The first, or primary examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body.

2. The second, or pass examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine,(a) is partly written, partly oral, and partly on the practical use of surgical apparatus, and the practical examination of patients.

3. The primary examinations are held in the months of January, April, May, July, and November, and the pass examinations generally in the ensuing week respectively.

4. Candidates will not be admitted to the primary examination until after the termination of the second winter session of their attendance at a recognised school or schools; nor to the pass, or surgical examination, until after the termination of the fourth year of their professional education.

5. The fee of five guineas, paid prior to the primary examination, and allowed on the whole fee of twenty-two pounds(b) payable for the diploma, is retained; and after any two consecutive failures at the primary examination, the candidate is required to pay an *additional* fee of five guineas prior to being again admitted to that examination, which *additional* fee is also retained.

6. Five guineas, part of the sum of sixteen pounds fifteen shillings, the balance of the whole fee due for the diploma and paid prior to the pass examination, is retained; and after any two consecutive failures at the pass examination, the candidate is required to pay an *additional* fee of five guineas prior to being again admitted to the said pass examination, which *additional* fee is also retained.

7. A candidate having entered his name for either the primary or pass examination, who shall fail to attend the meeting of the Court for which he shall have received a card, will not be allowed to present himself for examination within a period of three months from the date at which he shall have so failed to attend.

8. A candidate referred on the primary examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference.

9. A candidate referred on the pass examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the surgical practice of a recognised hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

CERTIFICATE OF QUALIFICATION IN MIDWIFERY.

This College also, after due examination, grants a special certificate of qualification in Midwifery. This, however, though of great value to the possessor, cannot be registered, and is only granted to men otherwise qualified.

1. Persons who were Fellows or Members of the College prior to the first day of January, 1858, will be admitted to examination for the certificate of qualification in Midwifery upon producing their diploma.

2. Persons having become Members of the College subsequently to the first day of January, 1858, will be admitted to examination on producing their diploma, together with a certificate or certificates of having attended twenty labours.

3. Members or Licentiates of any legally constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any University recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma, licence, or degree, proof of being twenty-one years of age; of having been occupied at least four entire years in the acquirement of professional knowledge; of having attended one course of lectures on Midwifery; and of having attended not less than twenty labours.

4. Graduates in Medicine of any legally constituted college or university recognised for this purpose by this College, will also be admitted to examination on producing, together with their diploma or degree, proof of being twenty-one years of age; of having been occupied at least four entire years in the acquirement of professional knowledge; of having completed, at recognised schools, the anatomical and surgical education required of candidates for the diploma of Member of the College; of having attended one course of lectures on Midwifery; and of having attended not less than twenty labours.

5. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, prior to the first day of January, 1853, will be admitted to examination on producing the several certificates of professional education required for admission to examination for the diploma of Member of this College at the period when such persons shall respectively have, in such manner, commenced their professional education.

6. Persons having commenced their professional education, either by attendance on hospital practice or on lectures on Anatomy, after the 31st day of December, 1852, will be admitted to examination on producing certificates of being twenty-one years of age; of having been engaged during at least four entire years in the acquirement of professional knowledge; of having completed at recognised schools the professional education required of candidates for the diploma of Member of this College; of having attended one course of lectures on Midwifery and the Diseases of Women and Children; and of having personally conducted thirty labours.

Note.—All candidates who commenced their professional education on or after October 1, 1866, will, in addition to the certificates enumerated in the foregoing clauses, be required to produce a certificate of having, prior to such commencement, passed a preliminary examination in general knowledge recognised by this College.

N.B.—The fee for the certificate is as follows, viz.:—1. Persons who were Fellows or Members of this College prior to January 1, 1858, two guineas. 2. Persons admitted Fellows or Members of this College subsequently to January 1, 1858, three guineas. 3, 4. Persons producing any other diploma or certificate or degree which may be considered by the Council to afford satisfactory proof of sufficient surgical and medical education, three guineas. 5, 6. All other persons, ten guineas.

The examinations are held in the months of February, May, August, and December.

(a) Candidates can claim exemption from examination in Medicine under the following conditions, viz.:—(1.) The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858, or a degree, diploma, or licence in Medicine of a colonial or foreign university approved by the Council of the College. (2.) A declaration by the candidate, prior to his admission to the final examination for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.

(b) This sum of twenty-two pounds is exclusive of the fee of two pounds paid for the preliminary examination.

3. SOCIETY OF APOTHECARIES (ENGLAND).

Every candidate for a certificate of qualification to practise as an apothecary will be required to produce testimonials—1. Of having passed a preliminary examination in Arts, as a test of general education. (This examination must be passed before the commencement of professional studies, which is defined by the Medical Council to be "the time of commencing studies at a medical school.") 2. Of having attained the full age of twenty-one years, of which satisfactory evidence will be required. 3. Of good moral conduct. 4. A certificate of three months' Practical Pharmacy from some recognised hospital or dispensary, or from a qualified medical practitioner (the apprenticeship not being required). 5. Of having pursued a course of medical study in conformity with the regulations of the Court.

Course of Study.—Every candidate must attend the following lectures and medical practice during not less than three winter and two summer sessions (each winter session to consist of not less than six months, and to commence not sooner than the 1st nor later than the 15th of October; and each summer session to extend from May 1 to July 31):—

First Year.—Winter Session: Chemistry; Anatomy and Physiology; Dissections. Summer Session: Botany; Materia Medica and Therapeutics; Practical Chemistry.

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Second Year.—Winter Session: Anatomy and Physiology, including dissections and demonstrations; Principles and Practice of Medicine; Clinical Medical Practice. Summer Session: Midwifery and Diseases of Women and Children, and Vaccination; Forensic Medicine and Toxicology; Clinical Medical Practice.

Third Year.—Winter Session: Principles and Practice of Medicine; Clinical Medical Lectures; Morbid Anatomy; Clinical Medical Practice.

All medical students presenting themselves for the second examination shall produce evidence of having served the office of clinical clerk at a recognised hospital during the period of six weeks at least; and also shall produce evidence that they have been examined at the class examinations instituted by the various lecturers and professors of their respective medical schools and colleges.

All students are required *personally* to register the several tickets of admission to lectures and medical practice within the first fifteen days of the months of October and May.

Professional Examinations.—The Court of Examiners meet in the Hall every Wednesday and Thursday, where candidates are required to attend at 4.30 p.m. each day. Every person intending to offer himself for examination must give notice in writing to the Clerk of the Society on or before the Monday previous to the day of examination, and must at the same time deposit all the required testimonials and the fee at the office of the Beadle, where attendance is given every day, except Sunday, from ten to four o'clock; Saturdays ten to two.

The examination of candidates is divided into two parts, and is conducted partly in writing and partly *vivâ voce*.

The written examination will take place on Wednesdays, and the *viva voce* examination on Thursdays.

Those students *only* who have to undergo the writing will have to attend on Wednesday, at half-past four p.m.

The first examination, which may be passed after the second winter session, embraces the following subjects:—The British Pharmacopœia; Latin of Physicians' Prescriptions; Anatomy and Physiology; General and Practical Chemistry; Botany; and Materia Medica.

Second or pass examination, at the termination of the medical studies:—Principles and Practice of Medicine; Pathology; Therapeutics; Midwifery, including the Diseases of Women and Children; Forensic Medicine and Toxicology.

All graduates in Medicine of British universities will be admitted to a practical examination in Medicine and Midwifery only.

Licentiates of the Royal College of Physicians, London; of the Royal College of Physicians, Edinburgh; of the Royal Colleges of Physicians and Surgeons, Edinburgh; of the King and Queen's College of Physicians, Ireland; of the Faculty of Physicians and Surgeons, Glasgow; and of the Apothecaries' Hall of Dublin, will be admitted to a *vivâ voce* examination in Medicine, Midwifery, Forensic Medicine, and Toxicology.

Any candidate who has passed his first examination for the licence of the Royal College of Physicians, London; the licence of the King and Queen's College of Physicians, Ireland; the joint licence of the Royal College of Physicians and Surgeons, Edinburgh, or for the single licence of the College of Physicians, Edinburgh; the licence of the Faculty of Physicians and Surgeons, Glasgow; the first professional examination for the degree of M.B., or Master in Surgery, in the Universities of Oxford, Cambridge, or London; or the second part of the professional examination for the degree of M.B., or Master in Surgery, in the Universities of Edinburgh, Aberdeen, St. Andrews, and Glasgow; or the first examination for the medical and surgical degrees in the Irish universities; or the first examination for the licence of the Apothecaries' Company, Dublin, will be admitted to a single examination in Materia Medica, Medicine, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Toxicology, part of which examination will be conducted in writing.

Members of the Royal College of Surgeons, England; Licentiates of the Royal College of Surgeons, Edinburgh; and Licentiates of the Royal College of Surgeons, Ireland; and all candidates who have passed the first Anatomical Examination of the Royal College of Surgeons, London; the Royal College of Surgeons, Edinburgh; the Royal College of Surgeons, Ireland, are exempt from *writing* on Anatomy and Physiology *only* in their first examination.

Candidates who were apprenticed before August 1, 1858, and those students who commenced their hospital attendance on or before October 1, 1861, will be admitted to a *vivâ voce* examination on the following subjects:—In translating physicians' prescriptions; in such parts of Chemistry and Materia Medica as bear upon the Practice of Medicine, and on Toxicology; in Forensic Medicine, Visceral Anatomy, the Practice of Medicine, including Diseases of Women and Children; and in Midwifery.

All qualified candidates, unless registered, will be required to produce their diploma.

The examination of candidates for certificates of qualification to act as Assistant in compounding and dispensing medicines is as follows:—In translating physicians' prescriptions; in the British Pharmacopœia; in Pharmacy, Pharmaceutical Chemistry, Materia Medica, and Medical Botany.

No rejected candidate for the licence can be re-examined until the expiration of six months from his former examination. A candidate rejected on his first professional examination can be admitted to re-examination after the expiration of three months. No rejected candidate as an Assistant can be re-examined until the expiration of three months.

Fees.—For a certificate of qualification to practise, six guineas, half of which is retained in case of rejection, to be accounted for at a subsequent examination. For the first examination, three guineas; for an Assistant's certificate, two guineas; both of which sums are retained in case of rejection, and accounted for subsequently.

Student's Prizes.—The Society of Apothecaries annually offer two prizes for proficiency in the knowledge of Botany, and also two prizes for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry. The prizes consist of a gold medal awarded to the candidate who distinguishes himself the most in the examination; and of a silver medal and a book to the candidate who does so in the next degree.

The examination in Botany will be held at the Hall of the Society on the third Wednesday in June, at 10 a.m., and will be conducted by printed papers and *viva voce* questions.

The examinations in Materia Medica and Pharmaceutical Chemistry will be held at the Hall of the Society on the third Wednesday, and on the following Friday, in October, from ten in the forenoon to one in the afternoon of each day; by printed papers on the Wednesday, and by *viva voce* questions on the Friday.

In Scotland, besides the Universities, there are three licensing bodies, viz.:—

4. ROYAL COLLEGE OF PHYSICIANS, EDINBURGH;
5. ROYAL COLLEGE OF SURGEONS, EDINBURGH;
6. FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

The first alone can give a qualification in Medicine; the two latter can give only a surgical qualification. Each of the surgical bodies has, however, most sensibly joined with the College of Physicians, so that a candidate can, by a single set of examinations, acquire a qualification both in Medicine and Surgery. For this reason, and as the greater must include the less, we shall only give the rules applying to these conjoint examinations. These are so nearly identical, that one set of regulations will suffice.

The Royal College of Physicians and the Royal College of Surgeons, Edinburgh, and the Royal College of Physicians of Edinburgh and the Faculty of Physicians and Surgeons of Glasgow, while they continue to give their diplomas separately under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain two separate licences—one in Medicine and one in Surgery.

The general principle of this joint examination is, that it is conducted by a board in which each body is represented, the object being to give to students facilities for obtaining from two separate bodies, and at less expense, a double qualification in Medicine and in Surgery. Students passing these examinations successfully will be enabled to register two qualifications under the Medical Act—viz., Licentiate of the Royal College of Physicians and Licentiate of the Royal College of Surgeons, Edinburgh; and Licentiate of the Royal College of Physicians of Edinburgh and Licentiate of the Faculty of Physicians and Surgeons of Glasgow.

Candidates for these qualifications commencing professional study on or after October 1, 1866, must have been engaged in professional study during four years, and in actual attendance

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at a university or recognised school of medicine during not less than four winter sessions or three winter sessions and two summer sessions, and must have completed the following curriculum:—

1. Anatomy, two courses of lectures in distinct sessions, six months each.
2. Practical Anatomy, twelve months.
3. Chemistry, one course of lectures, six months.
4. Practical or Analytical Chemistry, one course of lectures, three months.
5. Physiology, not less than fifty lectures.
6. Practice of Medicine, one course of lectures, six months.
7. Clinical Medicine, extending to six months.
8. Another course of Practice of Medicine, or of Clinical Medicine, at the option of the candidate.
9. Principles and Practice of Surgery, one course of lectures, six months.
10. Clinical Surgery, extending to six months.
11. Another course of Surgery, or of Clinical Surgery, at the option of the candidate.
12. Materia Medica, one course of lectures, three months.
13. Midwifery, one course of lectures, three months.
14. Practical Midwifery, attendance on at least six cases of labour.
15. Medical Jurisprudence, one course of lectures, three months.
16. Pathological Anatomy, instruction in the post-mortem rooms of a recognised hospital, three months.
17. Practical Pharmacy, instruction, three months.
18. General Hospital, attendance on the practice of a public general hospital, twenty-four months.
19. Proficiency in Vaccination, certified by a public vaccinator or a registered practitioner.

[Attendance for six months on the practice of a public dispensary, or of having been engaged for six months as visiting assistant to a registered practitioner.—Ed.]

Students are strongly recommended to avail themselves of any opportunities they may possess of studying Ophthalmic and Mental Diseases, Natural History, Comparative Anatomy, and Practical Physiology, in addition to what is required in the curriculum.

The examinations are conducted partly in writing and partly orally. Recent dissections, anatomical specimens, chemical tests, articles of the Materia Medica, the microscope, surgical and obstetrical apparatus, and pathological specimens are employed at the discretion of the examiners. Candidates at the second examination are subjected in the hospital to a practical clinical examination in Medicine and Surgery.

Candidates for the double qualification who have passed the examination in Anatomy, Physiology, and Chemistry of one or other of the licensing bodies enumerated in Schedule (A) of the Medical Act, on complying with the regulations in other respects, are admissible to the second professional examination. No candidate is exempted from examination in any of the subjects of the second examination.

A candidate, on showing a sufficient reason, may be admitted to examination on a day specially arranged, on paying an extra fee of £5, which will not be returned in the event of his being remitted to his studies.

Three Irish bodies grant licences to practise—the King and Queen's College of Physicians, the Royal College of Surgeons, and the Apothecaries' Company.

7. KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

This body consists of Fellows and Licentiates. The regulations relating to the latter are as follows:—Candidates must produce—1. Evidence of having been engaged in the study of Medicine for four years. 2. A certificate of having passed the preliminary examination of one of the recognised licensing corporations before the termination of the second year of medical study. 3. Certificates of having studied, at a school or schools recognised by the College, the following subjects, viz.:—Practical Anatomy; Anatomy and Physiology, or Institutes of Medicine; Botany; Chemistry; Practical Chemistry; Materia Medica; Practice of Medicine and Pathology; Surgery; Midwifery; Medical Juisprudence. 4. Certificates of having attended a medico-chirurgical hospital in which regular courses of clinical lectures are delivered, together with clinical instruction, for twenty-seven months; or such hospital for eighteen months with nine months' attendance on a medical hospital, and similar courses of clinical lectures and instruction. 5. A certificate of having attended Practical Midwifery for six months at a recognised lying-in hospital, or evidence satisfactory to the College in each individual case of having attended Practical Midwifery. 6. Certificates of character from two registered physicians or surgeons.

A candidate who has already obtained a medical or surgical qualification recognised by the College is only required to produce his diploma or certificate of registration, and the certificate of practical midwifery, and testimonials as to character.

EXAMINATION FOR THE LICENCE IN MEDICINE.

The examination consists of two parts. The subjects of the first part or previous examination are—Anatomy, Physiology, Botany, Chemistry. The subjects of the second part or final examination are—Materia Medica, Practice of Medicine, Medical Jurisprudence, Midwifery.

All candidates for the second or final examination (with the exception below specified) (a) are examined in the Practice of Medicine at the bedside in one of the hospitals of Dublin.

Candidates qualified as follows are required to undergo the *second part* of the professional examination *only*, viz.:—1. Graduates in Medicine of a university in the United Kingdom, or of any foreign university approved by the College. 2. Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh, who have been admitted upon examination. 3. Graduates or Licentiates in Surgery. 4. Candidates who, having completed the curriculum above mentioned, have passed the previous examination of any of the licensing corporations in the United Kingdom.

DIPLOMA IN MIDWIFERY.

Candidates already qualified in Medicine or Surgery may apply for permission to be examined for the diploma in Midwifery. The certificates required to be lodged are the same as those required from *qualified* candidates for the licence to practise Medicine.

Fees.—Fee for the licence in Medicine, £15 15s. Fee for licence in Medicine and diploma in Midwifery (for which latter there is a separate examination), if taken out within an interval of a month, £16. Fee for the diploma in Midwifery, £3 3s.

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8. THE ROYAL COLLEGE OF SURGEONS, IRELAND.

This body grants two qualifications—that of Fellow, and Letters Testimonial equivalent to a Licentiateship. The regulations relating to the latter are as follows:—

Candidates for the Letters Testimonial of the College may present themselves either at a Special or at a Stated Examination, as follows:—

SPECIAL EXAMINATIONS.

Every registered pupil shall be admitted, upon payment of a special fee of five guineas, to a Special Examination for Letters Testimonial, if he shall have laid before the Council the following documents:—

a. A receipt showing that he has lodged, in addition to his registration and special fees, a sum of twenty guineas in the Bank of Ireland, to the credit of the President, and for the use of the College.

b. A certificate that he has passed a preliminary examination, conducted by a board recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject.

c. A certificate showing that he has been engaged in the study of his profession for not less than four years.

d. Certificates of attendance during three years on a hospital recognised by the Council, where clinical instruction is given.

e. Certificates of attendance on three courses of lectures on Anatomy and Physiology; three courses of lectures on the Theory and Practice of Surgery; and of the performance of three courses of Dissections, accompanied by demonstrations; also certificates of attendance on two courses of lectures on Chemistry, or one course of lectures on General and one on Practical Chemistry; one course of lectures on Materia Medica; one course of lectures on the Practice of Medicine; one course of lectures on Midwifery; one course of lectures on Medical Jurisprudence; and one course of lectures on Botany.

N.B.—The subjects for examination, and the mode of carrying these out, for a Special Examination, will be the

(a) Candidates who are physicians or surgeons of five years' standing are exempted from the clinical and written portions of the final examination.

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same as those hereinafter laid down for the Stated Examinations, and any rejected candidate will only be entitled to receive back fifteen guineas of the fees lodged by him.

STATED EXAMINATIONS.

1st. Stated Examinations shall be held in the months of April, July, and November, commencing on dates of which due notice shall be given beforehand by the Council of the College, and to which *candidates cannot be admitted unless they be registered pupils*, and at which they shall be divided into two classes—junior and senior.

2nd. The junior class shall produce certificates of having passed a preliminary examination conducted by a board recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject; and of having attended three courses of lectures on Anatomy and Physiology, three courses of lectures on Practical Anatomy, with dissections; two courses of lectures on Chemistry, one course of lectures on Materica Medica, one course of lectures on Botany, and one course of lectures on Forensic Medicine.

3rd. This class shall be examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry.

4th. The fee for this examination shall be five guineas, in addition to the registration fee of five guineas—not to be returned in case of rejection, but to be allowed the candidate in case he presents himself a second time for examination.

5th. The Senior Class shall produce certificates of having attended three courses of lectures on the Theory and Practice of Surgery, one course of lectures on the Practice of Medicine, and one course of lectures on Midwifery; also certificates of attendance on a recognised hospital for three winter and three summer sessions.

6th. This class shall be examined in Surgery, Operative Surgery and Surgical Appliances, Practice of Medicine, Medical Jurisprudence and Prescriptions.

7th. The fee for the Senior Class Examination shall be fifteen guineas, returnable to the candidate in case of rejection.

8th. Both of these examinations shall be conducted partly by written and partly by oral questions.

9th. In addition to the foregoing fees, a fee of one guinea is to be paid to the registrar, on handing each licentiate his diploma.

10th. Every candidate rejected at any of the stated examinations, on applying for re-examination, shall be required to pay to the College, in addition to the regular fees, the sum of two guineas to reimburse the College the necessary expense of his re-examination.

This body also grants a diploma in Midwifery, for which the following are the regulations:—

Qualifications of Candidates for the Diploma in Midwifery.—Any Fellow or licentiate of the College shall be admitted to an examination for the diploma in Midwifery upon laying before the Council the following documents:—*a*. A certificate showing that he has attended one course of lectures on Midwifery and Diseases of Women and Children, delivered by a professor or lecturer in some school of Medicine or Surgery recognised by the Council. *b*. A certificate showing that he has attended, during a period of six months, the practice of a lying-in hospital recognised by the Council; or the practice of a dispensary for lying-in women and children recognised by the Council and devoted to this branch of Surgery alone. *c*. A certificate showing that he has conducted thirty labour cases, at least.

Fees to be Paid by Candidates for the Diploma in Midwifery.—The candidate pays £1 6s. for the Midwifery diploma, provided he takes it out within one month from the date of his letters testimonial; after that date the fee will be £2 2s.

9. THE APOTHECARIES' HALL OF IRELAND.

This body grants a licence to practise on the following conditions:—

1. Of having passed an examination in Arts previously to entering on professional study.

2. Of being at least twenty-one years of age, and of good moral character.

3. Of apprenticeship to a qualified apothecary, or of having been engaged in practical pharmacy with an apothecary for a period of three years subsequent to having passed the examination in Arts.

4. Of having spent four years in professional study.

5. Of having attended the following courses, viz.:—Chemistry, during one winter session; Anatomy and Physiology, during two winter sessions; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Chemistry (in a recognised laboratory), during three months; Materia Medica, during three months; Principles and Practice of Medicine and Therapeutics, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Forensic Medicine, during one summer session; instruction in the practice of vaccination.

6. Of having attended, at a recognised hospital or hospitals, the practice of Medicine and clinical lectures on Medicine, during two winter and two summer sessions; also the practice of Surgery and clinical lectures on Surgery, during one winter and one summer session.

7. Of having performed the operation of vaccination successfully under a recognised vaccinator.

The examination for the licence to practise is divided into two parts:—The first part comprehends Chemistry, Botany' Anatomy, Physiology, Materia Medica, and Pharmacy; the second—Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

The professional examinations will be held quarterly, and will commence on the first and second Mondays in the months of January, April, July, and October.

THE HIGHER QUALIFICATIONS.

Besides the ordinary qualifications available to students who have just finished their curriculum, there are certain higher grades attainable after a certain period. Thus, at the Universities the student first graduates M.B., and after certain years, with or without a special examination, proceeds to the degree of M.D. At the Royal College of Physicians, in the same manner, with or without the Licentiateship, one may proceed to take the Membership of the College; but this is hardly ever done save by those who desire to practise what is called "pure" Medicine. It is by the rules of most institutions a necessary qualification for one desiring the post of physician. The reason of this limitation is that the by-laws of the College impose such restrictions on its members that it is hardly possible for them to practise as general practitioners. Again, at the College of Surgeons, those who have obtained the qualification of M.R.C.S.E. may, after certain special study, to which we need not further here refer, present themselves for examination for the Fellowship. This stands in the same relationship to the surgical branch of our profession as does the Membership of the Royal College of Physicians to the purely medical; but, inasmuch as the restrictions are less onerous, it is also possessed by many general practitioners. These, however, are not Student-qualifications, and consequently the rules and regulations relating to them are here omitted.

THE SELECTION OF A SCHOOL.

ENTRANCE SCHOLARSHIPS.

The pupil or his friends having determined in their own minds the body whose qualification is to be sought, and the consequent curriculum to be followed, the next thing is to seek the means of following out this curriculum, and of obtaining the knowledge necessary for the acquisition of the diploma. This is commonly a simple enough matter, for if a student desires to obtain the degree of M.B. Edinburgh, he naturally enters himself as a student in the University. In London it is otherwise. Here we would advise all who desire an ordinary qualification in Medicine and Surgery to look forward to those offered by the Royal Colleges of Physicians and Surgeons. The licence of the Apothecaries' Society is in many ways useful, but it does not possess the same high character as that given by the Royal College of Physicians. The curricula of the English schools are specially adapted to the regulations of these bodies, and hence there is no difficulty in obtaining what the student wants. The difficulty to be solved is, where to get it of the best quality. In other words, the student or his friends have to select one of the eleven

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metropolitan or of the provincial schools in which to pursue his studies. This, in many instances, is settled simply as a matter of convenience; the youth's residence, or that of some of his friends, may make them select the nearest, be it great or small. But when neither this nor any other reason is operative, the selection of a school often becomes a somewhat difficult matter. Above all, there is the old difficulty of a large school or a small. The largest schools are St. Bartholomew's, Guy's, and University College; the first two having at the same time the largest hospitals, with the exception, perhaps, of St. Thomas's, in London; but, on the other hand, University College Hospital is one of the smallest. This very effectually deals with the idea that the success of a school exactly corresponds to the size of the hospital with which it is associated. The truth is, then, the size of the hospital does not matter greatly. It is quite impossible for any one student to attend upon the whole practice of even a small hospital with advantage. A physician or surgeon finds that the number of beds he can use with advantage to himself and others is very limited; and still more is this the case with the student. But to this we must return hereafter. Again, as regards class-work, there can be no doubt that with a large body of young men enthusiasm is highly contagious; but so, too, is indifference; and as regards tutorial work there can be no question of the superiority of a small class over a large one. The place to select—for all the recognised hospitals are large enough—is where the teachers are active and enthusiastic, and have got their way to make in the world, and whose success must in great measure depend on the success of their school. University College is a good example of what may be done in this way, for they have in this way raised their numbers to a height which is hardly manageable in so small a hospital.

There is still another element to be taken into account; that is, the entrance scholarships which have been instituted of late years in most of the schools, and designed especially to foster the study of natural science by young men previous to entering on their purely medical studies. We have already pointed out the great practical advantage of such studies, but the following is a list of the more material rewards offered by the various schools:—

St. Bartholomew's Hospital.—An open Scholarship in Science; £100 for one year. Subjects: Physics, Chemistry, Botany, and Zoology.

Charing-cross Hospital.—Two Entrance Scholarships, £30 and £20. Subjects, compulsory: English, Latin, French or German, Mathematics. Optional (one only may be selected): Chemistry, Mechanics, German or French. The subjects and authors will be the same as those chosen for the London matriculation of the preceding June.

Guy's Hospital.—Three prizes of £25, £20, £15. Subjects: Elementary Classics, Ancient and Modern History, and Mathematics.

King's College.—The Warneford Scholarships, Class I. Two, £25, for three years. Subjects: Divinity, Mathematics, English Language, History and Literature, Latin, Greek, French, German, Chemistry, Botany, Natural Philosophy.

London Hospital.—Two Buxton Scholarships, value £30 and £30, are awarded annually in October. Subjects same as preliminary examination for the Membership at the College of Surgeons of England.

St. Mary's Hospital.—Three Scholarships in Natural Science, £40, tenable for three years. One awarded each year.

Middlesex Hospital.—Two Entrance Scholarships, £25 and £20, for two years. Subjects: Latin, Greek, French or German, Mathematics, Natural Philosophy, Chemistry, Botany, Zoology. Candidates may select any three, and not more, of the above subjects; but only one modern language and two out of the last three subjects are permitted.

University College.—Three Entrance Exhibitions, £30, £20, £10, tenable for two years. Subjects: Classics, Mathematics, Natural Philosophy, and either French or German.

Westminster Hospital.—Two Entrance Scholarships, £20 and £10, tenable for two years. Subjects: Latin, Mathematics, and either French, German, or Greek.

LONDON HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians.
Sir G. Burrows, Bart., D.C.L., F.R.S., Dr. Farre, and Dr. Harris.

Consulting Surgeon—Sir J. Paget, Bart., D.C.L., F.R.S.

Physicians.	*Surgeons.*
Dr. Black.	Mr. Holden.
Dr. Andrew.	Mr. Savory, F.R.S.
Dr. Southey.	Mr. Callender, F.R.S.
Dr. Church.	Mr. Thomas Smith.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Gee.	Mr. Willett.
Dr. Duckworth.	Mr. Langton.
Dr. Hensley.	Mr. Morrant Baker.
Dr. Brunton, F.R.S.	Mr. Marsh.
Physician-Accoucheur.	
Dr. Greenhalgh.	*Ophthalmic Surgeons.*
Assistant Physician-Accoucheur.	Mr. Power.
Dr. Godson.	Mr. Vernon.

Casualty Physicians—Dr. Wickham Legg, Dr. Hall, Dr. Moore.
Dental Surgeon—Mr. Coleman.
Administrator of Chloroform—Mr. Mills.
Medical Registrar—Mr. Champneys.
Surgical Registrars—Mr. Butlin, Mr. Milner.

LECTURES.

Botany—Rev. George Henslow.	General Anatomy and Physiology—Mr. Morrant Baker.
Chemistry and Practical Chemistry—Dr. Russell.	Histology—Dr. Klein.
Clinical Medicine—Dr. Black, Dr. Andrew, Dr. Southey, and Dr. Church.	Materia Medica—Dr. Farre and Dr. Brunton.
Clinical Surgery—Sir J. Paget, Bart., Mr. Holden, Mr. Savory, Mr. Callender, and Mr. Thomas Smith.	Medicine—Dr. Black and Dr. Andrew.
Comparative Anatomy—Dr. Moore.	Mental Diseases—Dr. Claye Shaw.
Dental Anatomy and Surgery—Mr. Coleman.	Midwifery and the Diseases of Women and Children—Dr. Greenhalgh.
Descriptive and Surgical Anatomy—Mr. T. Smith and Mr. Langton.	Ophthalmic Medicine and Surgery—Mr. Power.
Forensic Medicine and Hygiene—Dr. Southey.	Pathological Anatomy—Dr. Gee.
	Surgery—Mr. Savory and Mr. Callender.

DEMONSTRATIONS.

Diseases of the Ear—Mr. M. Baker.	Orthopædic Surgery—Mr. Langton.
Diseases of the Eye—Mr. Vernon.	Practical Anatomy and Operative Surgery—Mr. Cumberbatch, Mr. Furner, and Mr. Walsham.
Diseases of the Skin—Mr. Willett.	
Mechanical and Natural Philosophy—Dr. Hensley.	Practical Physiology—Mr. Symons.
Morbid Anatomy—Dr. W. Legg.	Practical Surgery—Mr. Willett.

Medical Tutor—Dr. Moore.

This Hospital comprises a service of 710 beds, of which 676 are in the Hospital in Smithfield, and 34 are for convalescent patients at Lauderdale House, Highgate.

SCHOLARSHIPS AND PRIZES.

The following scholarships and prizes are awarded:—Open Scholarship in Science, founded 1873; subjects of examination—Physics, Chemistry, Botany, and Zoology. This scholarship, of the value of £100, tenable for one year, will be competed for on September 27 and following days. Preliminary Scientific Exhibition, founded 1873: subjects of examination—Physics, Chemistry, Botany, and Zoology. This Exhibition, of the value of £50, is awarded in October. Lawrence Scholarship and Gold Medal, of the value of forty-five guineas, founded 1873, by the family of the late Sir W. Lawrence. Brackenbury Scholarship in Medicine, and Brackenbury Scholarship in Surgery, founded 1873, by the will of the late Miss Hannah Brackenbury, who left £2000 for this purpose. Senior Scholarship of the value of £50—Anatomy, Physiology, and Chemistry. Junior Scholarships of the value of £50, £30, and £20 are awarded after an examination in the subjects of study of the first year, at the end of the summer and winter sessions. The Jeaffreson Exhibition, of the value of £20, and tenable for two years, is awarded at the commencement of each winter session to the student who passes the best examination in the subjects of preliminary education. The Wix Prize is awarded for the best essay on the following subject—"The Mutual Influence of General Literature and Medical Science, as illustrated by the Writers of the Seventeenth Century." Hichens Prize: subject of examination—Bishop Butler's Analogy. Bentley Prize, for the best report of surgical cases occurring in the wards of the Hospital during the previous year. It is expected that the reports will comprise the histories, progress, treat-

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ment, and results of not less than twelve cases, with observations thereupon. Foster Prize: subject of examination—Practical Anatomy; senior. Treasurer's Prize: subject of examination—Practical Anatomy; junior. The Kirkes Gold Medal: subject of examination—Clinical Medicine.

FEES.

Whole fee for attendance on lectures and hospital practice 105 guineas, payable by instalments, or a single payment of 100 guineas. Payment in either of these ways entitles to a perpetual ticket.

A College for resident students exists in connexion with the Hospital; Resident Warden, Dr. Norman Moore, from whom students will obtain information respecting rooms in the College, or will be advised regarding residence out of the Hospital.

All communications to be addressed to the Warden of the College, St. Bartholomew's Hospital.

CHARING-CROSS HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Surgeon—H. Hancock, F.R.C.S.

Physicians.	*Surgeons.*
Dr. A. J. Pollock.	Mr. E. Canton.
Dr. A. Silver.	Mr. F. Hird.
Dr. T. H. Green.	Mr. R. Barwell.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. R. Douglas Powell.	Mr. E. Bellamy.
Dr. J. Mitchell Bruce.	Mr. W. Fairlie Clarke.
Dr. J. Pearson Irvine.	Mr. J. Astley Bloxam.
Physician-Accoucheur.	*Dental Surgeon.*
Dr. J. Watt Black.	Mr. John Fairbank.
Physician for Skin Diseases.	*Chloroformist.*
Dr. E. Sparks.	Mr. Woodhouse Braine.
Medical Registrar.	*Surgical Registrar.*
Dr. A. Duncan.	Mr. M. M. McHardy.

LECTURERS AND TEACHERS.

Anatomy—Mr. Edward Bellamy.
Bandaging, etc.—Mr. W. F. Clarke.
Botany—Dr. J. Pearson Irvine.
Chemistry & Practical Chemistry—Mr. C. W. Heaton; Demonstrator, Mr. T. Bolas.
Clinical Medicine—Dr. Alex. Silver.
Clinical Surgery—Mr. H. Hancock.
Comparative Anatomy—Mr. J. F. Blake.
Demonstrations and Dissections—Mr. R. J. Godlee.
Dental Surgery—Mr. J. Fairbank.
Diseases of Children—Dr. J. Pearson Irvine.
Forensic Medicine—Dr. G. V. Poore.
Materia Medica and Therapeutics—Dr. R. Douglas Powell.
Mental Diseases—Dr. W. J. Hunt.
Morbid Histology—Dr. J. M. Bruce.
Operative Surgery—Mr. E. Bellamy.
Pathology and Morbid Anatomy—Dr. T. Henry Green.
Physiology, Theoretical and Practical—Dr. Alex. Silver and Dr. J. Mitchell Bruce.
Practical Chemistry—Mr. C. W. Heaton.
Principles and Practice of Medicine—Dr. A. J. Pollock.
Principles and Practice of Midwifery and Diseases of Women—Dr. J. Watt Black.
Principles and Practice of Surgery—Mr. Edwin Canton.
Public Health—Mr. C. W. Heaton, Dr. G. V. Poore, & Mr. W. Eassie.
Skin Diseases—Dr. E. Sparks.
Surgical Pathology—Mr. J. Astley Bloxam.

The Hospital contains nearly 200 beds. This, together with the thirty-six beds of the adjoining Royal Westminster Ophthalmic Hospital, to the practice of which matriculated students are admitted, make a total of over 200 beds available for clinical teaching.

SCHOLARSHIPS, MEDALS, AND PRIZES.

Two entrance scholarships of the value of £30 and £20 respectively, tenable for one year, will be awarded annually in October, after a competitive examination in the following subjects:—Compulsory: English, Latin, French or German, Mathematics. Optional (only one of which may be selected): Chemistry, Mechanics, German or French. The subjects (as regards extent and the authors selected) will be the same as those chosen for the Matriculation Examination of the University of London in the June immediately preceding. Candidates must give notice of their intention to compete on or before Saturday, September 18, 1875. The successful candidates will be required to enter for their medical education at Charing-cross Hospital.

The Llewellyn Scholarship of £25 is open to all matriculated students who have just completed their second academical year. The examination is held at the end of the second summer session, and includes the following subjects:—Descriptive and Surgical Anatomy, Physiology, Materia Medica, Medicine, Surgery, Midwifery.

The Golding Scholarship of £15 is open to all matriculated students who have just completed their first academical year. The examination is held at the end of the first summer session, and includes the following subjects:—Descriptive Anatomy, Physiology, Materia Medica, and Chemistry.

The Governors' Clinical Gold Medal: the competition for this medal is open to matriculated students who shall have completed, at the end of the current session, their attendance on the medical and surgical practice of the Hospital. Candidates are examined on the subjects of clinical lectures delivered during the session, and on medical and surgical cases in the wards of the Hospital.

FEES.

The fees for the entire course of lectures required by the Examining Boards amount to £80 7s., including a fee of £2 2s. for matriculation (which involves *no* examination), and they may be paid in five separate instalments. The first is payable on entrance, the second on the 1st of February following, and so on, the fifth instalment being due at the commencement of the third year.

The composition fee for Dental Surgery, including matriculation, is £42 2s.

Further information may be had of the Librarian, who attends at the office of the School, Chandos-street, Charing-cross, between the hours of ten and four, or of the Dean, Mr. Francis Hird.

ST. GEORGE'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. Wilson, Dr. Pitman.

Consulting Surgeons—Mr. Cæsar Hawkins, F.R.S., Mr. Tatum, Mr. Prescott Hewett, F.R.S.

Physicians.	*Surgeons.*
Dr. Barclay.	Mr. Pollock.
Dr. Ogle.	Mr. Henry Lee.
Dr. Wadham.	Mr. Holmes.
Dr. Dickinson.	Mr. Rouse.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Whipham.	Mr. Pick.
Dr. Cavafy.	Mr. Haward.

Obstetric Physician—Dr. Barnes.

Ophthalmic Surgeon—Mr. Brudenell Carter.

Aural Surgeon—Mr. Dalby. *Dentist*—Mr. Vasey.

LECTURERS.—WINTER SESSION.

Chemistry and Physics—Dr. Noad.
Clinical Lectures on Diseases of Women—Dr. Barnes.
Clinical Medicine—Drs. Ogle and Dickinson.
Clinical Surgery—Messrs. Pollock and Rouse.
Descriptive and Surgical Anatomy—Mr. Pick.
Histology—Mr. Herbert Watney.
Morbid Anatomy—Dr. R. J. Lee.
Ophthalmic Surgery—Mr. Brudenell Carter.
Pathology—Dr. Dickinson.
Physiological Chemistry—Dr. Ralfe.
Physiology and General Anatomy—Dr. Cavafy.
Principles and Practice of Physic—Dr. Barclay.
Principles and Practice of Surgery—Mr. Holmes.

SUMMER SESSION.

Aural Surgery—Mr. Dalby.
Botany—Dr. Whipham.
Clinical Demonstrations of Diseases of the Skin—Dr. Whipham.
Clinical Medicine—Dr. Barclay.
Clinical Surgery—Mr. H. Lee.
Comparative Anatomy—Dr. Brailey.
Dental Surgery—Mr. Vasey.
Materia Medica—Dr. Dickinson.
Medical Jurisprudence—Dr. Wadham.
Midwifery and Diseases of Women and Children—Dr. Barnes.
Practical Chemistry—Dr. Noad.
Practical Surgery—Mr. Haward.
Psychological Medicine—Dr. Blandford.

EXHIBITIONS AND PRIZES.

"The William Brown Exhibitions," of £100 per annum, tenable for two years, to be competed for by perpetual pupils who have recently obtained their diploma. "The William Brown Exhibition," of £40 per annum, tenable for three years, to be competed for by students during their fourth year of study. The Brackenbury Prizes of £35 each in Medicine and Surgery: awarded annually after a competitive examination. The Treasurer's Clinical Prize of £10 10s., the gift of A. Shaw Stewart, Esq., to be competed for annually. Sir Charles Clarke's prize for good conduct: The interest of £200 Consols, to be awarded annually to the student of the Hospital "who, by reason of his general good conduct during the preceding year, should be considered the most deserving." The Thompson Medal: A silver medal to be awarded annually for the best clinical report of medical and surgical cases observed in the Hospital during the preceding twelve months. Sir Benjamin Brodie's Clinical Prize in Surgery will be awarded to the pupil of the Hospital who shall have delivered to the Surgeons the best report of not more than twelve surgical cases which have occurred in the Hospital during the preceding twelve months. Dr. Acland's Clinical Prize in Medicine will be awarded to the pupil of the Hospital who shall produce the best report of not more than twelve medical cases which have occurred in the Hospital during the preceding twelve months. The Henry Charles Johnson Memorial Prize in Anatomy will be awarded to that pupil who shall in the judgment of the Medical School Committee,

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exhibit the greatest proficiency in Practical Anatomy. General Proficiency Prizes: To pupils in their first year, £10 10s.; to pupils in their second year, £10 10s.; to pupils in their third year, £10 10s.

FEES.

Perpetual pupils pay at the time of entry a compounding fee of £105.

Gentlemen are admitted to the hospital practice and lectures required for the licensing bodies on payment of the following fees—viz., £42 for the first year of study, £42 for the second year of study, and £10 10s. for each succeeding year. Pupils may also enter to the hospital practice and lectures separately.

For further particulars apply to Dr. Barclay, Treasurer, or Dr. Wadham, Dean of the school.

GUY'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir William Gull, Bart.; Dr. G. Owen Rees.
Consulting Obstetric Physician—Dr. Henry Oldham.
Consulting Surgeons—Mr. J. Hilton; Mr. E. Cock.

Physicians.
Dr. S. O. Habershon.
Dr. S. Wilks.
Dr. F. W. Pavy.
Dr. W. Moxon.

Assistant-Physicians.
Dr. C. Hilton Fagge.
Dr. P. H. Pye-Smith.
Dr. Frederick Taylor.

Obstetric Physician.
Dr. J. Braxton Hicks.

Assistant Obstetric Physician.
Dr. A. L. Galabin.

Medical Registrars.
Dr. Frederick Taylor,
Dr. J. F. Goodhart.

Surgeons.
Mr. J. Cooper Forster.
Mr. Thomas Bryant.
Mr. Arthur Durham.
Mr. H. G. Howse.

Assistant-Surgeons.
Mr. N. Davies-Colley.
Mr. R. Clement Lucas.
Mr. C. H. Golding-Bird.

Ophthalmic Surgeons.
Mr. C. Bader;
Mr. C. Higgens, *Asst.*

Dental Surgeons.
Mr. S. J. A. Salter;
Mr. H. Moon, *Asst.*

Aural Surgeon.
Mr. W. Laidlaw Purves.

Surgical Registrar.
Mr. Frederic Durham.

Apothecary—Mr. James Stocker.
Curator of the Museum—Dr. Fagge.
Secretary to the School—Mr. Stocker.
Dean—Dr. F. Taylor.

WINTER COURSES—LECTURES.

Anatomy, Descriptive and Surgical—Mr. Howse and Mr. Davies-Colley.
Chemistry—Dr. Debus and Dr. Stevenson.
Clinical Medicine—Dr. Habershon, Dr. Wilks, Dr. Pavy, and Dr. Moxon.
Clinical Surgery—Mr. Forster, Mr. Bryant, Mr. Durham, and Mr. Howse.
Clinical Lectures on Midwifery and Dis. of Women—Dr. Braxton Hicks.
Experimental Philosophy—Prof. A. W. Reinold.
Medicine—Dr. Habershon and Dr. Wilks.
Physiology and General Anatomy—Dr. Pavy and Dr. Pye-Smith.
Surgery—Mr. Bryant and Mr. Arthur Durham.

DEMONSTRATIONS.

Cutaneous Diseases—Dr. F. Taylor.
Morbid Anatomy—Dr. Fagge and Dr. Goodhart.
Practical Surgery — Mr. Davies-Colley.
Practical Anatomy—Mr. R. Clement Lucas, Demonstrator; Mr. C. H. Golding-Bird and Mr. W. H. A. Jacobson, Assist. Demonstrators.
Practical Physiology—Dr. Pye-Smith

SUMMER COURSES—LECTURES.

Botany—Dr. Stokoe.
Clinical Medicine—Dr. Fagge, Dr. Pye-Smith, and Dr. F. Taylor.
Clinical Surgery—Mr. Davies-Colley, Mr. Clement Lucas, and Mr. Golding-Bird.
Clinical Lectures on Diseases of Women—Dr. A. L. Galabin.
Comparative Anatomy and Zoology—Mr. Jacobson.
Dental Surgery—Mr. Moon.
Hygiene—Dr. F. Taylor.
Materia Medica and Therapeutics—Dr. Moxon.
Medical Jurisprudence—Dr. Alfred S. Taylor.
Mental Diseases—Dr. Savage.
Midwifery and Diseases of Women—Dr. Braxton Hicks.
Ophthalmic Surgery—Mr. Bader.
Pathology—Dr. Fagge.

DEMONSTRATIONS.

Morbid Histology—Mr. Howse.
Practical Chemistry—Dr. Debus.
Operative Surgery — Mr. Davies-Colley.

This Hospital contains 690 beds.

PRIZES.

Voluntary examinations are held at four periods of the student's course, as follows:—1st. At entrance, commencing on October 7, in Classics and Mathematics, Modern Languages, Chemistry, Physics, and Botany—The candidate who most distinguishes himself receives £60; the second candidate, £30. 2nd. At the end of the first sessional year, in Anatomy, Physiology, Chemistry, Materia Medica, Botany, and Comparative Anatomy—First prize, £50; second prize, £25; third prize (presented by one of the Governors, £10 10s. 3rd. At the end of the second sessional year, in Anatomy, Physiology, and Practical Physiology—First prize, £25; second prize, £10. 4th. At the end of the third sessional year, in Medicine, Surgery, Midwifery, and Medical Jurisprudence—First prize, £25, second prize, £20. Honorary certificates are also given to candidates who pass creditable examinations.

Two gold medals are given annually by the Treasurer to students who have completed their third, and not exceeded their fourth, year—the one for Clinical Medicine, the other for Clinical Surgery.

FEES.

The fees for hospital practice and lectures are as follows:—The payment of one hundred guineas in one sum on entrance, or in two moieties, at the commencement of the first winter and of the following summer session, entitles a student to a perpetual ticket.

Payment may be made by instalments at the commencement of each sessional year, as follows:—First year, £40; second year, £40; third year, £30; on payment of this instalment the student is entitled to a perpetual ticket. Materials used in practical courses are charged extra.

For further information apply to the Dean, Dr. F. Taylor; or the Secretary, Mr. J. Stocker.

KING'S COLLEGE HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir Thos. Watson, Bart., M.D., Dr. George Budd, Dr. Arthur Farre, Dr. W. A. Guy, Dr. W. O. Priestley, Dr. A. B. Garrod.
Consulting Surgeon—Mr. J. M. Arnott.

Physicians.
Dr. George Johnson.
Dr. Lionel S. Beale.
Dr. Alfred B. Duffin.
Dr. William Playfair.

Assistant-Physicians.
Dr. J. Burney Yeo.
Dr. David Ferrier.
Dr. E. B. Baxter.
Dr. John Curnow.
Dr. T. C. Hayes.

Surgeons.
Sir W. Fergusson, Bart.
Mr. John Wood.
Mr. Henry Smith.

Assistant-Surgeon.
Mr. H. Royes Bell.

Dental Surgeon.
Mr. S. Hamilton Cartwright.

Ophthalmic Surgeon.
Mr. J. Soelberg Wells.

Vaccinator—Mr. R. W. Dunn.
Pathological Registrar—Dr. Urban Pritchard.
Chloroformist—Mr. Charles Moss.
Registrars—Mr. G. H. Batterbury and Mr. A. B. Barrow.

LECTURES.

Anatomy, Descriptive and Surgical—Dr. John Curnow.
Botany—Mr. Robert Bentley.
Chemistry and Practical Chemistry—Mr. C. M. Bloxam; Mr. W. N. Hartley, Demonstrator, Mr. J. M. Thomson, Assistant-Demonstrator.
Clinical Surgery—Sir William Fergusson, Bart.
Comparative Anatomy—Mr. A. H. Garrod.
Dental Surgery—Mr. S. Hamilton Cartwright.
Forensic Medicine—Dr. D. Ferrier.
Hygiene—Dr. W. A. Guy.
Materia Medica and Therapeutics—Dr. E. B. Baxter.
Principles and Practice of Medicine—Dr. George Johnson.
Obstetric Medicine, and the Diseases of Women and Children—Dr. W. Playfair.
Ophthalmology — Dr. J. Soelberg Wells.
Pathological Anatomy—Dr. L. S. Beale.
Physiology and Practical Physiology—Dr. Gerald F. Yeo.
Psychological Medicine—Dr. Edgar Sheppard.
Principles and Practice of Surgery—Mr. John Wood.

Dean of the Faculty—Professor Bentley.
Sub-Dean and Medical Tutor—Mr. J. H. Philpot.

SCHOLARSHIPS AND PRIZES.

Warneford Scholarships: "For the encouragement of the previous education of medical students," two scholarships of £25 per annum for three years, and "For the encouragement of resident medical students," one scholarship of £25 per annum for two years. College Scholarships: The following are given every year to matriculated students of this department:—1. One of £40 for two years, open to students of the third and fourth year; 2. One of £30 for one year, open to students of the second year; 3. One of £20 for one year, open to students of the first year. Daniell Scholarship: £20, tenable for two years, is open to every student of the College who has worked in the laboratory for at least six months. Sambrooke Registrarships: Two of £50 every year. Science Exhibitions: One annually of £25, tenable for two years, for proficiency in Mathematics, Mechanics, Physics, Chemistry, Botany, and Zoology. Leathes Prizes: Bible and Prayer-book to two matriculated medical students. Warneford Prizes: £40 is expended in the purchase of medals and books as prizes to two matriculated medical students. Class Prizes are awarded annually for proficiency in each subject of study; these consist of books of the value of £3. Two Medical Clinical Prizes, one of £3 for the winter session, and the other of £2 for the summer session; and two Surgical Clinical Prizes of the same value are given for attendance at the Hospital. Todd Medical Clinical Prize: This prize was founded in memory of

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the late Dr. Todd. It consists of a bronze medal and books to the value of £4 4s. Tanner Prize: £10 for proficiency in the study of Obstetric Medicine.

FEES.

The fees, amounting to £105, may be paid either in one sum of £100 on matriculation, or in three amounts at the commencement of each winter session. Students are, however, recommended to add to the above the fee for attendance on the medical tutor's class for one year—viz., £3 3s.; or in the case of those preparing for the Preliminary Scientific Examination of the University of London, £5 5s. All resident students are required to attend the tutor (Dr. J. H. Philpot) during their first year.

For further information apply to Professor Bentley, Dean of the Medical Faculty.

LONDON HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. Herbert Davies.
Consulting Surgeons—Mr. Luke, Mr. John Adams, and Mr. Curling.

Physicians.	*Surgeons.*
Dr. Andrew Clark.	Mr. Hutchinson.
Dr. Ramskill.	Mr. Maunder.
Dr. Langdon Down.	Mr. Couper.
Dr. Hughlings-Jackson.	Mr. Rivington.
Dr. Sutton.	
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Fenwick.	Mr. James Adams.
Dr. Woodman.	Mr. Waren Tay.
Dr. Stephen Mackenzie.	Mr. McCarthy.
Dr. A. E. Sansom.	Mr. Reeves.

Obstetric Physician—Dr. Palfrey. *Surgeon-Dentist*—Mr. A. W. Barrett.
Surgeons to the Ophthalmic Department—Mr. James Adams and Mr. Waren Tay.
Surgeons to the Aural Department—Mr. Rivington and Mr. Reeves.
Surgeon to the Skin Department—Mr. McCarthy.

LECTURERS.

Anatomy and Pathology of the Teeth—Mr. A. W. Barrett.
Botany—Mr. John Gilbert Baker.
Chemistry—Mr. Henry Letheby and Mr. C. Meymott Tidy.
Comparative Anatomy—Mr. E. B. Aveling.
Descriptive and Surgical Anatomy—Mr. Walter Rivington.
Diseases of the Throat, and Use of the Laryngoscope—Dr. Morell Mackenzie.
Forensic Medicine—1. Toxicology, Mr. J. E. D. Rodgers; 2. Medical Jurisprudence and Public Health, Mr. C. Meymott Tidy.
Materia Medica and General Therapeutics—Dr. M. Prosser James.
Medicine—Dr. Herbert Davies and Dr. S. Fenwick.
Midwifery and Diseases of Women—Dr. James Palfrey.
Pathology and Demonstrations of Morbid Anatomy—Mr. H. G. Sutton.
Practical Anatomy—Mr. James Adams and Mr. H. A. Reeves.
Practical Chemistry—Mr. Henry Letheby.
Practical Histology, and Use of the Microscope—Mr. J. McCarthy.
Physiology and General Anatomy—Mr. J. McCarthy.
Ophthalmic Surgery—Mr. J. Couper.
Special Operative Surgery—Mr. C. F. Maunder.
Surgery—Mr. John Couper.

Dean of the College—Dr. Andrew Clark.
Vice-Dean of the College—Mr. Waren Tay.

SCHOLARSHIPS AND PRIZES.

Nine scholarships will be offered for competition during the ensuing winter and summer sessions.

Two Entrance Scholarships in Natural Science, of the value of £60 and £40 respectively, will be offered for competition at the end of September. The subjects will be the same as those for the Preliminary Scientific Examinations at the University of London (see the University Calendar for details).

The two Buxton Scholarships will be awarded in October to the students who distinguish themselves most in the subjects appointed by the General Council of Medical Education and Registration as the subjects of the preliminary examinations. 1. A scholarship, value £30, to the student placed first in the examination. 2. A scholarship, value £20, to the student placed second in the examination. 3. A scholarship, value £20, will be awarded to the first year student who shall pass in April, 1876, the best examination in Human Anatomy. 4. A scholarship, value £25, will be awarded to the first year or second year student who shall pass at the end of the winter session the best examination in Anatomy, Physiology, and Chemistry. 5. A hospital scholarship, value £20, for proficiency and zeal in Clinical Medicine. 6. A hospital scholarship, value £20, for proficiency and zeal in Clinical Surgery. 7. A hospital scholarship, value £20, for proficiency and zeal in Obstetrics (awarded at the end of June, 1876). A prize of £5 is also awarded to the student who has attended most midwifery cases for the Hospital during the previous twelve months. The Duckworth-Nelson Prize, value £10, will be awarded by competition at the end of the winter session, 1876, and will be open to all students who have not completed their education. The subjects of examination will be practical Medicine and Surgery. Money prizes, to the value of £60 per annum, are awarded by the House Committee to the most meritorious of the dressers in the out-patient rooms.

FEES.

General fee for perpetual attendance on all the lectures with two years' Practical Anatomy, and for attendance on medical and surgical practice, qualifying for examination at most of the medical and surgical boards, 90 guineas; composition fee for gentlemen entering at or before the beginning of their second winter session, their first year having been spent elsewhere, 70 guineas; perpetual fee for lectures with two years' Practical Anatomy and hospital practice, 100 guineas; perpetual fee for lectures alone, 50 guineas; perpetual fee for hospital practice alone, 50 guineas. Extra fees: Practical chemistry (for apparatus, etc.), £2 2s.; subscription to the library (compulsory), £1 1s. *Note.*—The general fee and the perpetual fee are payable in two instalments of 45 guineas and 50 guineas each respectively, at the commencement of each of the first two years of attendance. If preferred, the perpetual fee can be paid in three instalments—45 guineas at the commencement of each of the first two years of attendance, and 10 guineas at the commencement of the third year. The composition fee is payable in two instalments of 35 guineas.

Students in Arts of Universities where residence is required, who may have attended lectures in Anatomy, Physiology, Chemistry, Botany, or Comparative Anatomy, and have obtained signatures for such attendance, fulfilling the requirements of the Examining Boards, may become pupils of the London Hospital, eligible for all hospital prizes and appointments, on payment of the fee of fifty guineas for practice (perpetual) at the Hospital.

Communications addressed to the Dean or Vice-Dean of the School, at the London Hospital Medical College, Turner-street, Mile-end, London, E., will receive immediate attention.

ST. MARY'S HOSPITAL.

MEDICAL OFFICERS.

Consulting Medical Officers.
Sir James Alderson, M.D., F.R.S., Dr. Chambers, Dr. Sibson, F.R.S.; Mr. Coulson, Mr. Lane, Mr. White Cooper.

Physicians.	*Surgeons.*
Dr. Handfield Jones.	Mr. Spencer Smith.
Dr. Sieveking.	Mr. Haynes Walton.
Dr. Broadbent.	Mr. James R. Lane.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Cheadle.	Mr. Gascoyen.
Dr. Lawson.	Mr. Norton.
Dr. Shepherd.	Mr. Edmund Owen.

Physician-Accoucheur—Dr. Alfred Meadows.
Assistant Physician-Accoucheur—Dr. Wiltshire.
Physicians in charge of the Department for Diseases of the Skin—Dr. Handfield Jones, F.R.S., Dr. Cheadle.
Surgeon in charge of the Ophthalmic Department—Mr. Haynes Walton.
Surgeon in charge of the Department for Diseases of the Throat—Mr. Norton.
Aural Surgeon—Mr. G. Field.
Surgeon-Dentist—Mr. Howard Hayward.
Instructor in Vaccination—Mr. W. A. Sumner.

LECTURERS.—WINTER SESSION.

Anatomy—Mr. Norton.
Clinical Medicine—Dr. Handfield Jones, Dr. Sieveking, and Dr. Broadbent.
Clinical Surgery—Mr. Spencer Smith, Mr. Haynes Walton, and Mr. J. R. Lane.
Chemistry and Natural Philosophy—Dr. C. R. A. Wright.
Dental Surgery—Mr. Howard Hayward.
Dissections—Mr. Edmund Owen, Demonstrator; Mr. A. B. Prowse, Assistant-Demonstrator.
Experimental Physiology—Dr. Shepherd.
Medicine—Dr. Chambers and Dr. Broadbent.
Pathology—Dr. Cheadle.
Physiology—Dr. Lawson.
Surgery—Mr. James R. Lane and Mr. Gascoyen.

SUMMER SESSION.

Aural Surgery—Mr. G. Field.
Botany—Dr. Trimen.
Comparative Anatomy—Mr. St. George Mivart.
Diseases of the Skin—Dr. Cheadle.
Medical Jurisprudence—Dr. Randall.
Materia Medica—Dr. Farquharson.
Midwifery—Dr. Meadows and Dr. Wiltshire.
Ophthalmic Surgery—Mr. Haynes Walton.
Practical Chemistry—Dr. C. R. A. Wright.
Demonstrations in Morbid Anatomy—Dr. Mahomed.

The Hospital contains 170 beds—68 medical, and 102 surgical. There are special departments for the Diseases of Women and Children, and for Diseases of the Eye, the Ear, the Skin, and the Throat.

SCHOLARSHIPS, PRIZES, ETC.

Three scholarships in Natural Science, tenable for three years, and an exhibition in Natural Science, for one year. One of the scholarships and the exhibition are awarded by open competitive examination at the commencement of the

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winter session. A scholarship in Anatomy, of the annual value of £20 (the holder of which is styled Assistant-Demonstrator, and assists in the teaching of Practical Anatomy), is offered for competition amongst those students who have completed their second winter session; and a scholarship in Pathology, of the value of £20 (the holder of which is styled Assistant-Curator), for those students who have completed their third winter session. Examinations for prizes are held at the termination of each session in the various classes for students of the first, second, and third year. Two Prosectors are appointed annually, who each receive a certificate and £5 for their services in the dissecting room.

FEES.

The entrance fee for general students may be paid in instalments by arrangement with the Dean of the School. Students who have kept the two years' course at the University of Cambridge are admitted as perpetual pupils on payment of 55 guineas, and those who have kept a portion of the course elsewhere at a proportionate reduction. A fee of £1 1s. is required to be paid to the library and reading-room. Instruction in vaccination can be obtained; fee £1 1s.

Further information may be obtained from Dr. Shepherd, Dean of the School; or from the Registrar, at the Hospital.

MIDDLESEX HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Dr. Francis Hawkins, Dr. A. P. Stewart, Dr. Goodfellow.
Consulting Surgeon—Mr. Shaw.
Consulting Dental Surgeon—Mr. Tomes, F.R.S.

Physicians.	*Surgeons.*
Dr. Henry Thompson.	Mr. De Morgan.
Dr. Greenhow.	Mr. Hulke.
Dr. Robert Liveing.	Mr. Nunn.
	Mr. Lawson.
Assistant-Physicians.	
Dr. Cayley.	*Assistant-Surgeons.*
Dr. Robert King.	Mr. Morris.
Dr. G. H. Evans.	Mr. Andrew Clark.

Obstetric Physician—Dr. Hall Davis.
Assistant Obstetric Physician—Dr. Arthur Edis.
Dental Surgeon—Mr. Turner.
Curator of Museum and Pathologist—Dr. Sydney Coupland.
Registrars—Dr. Henry Humphreys, M.A., and Dr. R. W. Lyell.
Resident Medical Officer—Mr. Lucas.
Chloroformist—Mr. G. Everett Norton.

LECTURES.—WINTER SESSION.

Clinical Lectures on Medicine and Surgery — The Physicians and Surgeons.
Clinical Lectures on Diseases of Women and Children — Dr. J. Hall Davis.
Clinical Lectures on Diseases of the Eye—Mr. Hulke.
Descriptive and Surgical Anatomy —Mr. Morris, Mr. Hensman.
Pathological Anatomy—Dr. Cayley.
Physiology and General Anatomy—Mr. B. Thompson Lowne.
Practical Surgery—Mr. Lawson, Mr. Morris.
Principles and Practice of Medicine —Dr. Greenhow.
Principles and Practice of Surgery —Mr. De Morgan, Mr. Hulke.

SUMMER SESSION.

Botany—Dr. Hensman.
Clinical Lectures on Medicine and Surgery — The Physicians and Surgeons.
Clinical Lectures on Diseases of the Eye—Mr. Hulke.
Comparative Anatomy and Zoology —Mr. Hensman.
Materia Medica and Therapeutics—Dr. Thorowgood.
Medical Jurisprudence — Dr. R. King.
Midwifery and Diseases of Women and Children—Dr. J. Hall Davis.
Practical Demonstrations on Diseases of the Skin—Dr. R. Liveing.
Practical Demonstrations on Diseases of Women and Children—Dr. Arthur Edis.
Practical Demonstrations on Diseases of the Larynx and Ear—Mr. A. Clark.
Practical Physiology and Histology —Mr. B. Thompson Lowne.
Psychological Medicine—Dr. Henry Rayner.
Public Health—Dr. G. H. Evans.

This Hospital contains upwards of 300 beds, of which 185 are for surgical, and 120 for medical cases. There is a special department for cancer cases, affording accommodation for thirty-three in-patients, whose period of residence in the Hospital is unlimited. Wards are also appropriated for the reception of cases of uterine disease and of syphilis, and beds are set apart for patients from diseases of the eye. There are special out-patient departments for diseases of the skin, the throat, the eye, and ear.

PRIZES AND SCHOLARSHIPS.

Two Entrance Scholarships of the annual value of £25 and £20, tenable for two years, are afforded for competition at the commencement of the winter session.

Two Broderip Scholarships of the annual value of £30 and £20, tenable for two years, and a clinical prize of ten guineas, are annually awarded to those students who pass the most satisfactory examination at the bedside, and in the post-mortem room.

The Governors' Prize of twenty guineas is awarded annually to the student who shall have most distinguished himself during his three years' curriculum.

FEES.

The fee for attendance on the hospital practice and lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries is £90 if paid in advance, or £35 on entrance, £35 at the beginning of the second winter session, £20 at the beginning of the third winter session, and £10 for every additional year's attendance.

Dental students who intend to become Licentiates in Dental Surgery of the Royal College of Surgeons are admitted to attend the requisite courses of lectures and hospital practice on payment of a fee of forty guineas, either in one payment, or by instalments of twenty-five guineas on entrance, and fifteen guineas at the beginning of the second winter session.

ST. THOMAS'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Honorary Consulting Physicians—Dr. Barker, Dr. J. Risdon Bennett.
Honorary Consulting Surgeon—Mr. F. Le Gros Clark.

Physicians.	*Surgeons.*
Dr. Peacock.	Mr. Simon.
Dr. Bristowe.	Mr. Sydney Jones.
Dr. Murchison.	Mr. Croft.
Dr. Stone.	Mr. Mac Cormac.
Obstetric Physician.	*Ophthalmic Surgeon.*
Dr. Gervis.	Mr. Liebreich.
	Assistant-Surgeons.
Assistant-Physicians.	Mr. Francis Mason.
Dr. Ord.	Mr. H. Arnott.
Dr. John Harley.	Mr. W. W. Wagstaffe.
Dr. Payne.	*Dental Surgeon.*
	Mr. J. W. Elliott.
Assistant Obstetric-Physician.	*Assistant Dental Surgeon.*
Dr. Cory.	Mr. W. G. Ranger.
Resident Assistant-Physician.	*Resident Assistant-Surgeon.*
Dr. Turner.	Mr. A. O. MacKellar.

Demonstrator of Morbid Anatomy—Dr. Greenfield.
Analytical Chemist of the Hospital—Dr. Albert J. Bernays.
Curator to the Museum—Mr. C. Stewart.
Apothecary—Mr. R. W. Jones.
Medical Registrar—Mr. W. Verdon.
Surgical Registrar—Mr. S. Osborn.

LECTURES.—WINTER SESSION.

Chemistry—Dr. Albert J. Bernays.
Demonstrations — The Anatomical Lectures, Dr. R. W. Reid, and Anatomical Assistants.
Descriptive Anatomy—Mr. Francis Mason and Mr. W. W. Wagstaffe.
General Pathology—Dr. Bristowe.
Physics and Natural Philosophy—Dr. Stone.
Physiology and General Anatomy—Dr. Ord and Dr. John Harley.
Morbid Anatomy and Practical Pathology—Mr. H. Arnott and Dr. Greenfield.
Practical and Manipulative Surgery —Mr. Croft and Mr. MacKellar.
Special Anatomical and Microscopical Demonstrations—Mr. Rainey.
Surgery — Mr. Sydney Jones and Mr. Mac Cormac.
Theory and Practice of Medicine—Dr. Peacock and Dr. Murchison.

SUMMER SESSION.

Botany—Mr. A. W. Bennett.
Comparative Anatomy — Mr. C. Stewart.
Forensic Medicine—Dr. Stone.
Materia Medica—Dr. Payne.
Mental Diseases—Dr. Wm. Rhys Williams
Midwifery—Dr. Gervis.
Ophthalmic Surgery—Mr. Liebreich
Practical and Manipulative Surgery —Mr. Croft and Mr. MacKellar.
Practical Chemistry—Dr. Albert J. Bernays.
Practical Physiology—Dr. Ord and Dr. John Harley.

PRIZES AND APPOINTMENTS.

First Year's Prizes.—Winter: Entrance Scholarships of £60 and £40, awarded after an examination in Physics, Chemistry, Botany, and Zoology; the Wm. Tite Scholarship of £30; College Prizes—£20 and £10. Summer Prizes: £15, £10, and £5.

Second Year's Prizes.—Winter: The Musgrove Scholarship of 40 guineas, tenable for two years; College Prizes—£20 and £10. Summer Prizes: £15, £10, and £5. The Dresserships and the Clinical and Obstetrical Clerkships are open to students who have passed the primary examinations at the Royal College of Surgeons.

Third Year's Prizes.—Winter: £20, £15, and £10. The Cheselden Medal, awarded after a special examination in Surgical Anatomy and Surgery. The Mead Medal, awarded after a special examination in Practical Medicine and Hygiene. The Solly Medal, with a prize of at least 10 guineas, for a collection of surgical reports. The Treasurer's Gold Medal, for general proficiency during the entire course of study. The Grainger Testimonial Prize, of the value of £20, will be awarded biennially to the third or fourth year's students for a physiological essay, to be illustrated by preparations.

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FEES.

The admission fee to hospital practice and all the lectures is £40 for the first year, and a similar sum for the second, £20 for the third, and £10 for each succeeding year; or £105 at one payment for unlimited attendance. Special entries may be made to any course of lectures, or to the hospital practice.

There are special departments for diseases of the eye, diseases of women and children, vaccination, diseases of the skin, diseases of the teeth, and mental diseases.

For further information apply to Mr. Whitfield, Medical Secretary, St. Thomas's Hospital, London, S.E.

UNIVERSITY COLLEGE HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Sir William Jenner, Bart.	Mr. Erichsen.
Dr. Reynolds.	Mr. Marshall.
Dr. Wilson Fox.	Mr. Berkeley Hill.
Dr. Sydney Ringer.	Mr. Christopher Heath.
Dr. H. Charlton Bastian.	
Obstetric Physician.	*Assistant-Surgeons.*
Dr. Grailly Hewitt.	Mr. Marcus Beck.
Physician to the Skin Infirmary.	Mr. A. Barker.
Dr. W. Tilbury Fox.	
Assistant-Physicians.	*Ophthalmic Surgeons.*
Dr. F. T. Roberts.	Mr. Wharton Jones.
Dr. W. R Gowers.	Mr. J. F. Streatfeild.
Dr. V. Poore.	
Assistant Obstetric Physician.	*Dental Surgeon.*
Dr. John Williams.	Mr. G. A. Ibbetson.

Assistant Teacher of Clinical Medicine—Dr. F. T. Roberts.
Assistant Medical Officer in the Skin Department—Mr. John Tweedy.
Resident Medical Officer—Mr. H. R. Crocker.

LECTURES.—WINTER SESSION.

Chemistry—Dr. Williamson.
Clinical Medicine—Sir W. Jenner, Dr. Reynolds, Dr. W. Fox, Dr. S. Ringer, Dr. Roberts, Dr. Gowers.
Clinical Midwifery—Dr. G Hewitt.
Clinical Surgery—Mr. Marshall, Sir H. Thompson, Mr. C. Heath, Mr. W. Jones, Mr. Streatfeild.
Descriptive Anatomy—Mr. Ellis.
Demonstrations—Mr. Ellis, Mr. G. D. Thane, Mr. T. E. Maclean, Mr. A. P. Gould.
Histology and Practical Physiology—Dr. B. Sanderson.
Medicine—Dr. J. R. Reynolds.
Physiology and General Anatomy—Dr. B. Sanderson.
Skin Diseases—Dr. T. Fox.
Surgery—Mr. Marshall.

SUMMER SESSION.

Botany—Mr. Oliver.
Comparative Anatomy—Mr. E. R. Lankester.
Dental Surgery—Mr. Ibbetson.
Forensic Medicine—Dr. Maudsley.
Hygiene—Dr. Corfield.
Materia Medica—Dr. Ringer.
Mental Diseases—Dr. Sankey.
Midwifery—Dr. Grailly Hewitt.
Morbid Anatomy and Pathology—Dr. C. Bastian.
Natural Philosophy—Prof. G. C. Foster.
Ophthalmic Surgery—Mr. W. Jones.
Practical Chemistry—Dr. Williamson
Practical and Operative Surgery—Mr. B. Hill, Mr. M. Beck, Mr. E. A. Barker.
Practical Pharmacy—Mr. Gerard.
Skin Diseases—Dr T. Fox.

SCHOLARSHIPS AND EXHIBITIONS.

The Atkinson-Morley Surgical Scholarship, of £45 per annum, tenable for three years, is awarded every year for proficiency in the theory and practice of Surgery. The Sharpey Physiological Scholarship, of about £70 a year, for proficiency in Biological Science. The Filliter Prize of £30, for proficiency in Pathological Anatomy. Dr. Fellowes' Clinical Medals, one gold and one silver, each winter and summer session, and certificates of honour, for reports and observations on the medical cases in the Hospital. The Liston Gold Medal, and certificates of honour, for reports and observations on the surgical cases in the Hospital. The Alexandra Bruce Gold Medal, for Pathology and Surgery. The Cluff Memorial Prize, awarded every other year for proficiency in Anatomy, Physiology and Chemistry. Gold and silver medals, as well as certificates of honour, are awarded as class prizes. The Jews' Commemoration Scholarship of £15 a year, tenable for two years, for general proficiency in the Faculty of Arts or of Science, for students of one year's standing, and the Clothworkers' Exhibition for Chemistry and Physics, of £50 a year, tenable for two years, may be held by students who, after obtaining it, enter the Medical Faculty.

ENTRANCE EXHIBITIONS.

Three Entrance Exhibitions, of the respective values of £30, £20, and £10 per annum, tenable for two years, are awarded upon examination to gentlemen who are about to commence their first winter's attendance in a medical school. The next examination will be held at the College on September 28 and 29, 1875. Notice of intention to compete must be given to the Secretary on or before September 18.

FEES.

For the lectures and hospital practice for the licences of the Royal College of Physicians, Society of Apothecaries, and M.R.C.S., first year, £48 17s.; second, £39 8s.; third £18 11s.; perpetual, £105 15s.; for the hospital practice alone, £27.

Further information and detailed prospectuses may be obtained at the Office of the College.

WESTMINSTER HOSPITAL.

HOSPITAL STAFF.

Consulting Physicians and Surgeons—Dr. Kingston, Dr. Radcliffe, Mr. Lynn, Mr. Brooke, Mr. Barnard Holt.

Physicians.	*Surgeons.*
Dr. Basham.	Mr. Holthouse.
Dr. Fincham.	Mr. Cowell.
	Mr. Richard Davy.
Assistant-Physicians.	*Assistant-Surgeons.*
Dr. Sturges.	Mr. T. Cooke.
Dr. Allchin.	Mr. T. Bond.
Dr. Donkin.	Mr. Keene.

Obstetric Physician—Dr. Potter.
Assistant Obstetric Physician—Dr. Grigg.
Surgeon in charge of the Ophthalmic Department—Mr. Cowell.
Surgeon in charge of the Skin Department—Mr. Bond.
Surgeon in charge of the Aural Department—Mr. Keene.
Dental Surgeon—Mr. Walker.

Medical Registrar.	*Surgical Registrar.*
Dr. F. De Havilland Hall.	Mr. W. R. Cheyne.

LECTURERS.

Anatomy—Mr. Richard Davy.
Aural Surgery—Mr. Keene.
Botany—Mr. E. M. Holmes.
Chemistry—Dr. Dupré.
Clinical Medicine—Dr. Basham (Special Lecturer), Dr. Radcliffe, Dr. Fincham, Dr. Gibb.
Clinical Surgery—Mr. Holthouse (Special Lecturer), Mr. Holt, Mr. Cowell, Mr. Davy.
Comparative Anatomy—Mr. Carter Blake.
Dental Anatomy and Histology—Dr. Allchin.
Dental Surgery—Mr. Walker.
Diseases of the Skin—Mr. Bond.
Forensic Medicine and Hygiene—Dr. Dupré, Mr. Bond.
Materia Medica and Therapeutics—Dr. Phillips.
Medicine—Dr. Fincham, Dr. Sturges.
Metallurgy—Dr. Dupré.
Midwifery and Diseases of Women—Dr. Potter.
Natural Philosophy—Mr. Brooke.
Ophthalmic Surgery—Mr. Cowell.
Pathology and Morbid Anatomy—Dr. Allchin.
Physiology—Dr. Maclure.
Practical Chemistry—Dr. Dupré.
Practical Surgery—Mr. Cowell.
Practical Physiology and Histology—Dr. Allchin.
Psychological Medicine—Dr. Sutherland.
Surgery—Mr. Cowell.

Dean of the School—Mr. Cowell. *Sub-Dean*—Dr. Allchin.

DEMONSTRATORS.

Anatomy—Mr. Malcolm Smith.
Morbid Anatomy—Dr. Hall, Mr. Cheyne.
Minor Surgery and Bandaging—Mr. W. R. Cheyne.

In addition to the practice of the Hospital, which contains 191 beds, the general students of this school are admitted to the practice of the Royal Westminster Ophthalmic Hospital, and to that of the National Hospital for Epilepsy and Paralysis.

PRIZES.

There are two Entrance Scholarships of £20 and £10, each tenable for two years, an Exhibition in Anatomy and Physiology for first year's men, a Scholarship of twenty guineas in Anatomy and Physiology for second year's men, the Frederic Bird Prize, a prize of the value of £21 for general proficiency, and two clinical prizes of the value of five guineas each. Certificates of honour are also awarded to the most meritorious students.

FEES.

The entry fee to lectures and hospital practice required by the College of Physicians and Surgeons and the Society of Apothecaries may be paid in one sum of £80, which is perpetual; in two payments of £42 and £40 each, at the commencement of the first two years; or in four payments of 28, 14, 25, and 13 guineas respectively, at the commencement of the first four sessions.

Full particulars as to courses of lectures and mode of instruction will be found in the published Calendar, and any further information may be obtained by personal application to Mr. Cowell, the Dean of the School, or to Dr. Allchin, the Sub-Dean.

PROVINCIAL MEDICAL SCHOOLS.

OXFORD.

THERE is no complete and perfect School of Medicine in connexion with the University of Oxford, but the following classes or lectures may be attended:—

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LECTURES AND CLASSES.

Anatomy—Mr. J. B. Thompson; Mr. C. Robertson, Demonstrator.
Botany—Mr. M. Lawson.
Chemistry—Mr. W. Odling, Mr. A. G. V. Harcourt; Mr. T. H. G. Wyndham, Demonstrator.
Medicine—Dr. H. W. Acland.
Experimental Physics—Mr. R. B. Clifton.
Natural Philosophy—Rev. B. Price.
Natural Science—Mr E. Chapman.
Physics—Mr. Robert E. Baynes.
Physiology—Dr. G. Rolleston.
Zoology—Mr. J. O. Westwood.

Students may also be admitted to the practice of the Radcliffe Infirmary.

CAMBRIDGE.

The winter session will commence on October 11. The following is a list of the classes and lecturers in the Cambridge University School of Medicine:—

WINTER COURSES.

Anatomy—Professor Humphry and Dr. Wilson.
Anatomy and Physiology—Professor Humphry.
Chemistry—Professor Liveing.
Comparative Anatomy—Mr. Bridge, Demonstrator.
Dissections — Professor Humphry and Dr. Wilson.
Materia Medica—Professor Latham.
Medicine—Professor Paget.
Physics—Professor Maxwell.
Practical Chemistry — Professor Liveing and Mr. Hicks.
Practical Physiology—Dr. Michael Foster.
Zoology and Comparative Anatomy —Professor Newton.

SUMMER COURSES.

Botany—Professor Babington.
Chemistry and Practical Chemistry—Professor Liveing and Mr. Hicks.
Comparative Anatomy, Dissections —Mr. Bridge.
Human and Comparative Osteology —Professor Humphry.
Human Osteology—Professor Humphry and Dr. Wilson.
Pathology—Dr. Bradbury.
Practical Physiology—Dr. Michael Foster.
Practical Histology—Dr. Wilson.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

This Hospital contains 120 beds.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Paget.
Dr. Latham.
Dr. Bradbury.

Surgeons.
Mr. Lestourgeon.
Dr. Humphry.
Mr. Carver.

Fees for attendance upon the practice (medical and surgical), £15 15s. for an unlimited period: £10 10s. for one year; £8 8s. for six months.

THE QUEEN'S COLLEGE, BIRMINGHAM.

WINTER COURSES.

Anatomy—Mr. W. Thomas, and Dr. R. Jolly.
Chemistry—Dr. Alfred Hill.
Demonstrators of Anatomy—Mr. H. Campbell Pope and Mr. Bennett May.
Medicine—Dr. Balthazar Foster.
Physiology—Dr. Norris, Mr. T. H. Bartleet, and Dr. E. Rickards.
Surgery—Mr. Pemberton and Mr. Furneaux Jordan.

SUMMER COURSES.

Botany—Dr. William Hinds.
Comparative Anatomy—Dr. Thos. Savage.
Dental Surgery—Mr. T. Howkins.
Diseases of Women and Children—Mr. Samuel Berry, Dr. R. C. R. Jordan.
Forensic Medicine and Toxicology—Mr. J. St. S. Wilders, Dr. Alfred Hill.
Materia Medica and Therapeutics—Dr. Edward Mackey.
Midwifery—Mr. John Clay, Dr. John Bassett.
Ophthalmic Surgery—Mr. J. Vose Solomon.
Pathology—Dr. J. Sawyer.
Practical Chemistry—Mr. Anderson.

Medical Tutor—Mr. H. Campbell Pope.

SCHOLARSHIPS AND PRIZES.

The Sands Cox Prize, of the value of £20, is given annually in the medical department. The Warden's Prize, of the value of £3 3s., offered by the Rev. W. H. Poulton to the most proficient student of the first year.

The composition fee for all the lectures required by the Examining Boards is fifty guineas, payable by two equal instalments. Fees for rooms and board of resident students £50 per annum.

THE GENERAL AND QUEEN'S HOSPITALS, BIRMINGHAM.

GENERAL HOSPITAL STAFF.

Consulting Surgeon—Mr. D. W. Crompton.

Physicians.
Dr. Bell Fletcher.
Dr. Russell.
Dr. Wade.
Dr. Foster.
Dr. Rickards.

Surgeons.
Mr. Alfred Baker.
Mr. Oliver Pemberton.
Mr. T. H. Bartleet.
Mr. W. P. Goodall.
Mr. Robert Jolly.

Resident Physician and Medical Tutor.
Dr. Alfred Henry Carter.

Resident Surgeon and Surgical Tutor.
Mr. Walter Ottley.

Registrar and Pathologist—Mr. Philip Bindley.

QUEEN'S HOSPITAL STAFF.

Consulting Physician—Dr. Fleming.
Consulting Surgeon—Mr. Sands Cox.

Physicians.
Dr. Heslop.
Dr. Johnston.
Dr. Sawyer.
Dr. Mackey.

Surgeons.
Mr. West.
Mr. Gamgee.
Mr. Furneaux Jordan.
Mr. J. St. S. Wilders.

Resident Physicians.
Dr. Bissett Smith.
Dr. McQueen.

Resident Surgeons.
Mr. Hamilton.
Mr. Keetley.

Obstetric Surgeon—Mr. John Clay.
Ophthalmic Surgeon—Mr. Priestley Smith.
Dental Surgeon—Mr. Charles Sims.
Pathologist—Mr. Thomas.

The practices of these Hospitals are amalgamated for the purpose of clinical instruction, under the direction of the Birmingham Clinical Board, by whose orders all schedules will be signed and all examinations conducted. The Hospitals have a total of upwards of 400 beds; 4500 in-patients and 45,000 out-patients are treated annually. The students will be required to devote their time equally between the two Hospitals.

CLINICAL PRIZES.

The following prizes will be given annually:—Senior Medical Prize, for third or fourth year students: First Prize, £5 5s.; Second Prize, £3 3s. Senior Surgical Prize: First Prize, £5 5s.; Second Prize, £3 3s. Junior Medical Prize, for second year students: First Prize, £3 3s.; Second Prize, £2 2s. Junior Surgical Prize: First Prize, £3 3s.; Second Prize, £2 2s. Midwifery Prize, £4 4s.

The examination for all the above-mentioned appointments and prizes will be conducted by the Clinical Board, and will be open for competition to all students registered by the Clinical Board.

FEES.

Fees for attendance for four years, £31 10s. (N.B. This payment may be made in two equal sums, the first on entrance and the second at the commencement of the second year.) One year's attendance, £15 15s.; six months' attendance, £10 10s. Special Department for Midwifery and Diseases of Women (optional), £2 2s. Dental fee (optional), £1 1s.

BRISTOL SCHOOL OF MEDICINE.

COURSES OF LECTURES.—WINTER SESSION.

Chemistry—Mr. Thomas Coomber.
Descriptive and Surgical Anatomy —Mr. Edmund C. Board, Mr. Nelson C. Dobson, Dr. A. E. Aust Lawrence, Dr. Thomas Elliott, Dr. Henry Waldo, Mr. Charles Newman, and Mr. Frederick G. Stevens.
Medicine—Dr. Samuel Martyn and Dr. William H. Spencer.
Physiology and Practical Physiology —Mr. George F. Atchley and Dr. R. Shingleton Smith.
Principles of Surgery and Practical Surgery—Mr. Robert W. Coe and Mr. Robert W. Tibbits.

SUMMER SESSION.

Botany—Mr. Adolph Leipner.
Comparative Anatomy—Mr. George F. Atchley.
Materia Medica and Therapeutics—Dr. George F. Burder.
Medical Jurisprudence—Mr. Wm. P. Keall.
Midwifery and Diseases of Women—Dr. Joseph G. Swayne.
Pathological Anatomy—Dr. Samuel Martyn and Dr. Wm. H. Spencer.
Practical Chemistry—Mr. Thomas Coomber.

BRISTOL ROYAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Honorary and Consulting Physicians—Dr. William Budd and Dr. Frederick Brittan.
Honorary and Consulting Surgeons—Mr. John Harrison, Mr. Thomas Green, and Mr. Augustin Prichard.

Physicians.
Dr. Alexander Fairbrother.
Dr. Edward L. Fox.
Dr. William H. Spencer.
Dr. R. Shingleton Smith.

Surgeons.
Mr. Crosby Leonard.
Mr. Robert W. Tibbits.
Mr. Charles Steele.
Mr. Edmund C. Board.
Mr. Christopher H. Dowson.

Assistant-Physician.
Dr. Henry Waldo.

Assistant-Surgeon.
Mr. David E. Bernard.

House-Surgeon—Mr. Henry M. Chute.
Assistant House-Surgeon—Dr. John E. Shaw.

This Infirmary was founded in the year 1735, and is one of the largest provincial hospitals in England. It contains 242 beds.

PRIZES.

Suple's Medical Prize, consisting of a gold medal of the value of five guineas, and about seven guineas in money, is given annually to the successful candidate in an examination held by the Physicians. The examination comprises reports of cases in the medical wards, and the preparation of morbid specimens illustrative of disease, accompanied, if possible, by microscopic and chemical illustrations, besides written replies to questions in Medicine.

Suple's Surgical Prize corresponds in value and character to the medical one described above. In this case the examination is conducted by the Surgeons, and comprises surgical subjects only.

Clark's Prize.—The interest of £500, bequeathed by the late Henry Clark, Esq., Consulting Surgeon to the Infirmary, will be given annually to the prizeman of his third year at the examination held at the Medical School, provided he has

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attended his Hospital Practice at the Bristol Royal Infirmary, and can produce certificates of good moral character.

Pathological Prize.—The Pathological Clerk at the expiration of his term of office will receive a prize of the value of three guineas if his duties have been performed to the satisfaction of the Faculty.

FEES.

An entrance fee of five guineas to the Infirmary, and subscription of one guinea per annum to the Library. Surgeon's pupil, twelve guineas for one year; twenty guineas for two years (at one payment); twenty-five guineas for three years (at one payment). Dresser (extra fee), twelve guineas for one year; twenty guineas for two years (at one payment); twenty-five guineas for three years (at one payment). Physician's pupil:—For six months, £8; for one year, £15; for eighteen months, £20; perpetual, £25.

The fee for apprenticeship to the House-Surgeon is £315, which includes five years' residence in the Infirmary and all attendance on Hospital Practice required by the various examining bodies, excepting Dressers' fees. House pupils may also enter for a shorter period, at the rate of fifty guineas per annum, to the Infirmary, with a fee of fifty guineas to the House-Surgeon.

BRISTOL GENERAL HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Honorary and Consulting Physician—Dr. Henry E. Fripp.
Honorary and Consulting Surgeons—Mr. Robert W. Coe, Mr. W. Michell Clarke, Dr. Henry Marshall.
Honorary and Consulting Physician-Accoucheur—Dr. Joseph G. Swayne.

Physicians.
Dr. Samuel Martyn.
Dr. George F. Burder.
Dr. E. Markham Skerritt.

Physician-Accoucheur.
Dr. A. E. Aust Lawrence.

Physician's Assistant.
Dr. G. A. Imlay.

Surgeons.
Mr. F. Poole Lansdown.
Mr. George F. Atchley.
Mr. Nelson C. Dobson.
Mr. William P. Keall.

House-Surgeon.
Dr. Thomas Elliott.

Assistant House-Surgeon.
Mr. W. J. Seward.

Dentist—Mr. T. C. Parson.

SCHOLARSHIPS AND PRIZES.

Lady Haberfield's Prize.—This prize, founded by the late Lady Haberfield, and consisting of the interest of £1000, is awarded annually to the student who exhibits the greatest proficiency.

Sanders Scholarship.—A Scholarship, founded by the late John Nash Sanders, Esq., and consisting of the interest of £500, is awarded annually after examinations in Medicine and Surgery.

Guthrie Scholarship.—A Medical Scholarship of £15, founded by the late Rev. Canon Guthrie, is awarded annually to the most diligent student attending the medical practice of the Hospital.

Clarke Scholarship.—A Surgical Scholarship of £15, founded by H. M. Clarke, Esq., of London, is awarded annually to the most diligent student attending the surgical practice of the Hospital.

The rules relating to the several scholarships may be had on application.

FEES.

Medical or Surgical Practice, £6 for six months; £10 for one year; £20 perpetual. Extra fee for Clinical Clerk or Dresser, five guineas for six months. Library fee one guinea per annum. Resident pupils (including board, lodging, and washing), £100 for the first year, £60 for each subsequent year; or for five years, with apprenticeship to the Hospital, £260.

LEEDS SCHOOL OF MEDICINE.

CLASSES AND LECTURES.

Chemistry (at the Yorkshire College of Science) — Professor T. E. Thorpe.
Clinical Medicine—Dr. J. D. Heaton, Dr. T. Clifford Allbutt, and Dr. Edwin Eddison.
Clinical Surgery—Mr. C. G. Wheelhouse, Mr. T. P. Teale, Mr. T. R. Jessop, and Mr. Edward Atkinson.
Comparative Anatomy—Dr. T. C. Allbutt and Mr. Edward Atkinson.
Demonstrations of Anatomy—Mr. E. Robinson and Mr. A. F. McGill.
Descriptive Anatomy—Dr. Robert T. Land, Mr. John A. Nunneley, and Mr. Edmund Robinson.
Forensic Medicine — Mr. Thomas Scattergood.
General Anatomy and Physiology—Mr. C. J. Wright and Mr. John Horsfall.
Materia Medica—Dr. John Edwin Eddison.
Medicine—Dr. John D. Heaton, and Dr. T. Clifford Allbutt.
Mental Diseases—Dr. J. Crichton Browne.
Midwifery—Mr. W. N. Price, and Dr. James Braithwaite.
Pathology—Mr. R. P. Oglesby.
Practical Physiology—Mr. James Walker.
Surgery (including the Practical Course)—Mr. T. Pridgin Teale, Mr. T. R. Jessop, and Mr. Edward Atkinson.

LEEDS GENERAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. Charles Chadwick.
Consulting Surgeon—Mr. Samuel Hey.

Physicians.
Dr. John Deakin Heaton.
Dr. T. Clifford Allbutt.
Dr. John Edwin Eddison.

Surgeons.
Mr. C. G. Wheelhouse.
Mr. T. Pridgin Teale.
Mr. T. R. Jessop.
Mr. Edward Atkinson.

Surgeons to the Eye and Ear Department.
Mr. John A. Nunneley, Dr. Robert T. Land, Mr. R. P. Oglesby.

SCHOLARSHIPS AND PRIZES.

The Hardwick Scholarship in Clinical Medicine.—Candidates for this prize must be in attendance on the lectures of the Leeds School of Medicine, and must have completed their first year's course there. They must be in registered attendance upon the medical practice of the Hospital, and have served the office of Clinical Clerk, or be holding that office at the time of competition. The prize is given annually for the best set of reports of medical cases in the Hospital during the winter session, subject to such regulations as may be laid down at the commencement of the session. Its value is £10 in money. Should the funds admit, a second prize may be given.

The Surgeons' Clinical Prizes.—Three prizes of the value of £8, £5, and £3 in money will be given annually by the Surgeons of the Hospital, subject to conditions similar to those relating to the Hardwick Prize.

The Thorpe Scholarship in Forensic Medicine.—This is a prize of £10 (founded by a former member of Council), awarded at the close of each summer session, subject to such regulations as may be made from time to time, of which due notice will be given.

FEES.

The composition fee for attendance upon all the required courses of school lectures is forty-four guineas, to be paid on entrance; or twenty-three guineas on entrance, and twenty-three guineas in twelve months. The fees for the Comparative Anatomy course and for a second course of Practical Chemistry are not included in the composition fee. The entrance fee to the library and reading-room, £1 1s., is paid by all students on joining the School. Instruction in vaccination, as required by the College of Surgeons and by the Poor-law Board, is given by Mr. Holmes, of Burmantofts, one of the Public Vaccinators—fee £1 1s.; students must attend on Tuesdays, at 3 p.m., for a period of six weeks. The fees for attending the medical practice or the surgical practice alone are as follows:—One winter session, £7 7s.; one summer session, £6 6s.; twelve months, £12 12s.; eighteen months, £15 15s.; three years, £21.

The fee of £21 for surgical practice is payable at the commencement of the first winter session, and that for medical practice at the commencement of the second winter session.

LIVERPOOL SCHOOL OF MEDICINE.

LECTURERS.

Anatomy—Mr. W. Mitchell Banks.
Botany—Mr. W. Carter.
Chemistry and Toxicology—Mr. J. C. Brown.
Comparative Anatomy—Mr. E. H. Dickinson.
Dental Mechanics — Mr. R. E. Stewart.
Dental Surgery—Mr. J. Snape.
Forensic Medicine — Dr. Ewing Whittle.
Diseases of Children—Dr. R. Gee.
Materia Medica—Dr. J. B. Nevins.
Medicine—Dr. A. T. H. Waters.
Obstetric Medicine and Gynæcology—Mr. A. B. Steele.
Ophthalmic Medicine—Mr. T. Shadford Walker.
Pathological Anatomy — Dr. A. Davidson.
Physiology—Dr. Richard Caton.
Surgery—Mr. Reginald Harrison.

DEMONSTRATORS.

Histology and Practical Physiology—Mr. Rushton Parker.
Practical Anatomy — Mr. Henry Ashby.

ROYAL INFIRMARY.

Consulting Physicians—Dr. Inman, Dr. Voss.
Consulting Surgeons—Mr. Long, Mr. Stubbs.

Physicians.
Dr. Turnbull.
Dr. Waters.
Dr. Glynn.

Surgeons
Mr. Bickerstcth.
Mr. Hakes.
Mr. Harrison.

Resident Medical Officer—Mr. Paul.
Pathologist—Mr. Parker.
Assistant-Surgeon—Mr. Banks.
Dental Surgeon—Mr. Snape.
Surgeons to the Lock Hospital—Mr. McCheane, Mr. F. W. Lowndes.

The Infirmary contains nearly 300 beds. There are special wards for the treatment of uterine and other diseases of women.

The Lock Hospital adjoining the Infirmary contains sixty beds.

SCHOLARSHIPS AND PRIZES.

Roger Lyon Jones Scholarship.—By the will of the late R. L.

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Jones, Esq., of Liverpool, the sum of £2000 has been left to the School for the purpose of founding a scholarship, to be named after the donor. It is expected that this sum will yield about £90 annually, which will be divided, after competitive examination, between two or more gentlemen, students of Medicine at the School. As some time, however, must elapse before the bequest comes into the actual possession of the School, and as the Council have still to determine the conditions upon which the Scholarship shall be competed for, no award can be made during the following winter session.

Torr Medal.—A gold medal for Anatomy and Physiology, presented by Mr. John Torr, M.P., is awarded to the first student in the second year subjects.

Bligh Medal.—This gold medal, which is presented annually by Dr. John Bligh, Liverpool (also for the encouragement of the study of Anatomy and Physiology), is awarded to the first student in the first year subjects.

FEES.

Composition Fee.—A payment of £47 5s. on entrance, or in two equal instalments (one-half on entrance, and the remainder within twelve months), entitles the student to attendance on all the lectures and demonstrations (exclusive of Practical Chemistry) required for the Membership of the Royal College of Surgeons, the Licence of the College of Physicians and the Apothecaries' Society.

Library.—All medical students on registering are required to pay an annual fee of 10s. 6d. to the library and reading-room, or a perpetual fee of £1 1s.

The perpetual Hospital fee (£33 12s.) and the School composition fee for lectures required by the licensing bodies (£47 5s.) amount together to £80 17s. In addition to this must be reckoned Practical Chemistry (£3 3s.), library fee (£1 1s.), Ophthalmology (£1 1s.), vaccination fee (£1 1s.), dissecting-room expenses (roughly estimated at £3 3s.), and a summer course of Practical Anatomy, which, though not absolutely essential, is generally taken (£2 2s.), in all amounting to £11 11s. The total expenses of the education necessary to procure a medical and surgical qualification thus amount to somewhat over £90.

LIVERPOOL NORTHERN HOSPITAL.

The winter session will commence on Thursday, October 1.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. Davidson. | Dr. Dickinson.

Surgeons.

Mr. Manifold. | Dr. Graham.
Mr. Lowndes. | Mr. Pusey.

The Hospital contains 144 beds.

FEES FOR HOSPITAL PRACTICE AND CLINICAL LECTURES.

Perpetual, 25 guineas; one year, 10 guineas; six months, 7 guineas; three months, 4 guineas. Students can enter to the medical or surgical practice separately on payment of half the above fees. The Hospital receives one resident pupil, fee 60 guineas per annum. Attendance on the practice of this Hospital qualifies for all the examining boards.

For further particulars apply to the House-Surgeon, Mr. Farnell.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

MEDICAL AND SURGICAL STAFF.

Consulting Surgeons—Dr. Petrie, Mr. J. L. Minshull, and Mr. A. Higginson.

Physicians.

Dr. J. Cameron. | Dr. W. Carter.

Surgeons.

Mr. J. Nottingham. | Mr. R. Hamilton.
Dr. T. G. Wollaston.

Senior House-Surgeon—Dr. W. Williams.
Junior House-Surgeon—Mr. H. Caddy.
Dental Surgeon—Mr. R. E. Stewart.

Two hundred beds.

FEES FOR PRACTICE AND LECTURES.

Perpetual, 25 guineas; one year, 10 guineas; six months, 7 guineas; three months, 4 guineas.

For further particulars apply to the House-Surgeons.

UNIVERSITY OF DURHAM.—COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

LECTURES.—WINTER SESSION.

Anatomy—Dr. Armstrong, Mr. Russell, Dr. Hume.
Chemistry—Professor Marreco.
Medicine—Dr. Philipson.
Mental Diseases—Mr. Wickham.
Physiology—Dr. Reoch.
Practical Physiology—Dr. Reoch.
Surgery—Dr. Heath.

SUMMER SESSION.

Botany—Mr. Armstrong and Mr. Maclean.
Midwifery—Dr. Gibson and Dr. Nesham.
Medical Jurisprudence—Dr. Page.
Materia Medica and Therapeutics—Dr. Arnison.
Operative Surgery—Dr. Heath.
Practical Chemistry—Professor Marreco.
Pathological Anatomy—Dr. Gibb and Dr. Bramwell.
Pharmacy—Mr. Proctor.

Hospital practice can be attended at the Newcastle Infirmary, which contains 230 beds.

FEES.

Composition fee for all the lectures payable on entering to the first winter session, £52 10s. Perpetual ticket for Pharmacy curriculum, £12 12s. Separate courses of lectures, each £4 4s. The composition fee entitles the holder to attend the lectures on Botany, Chemistry, Materia Medica, and Pharmacy, and to use the Museum of Materia Medica in the library of the College.

Twelve months' hospital practice, £7 7s.; six months, £5 5s.; three months, £4 4s.; perpetual fee, £17 17s.; or, if paid by instalments, first year £7 7s., second year £6 6s., third year £5 5s. These fees also are payable in advance.

SCHOLARSHIPS AND MEDALS.

Four scholarships of £25 a year each, tenable each for four years. Dickinson Memorial Scholarship, £15, tenable for one year, for general proficiency. By a recent Act of Convocation, students may now proceed to the degrees of M.D. and C.M. of the University of Durham by keeping the necessary terms in Arts either at Durham or Newcastle. Four resident Dressers, who also act as physicians' clinical clerks, are chosen every six months from the senior students. Fee for six months' board and residence, £10 10s.

At the end of each session a silver medal and certificate of honour will be awarded in each of the required classes.

R. H. B. Wickham, F.R.C.S., Medical Superintendent of the Cox Lodge Lunatic Asylum, will deliver a course of lectures on Psychological Medicine, illustrated by cases in the Asylum, to students in their third and fourth years, during the latter half of the winter session.

Further particulars may be obtained from Dr. Luke Armstrong, Registrar, or of Dr. Bramwell, Secretary.

NEWCASTLE-UPON-TYNE INFIRMARY.

This Infirmary contains 230 beds. There are special wards for the treatment of children, ophthalmic and syphilitic diseases.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Embleton.
Dr. Phillipson.
Mr. B. Bramwell.

Surgeons.
Dr. Heath.
Mr. Russell.
Dr. Arnison.
Dr. Armstrong.

Assistant-Surgeons.
Mr. A. Bell.
Dr. Hume.
Mr. J. Hawthorn.

Senior House-Surgeon.
Mr. Beatson.

Junior House-Surgeon.
Mr. G. Mickle.

FEES.

Fees for hospital practice and clinical lectures:—Twelve months, seven guineas; six months, five guineas; three months, four guineas. Perpetual fee, seventeen guineas; or if paid by instalments—first year, seven guineas; second year, six guineas; third year, five guineas.

OWENS COLLEGE (MANCHESTER ROYAL SCHOOL OF MEDICINE).

PROFESSORS AND LECTURERS.—WINTER SESSION.

Chemistry—Mr. Henry E. Roscoe.
Clinical Medicine—Dr. William Roberts.
Comparative Anatomy—Mr. W. C. Williamson.
Descriptive and Practical Anatomy—Dr. Morrison Watson.
General Pathology and Morbid Anatomy—Dr. Henry Simpson, Dr. Julius Dreschfeld.
Hospital Instruction—The Physicians to the Royal Infirmary.
Operative Surgery—The Surgeons to the Royal Infirmary.
Organic Chemistry—Mr. C. Schorlemmer.
Physiology and Histology—Dr. Arthur Gamgee.
Principles and Practice of Medicine—Dr. J. E. Morgan.
Principles and Practice of Surgery—Mr. George Southam, Mr. Edward Lund.

SUMMER SESSION.

Botany—Mr. W. C. Williamson.
Forensic Medicine—Mr. G. Morley Harrison.
Hygiene and Public Health—Dr. Arthur Ransome.
Practical Chemistry—Mr. Henry E. Roscoe.
Materia Medica and Therapeutics—Mr. Alexander Somers, Mr. Daniel John Leech.
Midwifery and Diseases of Women and Children—Dr. John Thorburn.
Ophthalmology—Mr. T. Windsor.

Medical Tutor and Demonstrator of Anatomy—Mr. J. Beswick Perrin.
Registrar—Mr. J. Holme Nicholson.
Dean of the Medical School Professor Gamgee, M.D., F.R.S.

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EXHIBITIONS, PRIZES, ETC.

A Turner Scholarship of £25 for third year's students, a scholarship of £15 for second year's students, and one of £10 for first year's students. Prizes will also be given for general proficiency.

Platt Physiological Scholarships.—Two Scholarships of £50 each, tenable for two years, one of which is offered annually, are open to the competition of all students of the College who shall have studied Physiology in the College laboratory during one entire session, and whose age on January 1 preceding the examination shall be not under eighteen nor over twenty-five years. The next competition will take place in October, 1875. The Scholarship will be awarded for the best original investigation in Physiology prosecuted in the College laboratory, and on the results of a written examination in Physiology and such subjects connected therewith as shall be prescribed. The Scholarship will not be awarded on the ground of comparative merit only. The candidate elected to the Scholarship will be required to attend during one year of his tenure the practical class in the physiological laboratory of the College, and during the other year the same or some other physiological laboratory in England or on the Continent approved of by the Council and the Senate of the College. If no original investigation shall have been carried on worthy of the Scholarship, the Council may, if they think fit, award one or more exhibitions to the candidate or candidates who shall have been most distinguished in the examination.

Dunville Surgical Prize, value £20.—The Prize will consist of books or surgical instruments at the option of the winner. Candidates must have studied in the Medical Department and the Manchester Royal Infirmary during the winter session of 1874-5, the summer session of 1875, and the winter session of 1875-6, and have attended four courses of lectures, including one, at least, on Surgery. The examination will be conducted by means of written answers to questions on the principles and practice of Surgery, including Surgical Anatomy, and, at the option of the examiners, will also include the examination of patients and operations on the dead subject, together with reports of three surgical cases which have occurred in the wards of the Manchester Royal Infirmary during the preceding six months—the reports to comprise the history, progress, treatment, and results (with observations thereon) of these cases. The examination will take place at the end of the winter session 1875-6. Notice of intention to compete must be sent to the Registrar in writing not later than seven days before the examination.

Gilchrist Scholarships.—Three of £50 each, tenable for three years, one of which is annually awarded to the candidate who shall stand highest at the Matriculation Examination of the University of London in June, provided that he pass in the honours division, and, failing such, two of £25 each will be given to the two candidates who stand highest in the first division. Further particulars will be found in the "Calendar" and in the prospectus of scholarships, exhibitions, and prizes.

FEES.

A composition fee, which may be paid in one sum of £48, or in two sums of £25 each at the commencement of the first and second years of studentship, admits to the whole of the lectures required to qualify, and to attendance on the class of Practical Anatomy during two winter sessions. In addition to the composition fee, all students (except those who entered before May 1, 1873) will be required to pay the Medical Tutor's fee, £2 2s. annually. Should a student desire to continue his study of Practical Anatomy beyond two sessions, he can do so on payment of extra fees at the rate of £2 2s. for a three months' or £3 3s. for a six months' course.

An extra fee of £1 1s. will be charged for attendance on the demonstrations in the Comparative Anatomy class, and a like extra fee for the demonstrations in Botany. A charge of £1 1s. is also made for the chemicals used in the class of Practical Chemistry.

SHEFFIELD SCHOOL OF MEDICINE.

LECTURES.—WINTER SESSION.

Anatomy, Descriptive and Surgical—Mr. Skinner, Mr. R. Skinner.
Chemistry—Mr. Allen.
Clinical Surgery—Mr. Barber, Mr. W. F. Favell, Mr. Parker.
Clinical Medicine—Dr. Bartolomé, Dr. Law, Dr. Frank-Smith.
Dental Mechanics—Mr. G. Mosely.
Physiology—Mr. S. Morton.
Demonstrations of Anatomy—Dr T. H. Morton, Dr. R. Thomas, Mr. O. Barber, Dr. O'Keeffe.
Principles and Practice of Medicine—Dr. Bartolomé, Dr. Hall.
Principles and Practice of Surgery—Mr. W. F. Favell, Mr. Parker, Mr. A. Jackson.

SUMMER SESSION.

Botany—Mr. Birks.
Demonstrations of Pathology and Microscopy—The House-Surgeon (at the Infirmary).
Demonstrations of Operative Surgery—Mr. Favell, Mr. Parker.
Demonstrations of Practical Histology and Physiology—Dr. Thomas.
Dental Surgery—Dr. Merryweather
Materia Medica and Therapeutics—Dr. Young.
Medical Jurisprudence and Toxicology—Mr. Baker, Mr. Harrison.
Midwifery and Diseases of Women—Dr. Hime.
Practical Chemistry—Mr. Allen.
Practical Surgery—The House-Surgeon (at the Infirmary.

SHEFFIELD GENERAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. Bartolomé.	Mr. Barber.
Dr. Law.	Mr. Favell.
Dr. Frank-Smith.	Mr. Parker.

House-Surgeon—Mr. Laver.

The Infirmary contains 200 beds for in-patients.

FEES.

The fees for perpetual attendance at the Infirmary are £15 15s. for medical, £21 for surgical practice. For twelve months' practice: Medical, £10 10s.; surgical, £6 6s. Six months': Medical, £6 6s.; surgical, £4 4s.

PUBLIC HOSPITAL AND DISPENSARY.

Physicians.	*Surgeons.*
Dr. J. Hall.	Mr. A. Jackson.
Dr. Law.	Dr. Keeling.
Dr. H. J. Branson.	Mr. Thorpe.

House-Surgeon—Mr. Lamb.

This Hospital contains 100 beds. The fees are the same as those of the Infirmary. Recognised by the Royal College of Surgeons.

SHEFFIELD HOSPITAL FOR DISEASES OF WOMEN.

MEDICAL OFFICERS.

Dr. Jackson, Dr. Keeling, Dr. Hime, Mr. Woodhouse.

FEES.

Anatomy and Physiology, first course, £6 6s.; second course, £4 4s. Practice of Medicine, first course, £4 4s.; second course, £2 2s. Practice of Surgery, first course, £4 4s.; second course, £2 2s. Chemistry, first course £4 4s. Midwifery and Diseases of Women, first course, £3 3s. Materia Medica, first course, £3 3s. Medical Jurisprudence, first course, £3 3s. Botany, first course, £3 3s. Practical Chemistry, first course, £3 3s. Practical Physiology, £3 3s. Practical Surgery, £3 3s. These fees include demonstrations.

Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries Hall, £42.

All further information may be obtained on application to the Hon. Secretary, Arthur Jackson, St. James's-row, Sheffield.

MANCHESTER ROYAL INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Sir James Bardsley, M.D., Dr. Peter Wood, Dr. R. F. Ainsworth, Dr. Frank Renaud, Dr. T. H. Watts.

Physicians.	*Surgeons.*
Dr. M. A. Eason Wilkinson.	Mr. George Southam.
Dr. Henry Browne.	Mr. F. A. Heath.
Dr. William Roberts.	Mr. Edward Lund.
Dr. Henry Simpson.	Mr. George Bowring.
Dr. John B. Morgan.	
Obstetric Physician.	*Ophthalmic Surgeon.*
Dr. John Thorburn.	Mr. Thomas Windsor.
Assistant-Physicians.	*Assistant-Surgeons.*
Mr. Daniel J. Leech.	Mr. S. M. Bradley.
Dr. Julius Dreschfeld.	Mr. W. Whitehead.

Dental Surgeon—Mr. G. W. Smith.
Resident Medical Officer—Dr. George Reed.
Medical Supt. of the Royal Lunatic Hospital at Cheadle—Mr. G. W. Mould.
Pathological Registrar—Mr. Thomas Jones.
Secretary—Mr. B. Brown.

CLINICAL PRIZES.

One Medical and one Surgical Clinical Prize is offered annually for the best reports and commentaries on six medical and on six surgical cases respectively. The cases must be selected from those treated in the Infirmary within the preceding twelve months.

The reports shall be signed with a motto, and transmitted (together with a sealed envelope containing the name and address of the student and the motto chosen by him) to the Chairman of the Medical Committee not later than the 1st day of September.

The two Prizes shall be open respectively to the medical and surgical pupils for the current year; they shall be each

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of the value of six guineas, and shall consist of books or instruments, at the option of the successful candidates.

STUDENTS' FEES.

Medical Practice.—Three months, 6 guineas; six months, 9 guineas; twelve months, 12 guineas; full period required by the examining boards, 18 guineas.

Surgical Practice.—Three months, 9 guineas; six months, 12 guineas; twelve months, 18 guineas; full period required by the examining boards, 30 guineas.

Composition Fee.—The fees for the full period required by the examining boards of both medical and surgical practice may be paid by a composition fee of £42 on entrance, or by two instalments of £22 each at an interval of twelve months.

In addition to the practice of the Infirmary, the Monsall Fever Hospital and the Barnes' Convalescent Home will also be open, under certain regulations, to students for the purposes of instruction.

SCHOOLS AND HOSPITALS IN SCOTLAND.

UNIVERSITY OF EDINBURGH.—FACULTY OF MEDICINE.

SESSION 1875-76.

Principal—Sir Alexander Grant, Bart., LL.D.

THE session will be opened on Monday, November 1, 1875, at two o'clock, when an address will be delivered by the Principal.

WINTER SESSION.

Anatomy—Prof. Turner.	Institutes of Medicine or Physiology—Prof. Rutherford.
Anatomical Demonstrations—Prof. Turner.	Materia Medica—Prof. Sir Robert Christison, Bart.
Botany—Prof. Balfour.	Midwifery and Diseases of Women and Children—Prof. Simpson.
Chemistry—Prof. Crum Brown.	Natural History — Prof. Wyville Thomson.
Clinical Medicine—Profs. Laycock, Maclagan, and Sanders. (Prof. Simpson on Diseases of Women.)	Practice of Physic—Prof. Laycock.
Clinical Surgery—Prof. Lister.	Surgery—Prof. Spence.
General Pathology—Prof. Sanders.	

WINTER AND SUMMER SESSION.

Practical Anatomy—Prof. Turner.	and Experimental Physiology—Prof. Rutherford.
Anatomical Demonstrations—Prof. Turner.	Operative Surgery—Prof. Spence.
Practical Chemistry—Prof. Crum Brown.	Bandaging and Surgical Appliances—Prof. Spence.
Practical Physiology, including Histology, Chemical Physiology,	Obstetric Operations—Prof. Simpson.

SUMMER SESSION.

Practical Instruction in Mental Diseases at an Asylum—Prof. Laycock.	Practical Botany—Prof. Balfour.
Practical Natural History—Prof. Wyville Thomson.	Practical Pathology and Morbid Anatomy—Prof. Sanders.
	Vegetable Histology—Prof. Balfour.

During the summer session lectures will be given on the following subjects:—

Anatomical Demonstrations—Prof. Turner.	Clinical Surgery—Prof. Lister.
Botany—Prof. Balfour.	Medical Jurisprudence—Prof. Maclagan.
Chemistry—Prof. Crum Brown.	Natural History — Prof. Wyville Thomson.
Clinical Medicine—Profs. Laycock, Maclagan, Sanders, and Simpson (Diseases of Women).	Natural Philosophy—Prof. Tait.
Medical Psychology and Mental Diseases—Prof. Laycock.	Obstetrical and Gynæcological Operations—Prof. Simpson.

Information relative to matriculation and the curricula of study for degrees, examinations, etc., will be found in the University Calendar, and may be obtained on application to the Secretary at the College.

A table of fees is given on opposite page.

During the summer session the following means are afforded for practical instruction:—

The *Dissecting Rooms* are open daily, under the superintendence of the Professor, assisted by J. A. Russell, M.A., M.B., C.M., and D. J. Cunningham, M.B., C.M.

The *Royal Edinburgh Asylum* is open to members of the class of Medical Psychology exclusively for practical instruction in Mental Diseases by Professor Laycock, and the Physician-Superintendent, Dr. Coulston.

Chemical Laboratories.—The Laboratory for instruction in Analytical Chemistry and for chemical investigation, under the superintendence of the Professor, assisted by E. A. Letts, Ph.D., is open from ten to four. The Laboratory for instruction in Practical Chemistry, under the superintendence of the Professor, assisted by A. P. Aitken, M.A., D.Sc.

The *Physiological Laboratory* is open daily for physiological investigation, under the superintendence of the Professor, assisted by William Stirling, M.B., C.M., D.Sc.

The *Physical Laboratory* is open daily from ten to three, under the superintendence of Professor Tait.

The *Medical Jurisprudence Laboratory* is also open daily from ten to three, under the superintendence of the Professor, assisted by J. O. Affleck, M.D.

The practice of Obstetrical and Gynæcological Operations is carried out in the Obstetrical Museum, under the superintendence of the Professor, assisted by J. Halliday Croom, M.B.

The *Natural History Laboratory* is open daily, under the superintendence of Professor Huxley, assisted by Isaac Bayley Balfour, D.Sc.

The *Natural History Museum* in the Museum of Science and Art, Chambers-street, is accessible to the students attending the Natural History class.

The *Royal Botanic Garden*, *Herbarium*, and *Museum* are open daily.

MEDICAL FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES.

Fellowships.—The Falconer Memorial Fellowship, value £100, tenable for two years. It is for the encouragement of the study of Palæontology and Geology, and is open to graduates in Science or Medicine of the University of not more than three years' standing. The next appointment may be made in October, 1876.

The Syme Surgical Fellowship, value about £100, tenable for two years, open to competition among Bachelors of Medicine of not more than three years' standing, who shall present the best thesis on a surgical subject, giving evidence of original research.

Scholarships.—The Sibbald Scholarship, value about £40, tenable for four years.

Bursaries.—The Abercromby Bursary of £20, tenable for four years, is open to students who have been brought up in Heriot's Hospital during their medical curriculum. The Sibbald Bursaries are open to the sons of duly registered medical men practising, or who may have practised in Scotland, and to the sons of parents who are, or who may have been householders in Edinburgh. They are of the value of £30 each, tenable for four years, and available for the Faculty either of Arts, Law, Medicine, or Divinity. One will be filled up in session 1875-76. One Grierson Bursary of £25 a year, tenable for three years, to be competed for by students who have reached the end of their first winter session, and have passed the medical preliminary examination in French and German—subjects of examination to be Chemistry, Botany, and Natural History. One Tyndall-Bruce Bursary of £25, tenable for one year, to be competed for by students who have reached the end of their third winter session—subjects of examination to be Materia Medica and Pathology. The above three bursaries are to be awarded in November, 1875-76. Competitors for the above bursaries must have studied the subjects of examination at the University of Edinburgh; and these are not to be held along with any other bursary or fellowship.

PRIZES.

The Ettles Medical Prize is awarded annually to the graduate in Medicine whom the Medical Faculty may consider the most distinguished of the year. Value about £40.

The Hope Chemistry Prize, open to all students of the University of not more than twenty-five years of age, who have worked for eight months, or for two summer sessions, in the Chemical Laboratory of the University. Value £100.

A Hope Scholarship, value £30, will be awarded in March, 1876; particulars as to which may be obtained on application to the Professor of Chemistry.

The Neil Arnott Prize, of about £40, is awarded to the candidate who shall pass with the greatest distinction the ordinary examination in Natural Philosophy for the degree of M.A. Candidates must have been medical students of this University during either a summer or a winter session, and the successful candidate must continue a medical student of this University during the winter session. No student can appear for examination after the completion of his third *annus medicus*; no candidate shall be allowed to offer himself more than once.

The Ellis Prize for the best essay "On the Respiration of Plants as distinguished from their Nutrition," is open to students or graduates of five years' standing. Value, proceeds of sum of £500 accumulated for three years. Essays to be given in by November 2, 1875.

The Goodsir Memorial Prize is shortly to be founded in

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commemoration of the late Professor Goodsir, and further information concerning it will be found in the Calendar.

The Medical Faculty Prizes.—Gold medals are given on the day of graduation to Doctors of Medicine whose theses are deemed worthy of that honour.

LECTURESHIP.

The Swiney Lectureship on Geology, value £144, tenable for five years, is open to Doctors of Medicine of the University of Edinburgh. It is in the patronage of the trustees of the British Museum.

MINIMUM COST OF ATTENDING THE MEDICAL CLASSES, WITH THE ORDER OF STUDY.

Whilst there is no authorised order of study, the usual course is given below—Preliminary Examination in Arts to be taken in the month of March or October, before entering medical classes. By order of the General Medical Council, all medical students require to be registered as such within fifteen days after the commencement of the session. Students are recommended to commence their medical studies by attending the summer session.

First Summer Session.—Preliminary examination fee, 10s.; matriculation fee, 10s.; Botany (garden fee, 5s.), £4 4s.; Natural History, £4 4s.; total, £9 8s.

First Winter Session.—Matriculation (for whole year), £1; Anatomy, £4 4s.; Practical Anatomy, £3 3s.; Chemistry, £4 4s.; hospital, £5 5s. (perpetual ticket, £10); total, £17 16s.

Second Summer Session.—Botany or Natural History if not attended previously; Practical Chemistry, £3 3s.; examination in Botany, Natural History, and Chemistry, in October following,(a) £5 5s.; total, £8 8s.

Second Winter Session.—Matriculation, £1; Institutes of Medicine, £4 4s.; Surgery, £4 4s.; hospital, £5 5s.; examination in Botany, Natural History, and Chemistry, in April, if not previously passed; total, £14 13s.

Third Summer Session.—Practical Pharmacy, £2 2s.; dispensary, £2 2s.; hospital; total, £4 4s.

Third Winter Session.—Matriculation, £1; Materia Medica, £4 4s.; Pathology, £4 4s.; Clinical Surgery, £4 4s.; dispensary, £1 1s.; hospital; examination in Anatomy, Physiology, Materia Medica, Pathology, in April or July, £5 5s.; total £19 18s.

Fourth Summer Session.—Medical Jurisprudence, £4 4s.; hospital and clinical lectures; total, £4 4s.

Fourth Winter Session.—Matriculation, £1; Practice of Medicine, £4 4s.; Midwifery, £4 4s.; Practical Midwifery, £1 4s.; Clinical Medicine, £4 4s.; Vaccination, £1 1s.; hospital; total, £15 17s.

Fifth Summer Session.—Hospital; final examination for M.B. and C.M., £10 10s.; total minimum expenses for M.B. and C.M., £104 18s.

Only one course of instruction on each subject is here stated, that being the minimum.

Fees for Degrees.—Examination in Botany, Chemistry, chemical testing, and Natural History, £5 5s.; examination in Anatomy, Institutes of Medicine, Materia Medica, Pathology, £5 5s.; final examination in Surgery, Midwifery, Practice of Physic, Clinical Medicine, Clinical Surgery, Medical Jurisprudence, and prescriptions, during last summer session, £5 5s.; total fees for M.B. diploma, £15 15s. Additional fee for C.M. diploma, £5 5s.; additional fee for M.D. diploma, £5 5s.; Government stamp-duty (for M.D. only), £10.

Note.—Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25.

N.B.—The above fees include all charges for the diplomas.

ROYAL INFIRMARY, EDINBURGH.

In this hospital a portion of the beds is set apart for clinical instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary Physicians and Surgeons. Special instruction is given in the Medical Department on Diseases of Women, Physical Diagnosis, etc., and in the Surgical Department on Diseases of the Eye. Separate wards are devoted to fever, venereal diseases, diseases of women, diseases of the eye; also to cases of incidental delirium or insanity. Post-mortem examinations are conducted in the Anatomical Theatre by the Pathologist, who also gives practical instruction in Pathological Anatomy and Histology.

MEDICAL DEPARTMENT.

Professors of Clinical Medicine—Dr. Laycock, Dr. Maclagan, Dr. Sanders.
Extra Physicians and Lecturers on the Diseases Peculiar to Women—Dr. J. Matthews Duncan, Dr. Alex. R. Simpson.
Ordinary Physicians and Lecturers on Clinical Medicine—Dr. Rutherford Haldane, Dr. George W. Balfour, Dr. T. Grainger Stewart.
Assistant-Physicians—Dr. Claud Muirhead, Dr. David J. Brakenridge.

SURGICAL DEPARTMENT.

Consulting Surgeons—Dr. Dunsmure, Dr. J. D. Gillespie.
Professor of Surgery—Mr. Spence.
Ordinary Acting Surgeons—Dr. P. H. Watson, Mr. Thos. Annandale (Lecturers on Clinical Surgery); Dr. Joseph Bell.
Professor of Clinical Surgery—Mr. Lister.
Ophthalmic Surgeons—Mr. Walker, Dr. D. A. Robertson.
Extra Surgeon for Treatment of Ovarian Diseases—Dr. Thomas Keith.
Assistant-Surgeons—Dr. John Duncan, Dr. John Chiene.
Dental Surgeon—Dr. John Smith.
Pathologist—Dr. James B. Pettigrew.

HOSPITAL TICKETS.

Perpetual, in one payment, £10; annual, £5 5s.; half-yearly, £3 3s.; quarterly, £1 11s. 6d. Separate payments for two years entitle the student to a perpetual ticket.

(a) For those who have certificates for two summer sessions and one winter session, and who have attended two courses during each of these three sessions.

THE EXTRA-ACADEMICAL SCHOOL OF MEDICINE, EDINBURGH.

The Practical Anatomy Rooms and Chemical Laboratories open on October 4. The inaugural address will be delivered by Mr. Chiene, on Monday, November 1, at eleven o'clock. Lectures commence on Tuesday, November 2.

WINTER SESSION.

Anatomy: Practical Anatomy, Lectures, Anatomical Demonstrations—Dr. P. D. Handyside.
Chemistry: Lectures, Practical Chemistry, Analytical Chemistry—Dr. Stevenson Macadam and Mr. J. Falconer King.
Clinical Medicine (Royal Infirmary)—Drs. Rutherford Haldane, Geo. W. Balfour, & Grainger Stewart. Dr. Matthews Duncan (for the Diseases of Women).
Clinical Surgery (Royal Infirmary)—Dr. P. H. Watson and Mr. Annandale.
Materia Medica and Therapeutics—Dr. Francis W. Moinet.
Medical Jurisprudence and Public Health—Dr. Littlejohn.
General Pathology and Pathological Anatomy—Dr. John Wyllie and Dr J. G. Sinclair Coghill.
Midwifery and Diseases of Women and Children—Dr. Matthews Duncan.
Physiology—Dr. Bell Pettigrew.
Practical Physiology—Dr. M'Kendrick.
Practice of Physic—Dr. Rutherford Haldane, Dr. Claud Muirhead, and Dr. Grainger Stewart.
State Medicine and Hygiene—Dr. Andrew Smart.
Surgery—Dr. P. H. Watson, Mr. Joseph Bell, Mr. Chiene, Dr. John Duncan.
Vaccination (Royal Dispensary)—Dr. Husband.

SUMMER SESSION.

Anatomy: Practical Anatomy, Anatomical Demonstrations—Dr. P. D. Handyside.
Chemistry: Practical Chemistry, Analytical Chemistry—Dr. Stevenson Macadam and Mr. J. Falconer King.
Clinical Medicine (Royal Infirmary)—Drs. Rutherford Haldane, Geo. W. Balfour, & Grainger Stewart. Dr. Matthews Duncan (for Diseases of Women).
Clinical Surgery (Royal Infirmary) Dr. P. H. Watson and Mr. Annandale.
Diseases of the Eye—Dr. Argyll Robertson.
Diseases of Children—Dr. Stephenson.
Insanity—Dr. J. Batty Tuke.
Materia Medica and Therapeutics—Dr. Francis W. Moinet and Dr. William Craig.
Medical Jurisprudence and Public Health—Dr. Littlejohn.
Midwifery and Diseases of Women and Children—Dr. Keiller, Dr. Angus Macdonald, and Dr. Underhill.
Practical Physiology—Dr. Bell Pettigrew and Dr. M'Kendrick.
Practical Surgery—Dr. John Duncan.
State Medicine and Hygiene—Dr. Andrew Smart.
Surgical Anatomy and Operative Surgery—Mr. Chiene.
Surgical Appliances and Operative Surgery—Mr. Joseph Bell.
Vaccination—Dr. Husband.

The lectures qualify for the University of Edinburgh and the other Universities; the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, and the other medical and public Boards.

FEES.

For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4s. Second course of Midwifery, £1 3s. Practical Anatomy (six months' course), £3 3s. Anatomical Demonstrations, £2 2s.; with Practical Anatomy, £1 1s.; perpetual, £4 4s. Practical Chemistry, £3 3s.; Analytical Chemistry, £2 a month, £5 for three months, or £10 for the session of six months. Vaccination, £1 1s. State Medicine and Hygiene, £2 2s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy (including Anatomical Demonstrations, Operative Surgery, Diseases of the Eye), Insanity, and State Medicine and Hygiene, each £2 2s.

The minimum cost of the education in this School of Medicine for the double qualification of Physician and Surgeon from the Royal College of Physicians and Surgeons, including the fees for the joint examination, is £90 4s., which is payable by yearly instalments during the period of study; whilst the minimum cost for the single qualification of either Physician or Surgeon, including the fee for examination, is £80.

UNIVERSITY OF GLASGOW.—FACULTY OF MEDICINE.

LECTURES AND CLASSES.—WINTER SESSION.

Anatomy, Junior; Anatomy, Senior; Practical Anatomy—Dr. A. Thomson and Demonstrators.
Chemistry, Chemical Laboratory—Mr. Ferguson.
Clinical Medicine—Dr. McCall Anderson and Dr. Gairdner.
Clinical Surgery—Dr. Buchanan and Dr. Macleod.
Forensic Medicine—Dr. P. A. Simpson.
Institutes of Medicine—Dr. A. Buchanan.
Materia Medica—Dr. Cowan.
Midwifery—Dr. Leishman.
Pathology—Dr. J. Coats.
Practice of Physic—Dr. Gairdner.
Surgery—Dr. Macleod.

SUMMER SESSION.

Botany, Botanical Demonstrations—Dr. A. Dickson.
Clinical Medicine—Dr. McCall Anderson and Dr. Gairdner.
Clinical Surgery—Dr. Buchanan and Dr. Macleod.
Embryology and Demonstrations on Anatomy, Elementary Anatomy, Practical Anatomy—Dr. A. Thomson and Demonstrators.
Diseases of Heart—Dr. Gairdner.
Lectures on the Eye—Dr. T. Reid.
Operative Surgery—Dr. Macleod.
Practical Chemistry, Chemical Laboratory—Mr. Ferguson.
Practical Pharmacy—Dr. Tennent.
Practical Physiology—Dr. A. Buchanan, Mr. W. J. Fleming.
Zoology—Dr. Young.

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CLASS FEES.

Fee for each course, £3 3s.; except lectures on the Eye, for which the fee is £1 1s.

In addition to the University courses, the following hospitals and dispensaries afford ample means for practical instruction in the various departments of Medicine and Surgery:—

WESTERN INFIRMARY.

This Hospital contains beds for medical and surgical patients, with a ward for skin diseases.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. W. T. Gairdner.	Dr. George H. B. Macleod.
Dr. T. McCall Anderson.	Dr. George Buchanan.
Dr. James Finlayson.	Dr. Alexander Patterson.

Dispensary Physicians to the Out-Patients—Dr. Gavin P. Tennent, Dr. Joseph Coats, and Mr. D. C. M'Vail.
Dispensary Surgeons to the Out-Patients—Dr. James G. Lyon, Mr. Wm. James Fleming, and Mr. D. N. Knox.
Pathologist—Dr. Joseph Coats.
Medical Superintendent—Mr. J. H. Lilly.
Lady Superintendent—Miss E. Clyde.

The hour of visit is 9 a.m.

FEES.

The fees for admission to the practice of this Infirmary are—First year, three guineas; second year, three guineas; third year, one guinea. The fees for clinical lectures are the same as for the other courses in the University.

GLASGOW ROYAL INFIRMARY.

The winter session commences on November 1, 1875. Hour of visit and of lectures 9 a.m. Beds, 580.

MEDICAL AND SURGICAL STAFF.

Physicians.	*Surgeons.*
Dr. Scott Orr.	Dr. Watson.
Dr. Perry.	Dr. Dewar.
Dr. McLaren.	Dr. Dunlop.
Dr. Wood.	Dr. Cameron.
Dr. Smith.	Dr. Morton.
Dr. Charteris.	

Pathologist.—Dr. D. Foulis.

FEES.

Fees admitting to the medical and surgical practice of the hospital and dispensary:—For the first year, £3 3s.; second year, £3 3s.; third and perpetual, £1 1s.; for six months' attendance, £2 2s.; three months', £1 11s. 6d.; practical Pharmacy, six months, £3 3s.

Fees for clinical lectures on Medicine, £3 3s.; on Surgery, £3 3s.

ANDERSON'S UNIVERSITY.

LECTURES AND CLASSES.

Anatomy—Dr. Buchanan.	Midwifery (in Summer)—Dr. J. G. Wilson.
Chemistry—Dr. Thorpe.	Ophthalmic Medicine and Surgery—Dr. Wolfe.
Institutes of Medicine or Physiology—Dr. Eben. Watson.	Practice of Medicine—Dr. Wood Smith.
Materia Medica—Dr. Morton.	Surgery—Dr. Dunlop.
Medical Jurisprudence (in Summer)—Dr. Alex. Lindsay.	

FEES.

Fee for each class, £2 2s.; second session, £1 1s. The fees for all lectures and hospital practice required for a diploma do not exceed £50.

Hospital practice and clinical lectures in the Royal Infirmary, containing 600 beds.

Students may also attend the Maternity Hospital (Physicians-Accoucheur—Drs. J. G. Wilson and Tannahill), Eye Infirmary, Ophthalmic Institution, Dispensary for Skin Diseases, etc.

A syllabus, with full information, may be obtained by applying to Mr. Arthur Forbes, solicitor, 146, Buchanan-street, Glasgow, Clerk to the Medical School.

UNIVERSITY OF ABERDEEN.—FACULTY OF MEDICINE.

LECTURES.—WINTER SESSION.

Anatomy—Professor Struthers.	Practical Anatomy and Demonstrations—Professor Struthers and Demonstrator.
Chemistry—Professor Brazier.	Practice of Medicine—Professor Smith-Shand.
Institutes of Medicine—Professor Ogilvie.	Surgery—Professor Pirrie.
Medical Logic and Medical Jurisprudence—Professor Ogston.	Zoology with Comparative Anatomy—Professor Nicol.
Midwifery and Diseases of Women and Children—Professor Stephenson.	

SUMMER SESSION.

Botany—Professor Dickie.	tions—Professor Struthers and Demonstrator.
Materia Medica—Professor Harvey.	Practical Chemistry—Professor Brazier.
Practical Pharmacy—Professor Harvey and Assistant.	Zoology with Comparative Anatomy—Professor Nicol.
Practical Anatomy and Demonstra-	

The Anatomical Course in summer includes instruction in Histology and in the use of the microscope; and instruction in Osteology for beginners.

FEES.

Matriculation fee (including all dues) for the winter and summer session, £1; for the summer session alone, 10s.

Pathological Anatomy, Dr. Rodger, £2 2s. Practical Ophthalmology (in summer), Dr. A. D. Davidson. Dental Surgery (in summer), Mr. Williamson.

The regulations relative to the registration of students of Medicine, and the granting of degrees in Medicine and Surgery, may be had of Professor Brazier, Secretary of the Faculty of Medicine.

Full information regarding the classes and degrees in the Faculties of Arts, Law, and Divinity, and in regard to Bursaries and Scholarships, will be found in the University Calendar, published by Messrs. Wyllie and Son, Union-street, Aberdeen, by post 2s. 2d.

ABERDEEN ROYAL INFIRMARY.

The Infirmary contains about 300 beds.

MEDICAL AND SURGICAL STAFF.

Consulting Physician—Dr. A. Harvey.
Consulting Surgeon—Mr. David Fiddes.

Physicians.	*Surgeons.*
Dr. J. W. F. Smith-Shand.	Mr. W. Pirrie.
Dr. R. Beveridge.	Mr. D. Kerr.
Dr. Angus Fraser.	Mr. A. Ogston.
	Mr. J. O. Will.
Resident Assistant-Physician.	*Resident Assistant-Surgeon.*
Mr. James Simpson.	Mr. James Smith.

Ophthalmic Surgeon—Dr. Alex. D. Davidson.
Dental Surgeon—Mr. Williamson.
Pathologist—Dr. James Rodger.
Resident Superintendent and Apothecary—Dr. R. Rattray.
Pathologist and Curator of Museum—Dr. J. Rodger.
Treasurer and Secretary—Mr. W. Carnie.

UNIVERSITY OF ST. ANDREWS.

There is no proper Faculty of Medicine in this University, but it is possible for the student to make an *annus medicus* by attendance on certain of the courses—as Botany, Professor Nicholson; and Anatomy and Medicine, now vacant.

SCHOOLS AND HOSPITALS IN IRELAND.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC.

The School of Physic is under the conjoint superintendence of the University authorities and those of the King and Queen's College of Physicians.

LECTURES AND CLASSES.

Anatomy and Surgery—Dr. Benjamin G. M'Dowel.	Midwifery—Dr. Edward B. Sinclair.
Botany—Dr. E. Perceval Wright.	Natural Philosophy—Rev. J. Leslie.
Chemistry—Dr. G. Emerson Reynolds.	Operative Surgery—Dr. Richard G. Butcher.
Comparative Anatomy and Zoology—Mr. Alexander Macalister.	Ophthalmic Surgery—Mr. Henry Wilson.
Institutes of Medicine—Dr. J. M. Purser.	Physic—Dr. William Stokes.
Materia Medica and Pharmacy—Dr. Aquilla Smith.	Practice of Medicine—Dr. W. Moore.
Medical Jurisprudence—Dr. Robert Travers.	Surgery—Dr. William Colles (Trin. Coll., Dr. Edward H. Bennett).
	University Anatomist—Dr. Thomas E. Little.

Winter Session, 1874-75.—The winter session commences on October 1. Lectures will commence on November 1. The dissecting-room will be opened on October 1.

SCHOLARSHIPS AND EXHIBITIONS.

Medical Scholarships.—Two medical scholars are elected annually, by the Board of Trinity College, at an examination held at the end of June—subject to conditions stated in the College Calendar. Each scholarship is worth £20 per annum, and is tenable for two years.

Medical Exhibitions.—The Professors of the School of Physic give three exhibitions annually, amounting altogether in value to £40—subject to conditions prescribed by the Professors themselves.

SIR PATRICK DUN'S HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Consulting Physician.—Dr. William Stokes.
Consulting Surgeon.—Dr. W. Colles.

Clinical Physicians.	*Clinical Surgeons.*
Dr. John Malet Purser.	Dr. Benjamin G. M'Dowel.
Dr. William Moore.	Dr. Thomas E. Little.
Dr. Aquilla Smith.	Dr. Edward H. Bennett.
Midwifery Physician.	*Lecturer in Operative Surgery.*
Dr. Edward B. Sinclair.	Dr. Richard G. Butcher.

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FEES.

Clinical Lectures and Hospital Attendance.—The payment of three guineas to the Hospital entitles any student to attend the Clinic of the Hospital for twelve months, and to attend the lectures delivered by Dr. R. G. Butcher, University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College, are entitled to attend the Hospital as perpetual free pupils. In addition to the Hospital fee, the payment of a fee of six guineas is required for the privilege of attending the clinical lectures. Total fees for hospital and lectures for twelve months, nine guineas.

Practical Midwifery.—Students desirous of entering for six months' instruction in Practical Midwifery are required to pay a maternity fee of three guineas each. Students of Trinity College are not liable to any other payment for instruction in Practical Midwifery. Other students are required to pay three guineas each to the King's Professor for six months' practical instruction, in addition to the hospital maternity fee. Students who have paid the hospital maternity fee are entitled to attend the demonstrations in Obstetric Surgery given by the King's Professor. Total fees for College Students, three guineas; total fees for Externs, six guineas.

PRIZES.

Clinical Medals.—The Governors of the Hospital award a Silver Clinical Medal in Medicine to the student who shall pass the best examination on the medical cases treated in the Hospital during the year; and a Silver Clinical Medal in Surgery to the student who shall pass the best examination on the surgical cases treated in the Hospital during the year.

QUEEN'S COLLEGE, BELFAST.

The lectures will commence on Tuesday, November 2.

Anatomy and Physiology—Dr. P. Redfern.
Chemistry—Dr. Thomas Andrews.
Materia Medica—Dr. J. S. Reid.
Medical Jurisprudence—Dr. J. F. Hodges.
Midwifery—Dr. R. F. Dill.
Natural Philosophy—Dr. Everett.
Practice of Medicine—Dr. James Cuming.
Practice of Surgery—Dr. A. Gordon.
Zoology and Botany—Dr. R. O. Cunningham.

The demonstrations in Anatomy are delivered by Dr. Charles. The lectures in Midwifery and in Medical Jurisprudence, and the courses of Botany and Practical Chemistry, and a second course of Experimental Physics, will commence in May.

FEES.

Anatomy and Physiology—First course, £3; each subsequent course, £2. Anatomical Demonstrations and Practical Anatomy—each course, £3. Practical Chemistry, £3. Other medical lectures—first course, £2; each subsequent course £1.

SCHOLARSHIPS.

Two medical scholarships are awarded to the students of each year of the medical course. The examinations commence on October 19.

BELFAST GENERAL HOSPITAL.

FEES.

Clinical Instruction—Perpetual fee, payable in one sum of £10 10s., or two instalments of £5 5s. each on entering for the first and second years. Hospital fee, 10s. 6d. each session.

BELFAST LYING-IN HOSPITAL.

Fee for the session, £3 3s.

QUEEN'S COLLEGE, GALWAY.—FACULTY OF MEDICINE.

LECTURERS.

Anatomy and Physiology, and Practical Anatomy—Dr. Cleland.
Botany and Zoology—Dr. A. G. Melville.
Chemistry—Dr. T. H. Rowney.
Logic and Mental Philosophy—Dr. T. W. Moffett.
Materia Medica—Dr. J. P. Pye.
Medical Jurisprudence—Dr. J. P. Pye.
Midwifery and Diseases of Women and Children—Dr. R. Doherty.
Natural Philosophy—Dr. A. H. Curtis.
Practice of Medicine—Dr. N. Colahan.
Practice of Surgery—Dr. J. V. Brown.

The County Galway Infirmary, Town, and Fever Hospitals are in the immediate vicinity of the Queen's College.

SCHOLARSHIPS AND EXHIBITIONS.

Eight scholarships of the value of £25 each, and exhibitions varying in value from £12 to £16, are appropriated to students pursuing the course for the degree of M.D.

FEES.

Anatomy and Physiology, £3 first session; afterwards £2. Practical Anatomy, £3; Practical Chemistry, £3; Operative Surgery £3; other classes, £1 for each course extending over one term only, £2 for each course extending over more than one term, and £1 for each re-attendance on the same.

For further information, application may be made to Professor Moffett, Registrar.

QUEEN'S COLLEGE, CORK.—FACULTY OF MEDICINE.

LECTURERS.

Anatomy and Physiology—Dr. J. H. Corbett.
Chemistry and Practical Chemistry—Dr. Maxwell Simpson.
Materia Medica—Dr. P. O'Leary.
Midwifery—Dr. J. R. Harvey.
Natural Philosophy—Mr. John England.
Practical Anatomy by the Professor, assisted by Demonstrators.
Practice of Medicine—Dr. D. C. O'Connor.
Practice of Surgery—Dr. W. K. Tanner.
Zoology and Botany—Dr. Joseph R. Green.

SCHOLARSHIPS.

Eight scholarships are awarded to students in Medicine, if qualified. Two junior scholarships of £25 each to students commencing their first, second, third, and fourth years. Clinical Medicine and Surgery at the North and South Infirmaries, and Clinical Midwifery at the Lying-in Hospital.

THE ADELAIDE HOSPITAL, PETER-STREET, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Henry H. Head.
Dr. James Little.

Obstetric Physician.
Dr. Lombe Atthill.

Assistant-Physician.
Dr. Walter G. Smith.

Surgeons.
Dr. Albert J. Walsh.
Dr. John K. Barton.
Mr. Benjamin Wills Richardson.

Ophthalmic Surgeon.
Mr. H. Rosborough Swanzy.

Assistant-Surgeon.
Mr. Montgomery A. Ward.

Further particulars can be obtained from Mr. Richardson, 22, Ely-place, or any other member of the medical staff.

ST. VINCENT'S HOSPITAL, DUBLIN.

HOSPITAL STAFF.

Physicians.
Dr. Francis J. B. Quinlan.
Dr. Robert Cryan.

Surgeons.
Dr. Edward D. Mapother.
Mr. William H. O'Leary, M.P.

Surgeon-Dentist—Mr. William J. Doherty.
Apothecary—Mr. C. T. Boland.

FEES.

Winter and summer session, £8 8s.; separately, £6 6s. and £3 3s. Perpetual pupils, £21.

Further particulars may be learned on application to the Secretary, or at the Hospital during the hours of attendance.

DR. STEEVENS' HOSPITAL AND MEDICAL COLLEGE, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Visiting Physician—Dr. W. M. Burke.
Visiting Surgeons—Mr. S. G. Wilmot and Mr. C. Fleming.

Physicians.
Dr. H. Freke.
Dr. T. W. Grimshaw.

Physician-Accoucheur.
Dr. James Isdell.

Surgeons.
Dr. E. Hamilton.
Dr. R. M'Donnell.

Resident Surgeon.
Mr. F. W. Warren.

Surgeon-Dentist—Dr. J. A. Baker.

LECTURERS.

Anatomy—Mr. R. L. Swan; Mr. F. W. Warren, Dr. R. Bookey, and Mr. A. Collee, Demonstrators.
Anatomy and Physiology—Dr. E. Hamilton.
Botany—Dr. C. A. Bell.
Materia Medica—Dr. T. W. Grimshaw.
Medical Jurisprudence—Dr. J. F. Pollock.
Medicine—Dr. H. Freke.
Midwifery—Dr. James Isdell.

Curator of the Museum—Dr. Henry J. Tweedy.
Pathological Analyst—Dr. C. A. Bell.

FEES.

Hospital Practice, nine months, £9 9s.; ditto, six months, £7 7s. Practical Anatomy, £5 5s. Lectures, each course, £3 3s.

Perpetual Pupils.—A perpetual fee of 78 guineas, which may be paid in two instalments, entitles the student to attend all the lectures and hospital practice required by the Colleges of Surgeons, Halls, and the Public Service.

Further particulars may be learned from any of the Professors; from the Resident Surgeon at the Hospital; or from Dr. Edward Hamilton, Hon. Sec., 120, Stephen's-green West.

JERVIS-STREET HOSPITAL.

MEDICAL AND SURGICAL STAFF.

Physicians.
Dr. Stephen M. MacSwiney.
Dr. William Martin.

Surgeons.
Dr. M. Harry Stapleton.
Dr. J. Stannus Hughes.
Dr. J. K. Forrest.
Dr. Anthony H. Corley.
Dr. Austin Meldon.
Mr. James Edward Kelly
Dr. Francis B. Kane.

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MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. William Stokes. | Dr. Arthur Wynne Foot.

Surgeons.

Dr. George H. Porter. | Mr. Rawdon Macnamara.
Dr. James H. Wharton. | Mr. R. Persé White.
Mr. Philip Crampton Smyly. | Mr. Lambert H. Ormsby.

The Hospital contains 120 beds.

CATHOLIC UNIVERSITY SCHOOL OF MEDICINE, CECILIA-STREET, DUBLIN.

LECTURES AND CLASSES.

Anatomy and Physiology — Dr. Hayden and Dr. Cryan.
Anatomical Demonstrations — The Professors of Anatomy and Physiology.
Botany—Dr. Sigerson.
Chemistry—Dr. Campbell.
Dissections—Dr. Hayes, Dr. Nixon, Dr. Ward, Dr. Coppinger, and Dr. Kilgarriff.
Medical Jurisprudence—Dr. MacSwiney.
Materia Medica—Dr. Quinlan.
Natural Physiology—The Rev. Dr. Molloy.
Pathology—Dr. Lyons.
Practical Chemistry—Dr. Campbell.
Theory and Practice of Medicine—Dr. Lyons.
Theory and Practice of Midwifery—Dr. Byrne.
Theory and Practice of Surgery—Mr. Tyrrell.

PRIZES AND EXHIBITIONS.

At the termination of the winter session, public examinations will be held, when, in addition to prizes in each class, the Conolly Exhibition of the Catholic University, value £20, and the University Exhibition, value £20, will be awarded for the subjects mentioned in the school prospectuses.

At the termination of the summer session, the University Gold Medal, value £7, will be awarded, in additional to the usual prizes in each class.

FEES.

Three guineas for each course. A reduction of one-sixth is made to perpetual pupils paying the entire of their fees in advance, or in two instalments at the commencement of the first and second years of their course. Parents and guardians are recommended to forward all fees directly, by cheque or order, to the Registrar, Dr. Hayes, 29, Westland-row, or at the School.

Further particulars may be learned from any of the Professors; from the Medical Registrar, Dr. Hayes, 29, Westland-row; or on application at the School.

CITY OF DUBLIN HOSPITAL, UPPER BAGGOT-STREET.

MEDICAL AND SURGICAL STAFF.

Consulting Physicians—Professor Apjohn, Dr. Charles Benson.
Consulting Surgeon—Dr. William Hargrave.
Consulting Ophthalmic Surgeon—Dr. Arthur Jacob.

Physicians.

Dr. Hawtrey Benson.
Dr. J. Magee Finny.

Surgeons.

Mr. Jolliffe T. Tufnell.
Mr. Henry Gray Croly.
Mr. William I. Wheeler.

Ophthalmic and Aural Surgeon—Mr. Loftie Stoney.

PRIZES, ETC.

The "Purser Studentship," of £20 per annum (with apartments), founded by William A. Purser, L.R.C.S.I., a former pupil of the Hospital, is open to all students through the medium of competitive examination, for which a special certificate is given, if merited, and numerous medals and prizes are awarded in Medicine, Surgery, and Ophthalmology.

The Drummond wing, for fever and other contagious diseases, affords full opportunity for studying these branches of Medicine.

Instruction in practical Pharmacy is given in the Compounding Department.

FEES.

Fee for total hospital attendance, twenty guineas; nine months, eight guineas; six months, six guineas; summer three months, three guineas.

For further particulars, apply to Dr. Wheeler, Hon. Sec., 56, Pembroke-road, between three and four o'clock, or at the Hospital between ten and eleven o'clock a.m.

MERCERS' HOSPITAL, WILLIAM-STREET, DUBLIN.

STAFF.

Physician—Dr. T. P. Mason.

Surgeons—Mr. E. Ledwich, Dr. E. S. O'Grady, Mr. John Morgan, and Dr. B. F. M'Dowell.

FEES.

Six months, £6 6s.; nine months, £8 8s.; perpetual pupils, £21.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—SCHOOL OF SURGERY.

LECTURES AND CLASSES.

Anatomy and Physiology — Dr. Mapother.
Botany—Dr. Minchin.
Chemistry—Dr. Charles A. Cameron.
Descriptive Anatomy—Dr. Bevan and Mr. Morgan.
Hygiene—Dr. Cameron.
Materia Medica—Dr. Macnamara.
Medical Jurisprudence—Dr. Davy.
Midwifery—Dr. John Cronyn.
Ophthalmic and Aural Surgery—Mr. Henry Wilson.
Practical Chemistry—Dr. Charles A. Cameron.
Practice of Medicine—Dr. Little.
Surgery—Dr. Stokes and Dr. J. S. Hughes.

Dissections (under the direction of the Professors of Anatomy and the Demonstrators), Drs. Stoney, W. T. Stoker, Ormsby, Wheeler, A. Barker, W. Stoker, Peele, Franks, and Roe, commence on October 1.

FEES.

The fee for each of the above courses is £3 3s., except Comparative Anatomy and Hygiene, which are free.

For further information, application to be made to the Registrar, John Brennen, Esq., at the College.

MATER MISERICORDIÆ HOSPITAL, ECCLES-STREET, DUBLIN.

MEDICAL AND SURGICAL STAFF.

Physicians.

Dr. John Hughes.
Dr. Thomas Hayden.
Dr. Christopher J. Nixon.

Assistant-Physician.

Dr. Valentine Brown.

Surgeons.

Mr. Francis R. Cruise.
Mr. Henry J. Tyrrell.
Mr. Patrick J. Hayes.

Assistant-Surgeon.

Mr. Charles Coppinger.

This Hospital contains 210 beds, including fifty beds for fever and other contagious diseases.

Certificates of attendance upon this Hospital are recognised by all the licensing bodies in the United Kingdom.

PRIZES.

Two clinical prizes (the "Leonard Prizes") of £15 each, one medical and one surgical, will be given at the end of the winter session, in accordance with the directions contained in the will of the late Mark Leonard, Esq., for the best report of not less than twenty cases for each prize; the cases reported to be those occurring in the Hospital during the winter session.

FEES.

Nine months, £8 8s.; six winter months, £6 6s.; three summer months, £3 3s.

Further particulars may be learned by application to Dr. Nixon, Secretary to the Medical Board, 32, Upper Merrion-street, or to any of the other medical officers.

LEDWICH SCHOOL OF ANATOMY, MEDICINE, AND SURGERY, PETER-STREET, DUBLIN.

COURSES OF LECTURES.

Anatomy, Physiology & Pathology, etc.—Mr. E. Ledwich, Mr. T. P. Mason, and, Mr. J. E. Kelly.
Botany—Dr. Maunsell.
Forensic Medicine and Hygiene—Dr. R. Travers.
Surgical and Descriptive Anatomy, Demonstrations, and Dissections—Mr. Mason, Mr. Ledwich, Mr. Glanville, Mr. Robinson, and Mr. Porter.
Materia Medica and Therapeutics—Dr. M'Dowel.
Midwifery and Diseases of Women and Children—Dr. J. Ringland.
Theory of Chemistry, Practical Chemistry, & Natural Philosophy—Dr. Griffiths.
Theory and Practice of Medicine—Dr. Foot.
Theory and Practice of Surgery—Mr. Wharton and Mr. Barton.

FEES.

The fee for each of the above courses will be £3 3s.

A course of operations to be performed by the students, under the superintendence of the lecturers (subjects, etc., included), £5 5s.

Further information may be obtained from any of the lecturers, or from Mr. Edward Ledwich, Secretary, 7, Harcourt-street, Dublin.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS.

MEDICAL AND SURGICAL STAFF.

Consulting Physician.—Sir D. J. Corrigan, Bart.

Physicians.

Dr. J. T. Banks.
Dr. B. G. M'Dowel.
Dr. S. Gordon.
Dr. R. D. Lyons.

Surgeons.

Mr. J. Hamilton.
Dr. William Stokes.
Dr. William Thomson.
Dr. Wm. Thornley Stoker.

Ophthalmic Surgeon—Dr. Charles E. Fitzgerald.
Resident Surgeon—Dr. Theodore Stack.

Clinical instruction will commence on October 1. These Hospitals contain 312 beds—110 for surgical cases, 82 for medical cases, and 120 for fever and other epidemic diseases. Premiums will be awarded in Clinical Medicine and Surgery.

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The Richmond Institution for the Insane, containing over 1000 patients, adjoins these Hospitals.

FEES.

For the winter and summer session (nine months), £9 9s.; for the six winter months, £7 7s.; for the three summer months, £3 3s.; perpetual pupils, £25, paid on entrance. Resident clinical clerks, £21 for the winter session, £15 15s. for the summer session, including certificate of attendance.

Application to be made to Dr. Gordon, 13, Hume-street, or to Dr. Stokes, 3, Clare-street, Dublin.

EDUCATIONAL VACCINATING STATIONS.

In order to provide for the granting of those special certificates of proficiency in vaccination which are required to be part of the medical qualification for entering into contracts for the performance of public vaccination, or for acting as deputy to a contractor, the following arrangements are made.—

1. The vaccinating stations enumerated in the subjoined list are open under certain specified conditions, for the purposes of teaching and examination.

2. The public vaccinators officiating at the stations are authorised to give the required certificates of proficiency in vaccination to persons whom they have sufficiently instructed therein; and

3. The public vaccinators, whose names in the subjoined list are printed in italic letters, are also authorised to give such certificates, after satisfactory examination, to persons whom they have not themselves instructed.

London.—Principal Station, Surrey Chapel, Blackfriars-road: *Mr. James Furness Marson*, who attends on Tuesday and Thursday, at 1 p.m. North-west Stations—Marylebone Institution, 15, Lower Seymour-street: Mr. William A. Sumner, on Monday, at 10 a.m.; Albion Hall, Grove-place, Lissongrove: Mr. William A. Sumner, on Wednesday, at 10 a.m. West Station, 9, St. George's-road, Pimlico, S.W.: Dr. Edward Lowe Webb, on Thursday, at 10 a.m. East Station, Eastern Dispensary, Leman-street: Mr. Charles T. Blackman, on Wednesday, at 11 a.m. North Station, Tottenham-court Chapel, Tottenham Court-road: Mr. William Edwin Grindley Pearse, on Monday and Wednesday, at 1 p.m. South-west Station, 2 Regent-place, Horseferry-road: Mr. William Edwin Grindley Pearse, on Tuesday, at 2 p.m. Strand Station, Charing-cross Hospital: Mr. Robert William Dunn, on Monday, at 10 a.m.

Birmingham.—St. John's Wesleyan Chapel, Inge-street, Hurst-street, on Monday; the rooms occupied by the Working Men's Mutual Improvement Society, in Barr-street, on Tuesday; St. Mark's School-rooms, St. Mark's-street, on Wednesday; and "The British Workman" Reading Rooms, Sherborne-street, near Grosvenor-street, on Thursday: *Dr. Edmund Robinson*, at 11 o'clock on the days before-mentioned.

Bristol.—The Public Vaccination Station, Peter-street: *Dr. Henry A. P. Robertson*, on Wednesday, at 10 a.m.

Exeter.—Odd Fellows' Hall, Bamfyld-street: *Mr. Charles H. Roper*, on Thursday, at 3 p.m.

Leeds.—Heed-street: *Mr. Frederick Holmes*, on Tuesday, at 2.30 p.m.

Liverpool.—4, Oldham-street: *Mr. Arthur Browne Steele*, on Thursday, at 2 p.m.

Manchester.—72, Rochdale-road: *Mr. Ellis Southern Guest*, on Monday, at 2 p.m.

Newcastle-on-Tyne.—The Central Vaccination Station, 21, Nun-street: *Dr. Thomas C. Nesham*, on Thursday, at 3 p.m.

Sheffield.—The Public Vaccination Station, Townhead-street: *Mr. William Skinner*, on Tuesday, at 3 p.m.

Edinburgh.—The Royal Dispensary: *Dr. William Husband*, on Wednesday and Saturday, at 12.

Glasgow.—The Hall of the Faculty of Physicians and Surgeons: *Dr. Hugh Thomson*, on Monday, at 12. The Royal Infirmary: Dr. Robert Dunlop Tannahill, on Monday and Thursday, at 12.

EAST LONDON HOSPITAL FOR CHILDREN.

This institution contains 36 beds.

Physicians — Dr. Andrew Clark, Dr. Barnes, Dr. Eustace Smith, Dr. John Magrath, and Dr. H. B. Donkin.

Surgeons—Mr. B. Shillitoe, Mr. A. Cæsar, and Mr. H. A. Reeves.
House-Surgeons—Mr. R. W. Leftwich and Mr. J. Cæsar.

Secretary—Mr. Ashton Warner.

TO CORRESPONDENTS.

We beg to return our best thanks to the Registrars and Secretaries of the various Universities, Colleges, and Schools for their prompt replies to our Circular, and for the trouble they have taken in supplying the latest Regulations of the Institutions with which they are connected.

As this Number is almost entirely devoted to matter mainly concerning Students, many most important communications and contributions unavoidably stand over.

We have here given everything of importance for the entering Student to know; for any further details he should apply for a prospectus to the authorities of the School he may select.

THE STUDENT BEGINNING WORK.

HOW TO WORK.

In telling the young student how to set to work, we can hardly do better than again insist upon what we have so often already said:—

Among the difficulties with which the student just entering on his career has to contend is a want of knowledge how to set to work with most advantage. The discipline which enables him later on to turn to any subject at a moment's notice has yet to be acquired—he is apt to be fitful instead of systematic. As men advance in life, habit acquires more and more power over them, and above all things, therefore, is it essential that the habits of work should be good. The plans adopted in early life gradually shape themselves into some system, good or bad, in after life, and success in no small degree depends on the character of this system.

To the mature physician or surgeon it sounds positively ridiculous to counsel the student of medicine to industry; three or four years may seem a long time, but, compared with what has to be acquired, they are all too inadequate. To practise medicine aright, one must continue a life-long student; it is only the basis of the superstructure which can be acquired during the few years spent in the medical school. From the day of entry, therefore, the student should set vigorously and earnestly to work—not too hard at first, for this not unfrequently ends in disgust, but steadily, until the irksomeness of the task wears off, and use becomes a second nature.

In the established order of things, lectures play a most important part; it is not our intention, meantime, to argue whether this should be so or not, but, accepting matters as they stand, it is advisable for the student to utilise these to the utmost. Much harm has been done by inveighing against lectures and lecturers, but it should be remembered that lecturers are, as a rule, skilled teachers; that their lectures consist of the essence of the knowledge they have spent years in acquiring; that they can explain, illustrate, and impress their meaning; they know the points of special importance, and can insist upon them; in short, they are living powers—books but a dead abstraction. There is no book so good as a good lecture. To insure the full benefit of these lectures, the teacher should address no dull, inert mass; the pupil ought to be ready and apt to receive and strive to master his teacher's meaning. One thing too much in vogue, and most prejudicial to the student, is missing lectures; we do not speak of the evil effects morally merely, but also of the actual loss the student sustains: the key-note to the next week's work may have thus been lost. By close attention and assiduous attendance, the student, if he has a good teacher, may acquire an enormous amount of information; but as yet he holds it loosely—he has not made it part and parcel of himself. To insure this end home-work should go hand in hand with school-work; the

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work of the evening should supplement and complete that of the day. In each subject the student should have a well-selected text-book; as a rule, it is better to read one than several; and in this in the evening he should recapitulate what he has heard during the day. The text-book should neither take the place of the teacher nor the teacher that of the text-book, but the one should be the correlate of the other. Neither would we advise the student to read on in advance of the lecturer. Such a plan is dangerous, for it is always more difficult to unlearn than to learn. The aspects of science change fast, and no book can long be up to the latest date. It is better, therefore, to allow the teacher to lay down the accepted belief; the student may compare it with that expressed in his book; and, if the two are found at variance, he may seek an explanation, which a good teacher will be only too happy to afford. The student should not seek to confuse himself with contradictory opinions, and consequently a good teacher is necessarily dogmatic; the knowledge that M. So-and-so says this, and Herr So-and-so says that, is scarcely worthy of the name of knowledge—at best, it is utterly barren; facts are wanted, not opinions, for, however interesting these last may be historically, they carry no real information.

Some men adopt the laudable practice of note-taking; but this also may prove a delusion and a snare, for somehow the information often remains in the note-book—it fails to reach the note-taker's head. To be useful, these notes should be studied, to recall the teacher's words, and the better to compare his teaching with the text-book. They should therefore be taken during lecture, but not in such a way as to divert the hearer's attention from what is being said, and, above all, not from that which is to be seen. Some men further adopt the plan of rewriting and extending these notes each evening; the benefit to be acquired from this will entirely depend on how it is done. If the attention is directed to mechanical accuracy and neat writing, it is useless; but, on the other hand, it must be accompanied with advantage if employed for the purpose of impressing the general spirit of the matter more forcibly on the memory. Writing has, further, the advantage of encouraging accuracy and exactness. Bacon's words should be remembered —"Reading makes a full man, conversation a ready man, writing an exact man." Besides, as examinations are to a considerable extent conducted in writing, it is important that the student should be accustomed to express himself on paper with ease and readiness. A pen and a blank sheet of paper are terrible resolvers of ideas to the novice; it is only use and wont which render them aids rather than obstacles to expression. And accuracy is of special value at such times. Nothing irritates an examiner so much as a loose way of answering questions, or of fencing with them instead of answering directly. Many a prize has been lost, and many a man has failed to pass, from disregarding this principle.

There is, unfortunately, amongst students a tendency to procrastinate, which should strenuously be avoided. At no time can the knowledge of a subject be so easily acquired as in that set apart for the purpose. Thus, a student in his first year may think that chemistry, which ought to be one of his principal studies, may easily be mastered at a subsequent period; the examination seems far off, and he may be enamoured of anatomy. But time flies apace, and as in our system certain years are devoted to certain subjects, these must be neglected in their turn to enable a man to make up the leeway he has lost the year before. This warning applies equally to industrious students and to the idle; for it often happens that men take a fancy to one particular subject, and work at it with the utmost relish, to the neglect of other studies which should be going on simultaneously. The old motto is a good one—A place for everything, and everything in its place. We are earnest in this, for we are convinced from long experience that most meritorious students sometimes fail for the very reason given above; they have no time to make up their leeway. But the plan we insist upon has the further actual advantage of saving time. When a man has listened to a lecture, or has seen a series of well-contrived experiments, in the morning, he has not had time to forget all about them by evening. When he sets to work, therefore, to refresh his memory with his books, the whole thing comes freshly up before him, and constitutes a more vivid impression on his memory than the two taken separately and at longer intervals possibly can do. But if a man returns to a study months after it ought to have been actively taken up, he finds he has to begin from the very beginning. All the time previously devoted to lectures or experiments has been wasted.

So, again, when dealing with the more practical subjects, such as medicine and surgery, ward-work and home-work should go hand in hand. We counsel every man to see everything he can see with his own eyes; to do everything he can do with his own fingers. But it is hardly possible for him to encounter every form of disease or injury during his pupilage. Something must be left to reading, especially that which regards the principles of his art. But whenever a form of disease is being studied, a case in a ward and a good description in a text-book will mutually complement each other, greatly to the student's present benefit and lasting good.

But of what might be called the mechanical portion of the student's work we have as yet said nothing, and we might pertinently enough be asked what we consider the best time of the day for reading—morning or evening? To this we would reply that in such a matter every man must be a law to himself. Some prefer the morning, most the evening, for study. To the latter, indeed, many men are practically restricted; for in lodgings it is hardly possible to pursue morning studies, except in the midst of discomforts of every kind, especially where the space available to the student is limited. But if the evening be chosen for study, it is better for men who are young and growing not to prolong their work into the small hours of the morning, for a fair amount of sleep is not only desirable, but necessary. Some men want more than others; but it not unfrequently happens that these can also do more work in their day than can the others in the longer time.

Suppose, then, that the evening is given up to home-work, just as the day is to hospital duty, how best to apportion one's time? In most of our hospitals the hour of visit is in the afternoon, the morning being given up to class-work, dissections, and what not. Between the two there is, ordinarily, a space devoted to refreshment, which some men occupy in dining. We cannot commend the practice, for after a heavy meal the brain acts more sluggishly, especially if more than a very small quantity of beer has been consumed; and whilst at his work, the student should be as sharp as a needle. It is, therefore, better to take only some light refreshment at midday, and to partake of the heavy meal of the day only when hospital work has ended. A story goes of a distinguished judge who used invariably to have beer at lunch-time, his brethren on the bench indulging in wine or coffee. They used to tease him about the practice, until, one day, he turned the tables on them by telling them he drank the beer to bring down his intellect to the level of the other judges. But medical students, as a rule, cannot afford thus to handicap themselves, and they will do well to bear the judge's remark in mind, for the sake of avoiding what notoriously blunts the intellectual faculties. Those who do not dine at home will best do so on their way from the hospital, after which a chat with a friend or a look at a newspaper, a cup of tea or coffee to brighten the intellect, and, like a giant refreshed, the student is ready for work again.

We have already spoken of the kind of work which should occupy the evening: it should supplement and complete that of the day; but we have not spoken of the fashion of work.

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If you inquire of anyone notorious for disposing of a vast amount of work in a short time what the secret of it is, in all probability he will tell you—concentration. It is the power, emphatically, of doing one thing at a time, and doing it with all your might. Some students will tell you of the number of pages they read daily; measure, rather, the work done by the knowledge acquired. Separate yourself as far as possible from your surroundings, and concentrate your energies on your work; you will thereby be spared the irksome task of going over the same thing time after time until it is fixed in your memory—for a single attentive reading is better than half a dozen careless ones.

But by-and-by the time for examinations comes; but these the student who has been diligent and attentive has no cause to dread. Nevertheless, one who is too vain-glorious, and not sufficiently careful, is apt to come off badly; it is the part of a wise man to prepare for all contingencies. It is usual, therefore, for one who is preparing for an examination to devote some extra time and attention to the subjects on which he has to undergo the inquisition. We have not unfrequently seen men overdo themselves during this period—and the same applies to prize examinations—so that they break down just before the critical time. The tactics which have so often succeeded on the turf are the best here also—a good steady pace all through the race, and a rush at the end. But force must not be miscalculated. If the pace has been too severe, and the rush begins too early, a break-down may result just before the winning-post. And so of the student: he should work well and steadily, but always, so to speak, within himself, so that at the time when he has everything at his finger-ends, he may be able to devote some extra exertion to revisal. It is astonishing how much can be done this way in an exceedingly short space of time.

The course we advocate, therefore, is that of steady industry—no fits and starts. Above all, let men doubt that genius whereby some are supposed intuitively to pick up knowledge; rely upon it that the real genius in Medicine is hard work. And this steady industry is valuable, not alone in the results it brings about, but, above all, in the habits it induces. It marks a man with a life-lasting impression. Habits of accuracy are as easily acquired as are those of inaccuracy. In time it is easier to be industrious than idle; and, as the child is father to the man, so is the industrious student the sure precursor of the successful practitioner.

THE STUDENT'S FIRST WINTER SESSION.

Let us suppose, then, that the young student comes to his medical studies with a good sound English education, and some little knowledge of Physics and Chemistry; his attention during the first winter will be mainly devoted to Chemistry, Anatomy, and Physiology. In Chemistry, he will find an enormous advantage in the little knowledge he brings with him; and it would greatly assist teachers of Chemistry in fulfilling their duty to be able to address gentlemen whose knowledge extended to the most important facts relating to Inorganic Chemistry, for then the time of the medical student could be directed mainly to Organic Chemistry, the part which is to be of most use to him in after life: whereas, as matters now stand, he rarely reaches those studies, and still more rarely masters them. We would very strongly, therefore, endeavour to impress on the minds of those about to become students of Medicine the importance of acquiring some knowledge of Chemistry, and still more of Botany, before entering a medical school. In most public schools nowadays both of these subjects are taught, and every effort ought to be made to encourage the practice. Be that, however, as it may, let the student work hard to master the science of Chemistry during this his first year, for each succeeding session brings its own work with it.

Turning next to Anatomy, the first thing to which a student directs his attention is the "bones," and these should be mastered as soon as possible. This is, as a rule, not very difficult; he will have plenty of aid from his fellow-students. A thorough knowledge of the bones is invaluable, and carries with it much knowledge of the soft parts. Each groove, ridge, foramen, and channel has its own story, and the knowledge of how each is occupied must be constantly exercised in after life. The next step should be a thorough study of the joints and ligaments, but this varies a good deal in different schools. In some—and perhaps this is the best plan—after the joints and ligaments, the student is sent at once to the study of muscles, as to origin, insertion, course, shape, composition, and mode of action. And these three subjects may be said to be the foundation of all surgical knowledge. In other schools, however, the student is at once turned into the dissecting-room to study all parts—muscles, nerves, vessels, fascias—as they are laid bare. This plan, too, has its excellencies; but on the whole it is better, if there is material for the purpose, to acquire a knowledge of the bones, ligaments, and muscles before attempting the more difficult concrete Anatomy. But whatever plan be adopted, let the knowledge acquired be real—a knowledge not of the memory, but of the understanding; for at the basis of Surgery, and of much of Medicine also, lies a sound knowledge of Anatomy. This leads us to point out another thing the student should do early—that is, to acquire some knowledge of the relative positions of the different viscera, and their external indications. This is best acquired in the post-mortem-room, which from the first the student should frequent. What of dissecting? The student should take to it as early as may be possible. He should endeavour, it is true, to master everything laid bare, but if he only acquire a manual dexterity, that at least is something.

And now as regards Physiology. Here we are almost reduced to despair. The absurd existing regulations compel a man to enter on the study of the very highest branches of Chemistry, in the shape of Physiological Chemistry, on the same day on which he begins to study its rudiments; to study the minute structure of a part or organ with whose shape or outward appearance he is altogether unacquainted. We can only tell him to do his best, and to learn as much as he can by means of his eyes; he must trust more to his ears another session.

Finally, as regards Hospital Practice, the sooner the young student begins to study what is, after all, to be the great business of his life, the better; but it should be begun with reason. Students should not be let loose like an undisciplined crowd of star-gazers; there should be rule in everything. In some hospitals the preposterous system of introducing the raw student into the medical wards did at one time prevail, and Sir Astley Cooper used to congratulate his class on having left the study of Medicine for the higher walk of Surgery. The sooner the young man understands that time spent in the medical wards at this period of his career is wasted, the better for him. Let him instead go at once to the surgical out-patient room; here he can *see* something. He can learn what an ulcer is, and how to dress it; what to do for a bad wound or bruise; that in many cases it is necessary to use a knife. He will see how different kinds of bandages are put on, and the different dodges, if one may say so, necessary to bandage different parts properly. In short, it is here that the student can best spend his time, thence proceeding in due course to the surgery of the wards. On the other hand, we would anxiously warn the young student against the physician's out-patient department. Here he will do no good, and he may be much harmed by it. He sees a gentleman busy prescribing for a crowd of patients, and he sees them rapidly disposed of, but he does not see the years of study and hard work which have enabled the physician to make in a few

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minutes a trenchant diagnosis. Vast numbers of these patients suffer from the same kind of illness; they are subject to the same influences—close, ill-smelling houses in foul alleys; a want of light and air; improper or badly cooked food partaken of at improper times; and, above all, the only solace they have for so much squalor and discomfort—that which ever tends to perpetuate this—too much beer and gin. But we are diverging from our subject. Let, however, the young student avoid such studies until he is better qualified to appreciate them, and let him stick to those things he can see for himself in the surgical section.

In due time comes the First Summer Session. This is commonly devoted to the study of Botany, Materia Medica, and Practical Chemistry. About these we have a word to say, especially as regards the first. Botany and its uselessness is a favourite subject of declamation with some; but with these we can in nowise agree. Like other studies, it might well be excluded from the medical curriculum, but it certainly ought not to be excluded from the scheme of medical education. Botany is far best and easiest learnt at school; of all branches of natural science it is that which requires fewest appliances. Its material is everywhere; and, rightly taught and rightly learned, it is a source of unfailing delight. Hunting for plants is quite as exciting as hunting anything else. Let Botany be taught and studied, then, but let it be out of the curriculum; or, if in it—as needs must be sometimes,—let the student acquire the principles here, and apply them for himself in the fields and lanes. Materia Medica, too, has come in for much abuse; but was it so when men went through an apprenticeship? Then they imbibed Materia Medica, as it were, insensibly; by constant handling they knew the colour, smell, taste, relative weight, and a hundred other things concerning drugs. But that system has passed away, and something must take its place if men are to live by their profession. Therapeutics, again, which some men would substitute, should be taught at a later period of the student's course of study. Fortunately, we are all agreed on the necessity for practical Chemistry, but that should really take the shape of the analysis of vegetable and animal solids and fluids, not of simple solutions.

SECOND WINTER SESSION AND FIRST EXAMINATION.

With the Second Winter comes the near approach of the First Professional Examination. At the Royal College of Surgeons, whither nearly all students flock, the subjects are Anatomy and Physiology, not separately, but conjointly. This arrangement is unfortunate, for it leads the student to the study of Anatomy at the expense of Physiology, the idea having got abroad that it is the more important subject of the two. As a consequence, we believe we are right in saying that the majority of those plucked are so in Physiology. We mention this because it is in this winter that a competent knowledge of Physiology is to be acquired, and the student should pay at least as much attention to it as to Anatomy. But there is another thing the student should also look after—that is, the art of passing an examination. It is not enough that a student should have a full knowledge of his subjects: that knowledge should be methodised, and so formulated as to be at hand when wanted. There is nothing does this so well as class examinations, which are now held almost everywhere; but the student should also accustom himself to note-taking and to writing answers to questions, such as those set at the College, and regularly published in our columns. This will give him that ease and accuracy of expression so essential for passing a good written examination. There should be no "shots" at answering questions, no beating about the bush; with an examiner everything should be straightforward, simple, and unmistakable. Finally—a little thing—when sitting down to an examination, read over your paper carefully, and see what question you can best answer; write down that answer first on one piece of paper; take the next one that suits you, and do likewise; and so on, gradually attacking the more difficult, until you finish. In this way you are left with plenty of time on your hands, whereas, did you hesitate and bungle over the first difficulty, you might be unable to finish the writing out of those answers with which you were best acquainted.

By the time the student has passed his First Examination he should be out of leading-strings, and able, with the advice of his teachers, to employ his time to good advantage. He has passed beyond the class we have meanwhile specially in view.

DEGREES AND QUALIFICATIONS IN PUBLIC HEALTH.

UNIVERSITY OF EDINBURGH.

In consequence of the great demand which now exists for Medical Officers of Health, and the importance to the public of some means of ascertaining that members of the medical profession have specially studied the subject of Public Health, Science Degrees in the Department of Public Health have been instituted by the University of Edinburgh under the following conditions:—

1. Candidates for graduation in Science in the Department of Public Health must be graduates in Medicine of a British University, or of such foreign or colonial Universities as may be specially recognised by the University Court.

2. Candidates who have not past an *annus medicus* in the University of Edinburgh must, before presenting themselves for examination, have attended as matriculated students in the University at least two courses of instruction, scientific or professional, bearing on the subjects of the examinations.

3. There are two examinations for the degree of Bachelor of Science in the Department of Public Health. Candidates who have passed the first examination may proceed to the second after an interval of five months.

4. Candidates must produce evidence that, either during their medical studies or subsequently, they have attended a course of lectures in which instruction was given on Public Health, and that they have studied Analytical Chemistry practically for three months with a recognised teacher.

5. The examinations are written, oral, and practical, and are conducted by University examiners selected by the University Court.

6. The subjects of the examinations for the degree of Bachelor of Science in the Department of Public Health are as follows:—

FIRST EXAMINATION.

1. *Chemistry.*—Analysis of air, detection of gaseous emanations and other impurities in the atmosphere; analysis of waters for domestic use, and determination of the nature and amount of their mineral and organic constituents; detection, chemical and microscopical, of adulterations in articles of food and drink, and in drugs; practical examination, including at least two analytical researches.

2. *Physics.*—Hydraulics and hydrostatics, in reference to water supply, drainage, and sewerage; pneumatics, in reference to warming and ventilation; meteorology, and methods of making meteorological observations; mensuration, in reference to the plans and sections of public and private buildings, mines, waterworks, and sewers.

3. *Sanitary Law.*—Knowledge of the leading sanitary Acts of Parliament.

4. *Vital Statistics.*—Knowledge of statistical methods and data in reference to population, births, marriages, and deaths.

Examination.—First day: Chemistry and Physics. Second day: Sanitary law and vital statistics.

An oral examination and an examination in practical chemistry in the laboratory will take place a few days after the written examination.

SECOND EXAMINATION.

1. *Medicine.*—Origin, nature, and propagation of epidemic and contagious diseases; prevention of contagion and infection; endemic diseases and the geographical distribution of disease; insalubrious trades; overcrowding; epizootics, including pathological changes.

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2. *Practical Sanitation.*—Duties of a health officer in reference to water supply; insalubrious dwellings and public buildings; removal and disposal of sewage and other refuse and impurities; cemeteries; nuisances from manufactories, etc.; bad or insufficient supplies of food; outbreaks of zymotic diseases; quarantine; disinfectants and deodorisers; construction of permanent and temporary hospitals.

The written examination will take place on October 22 and 23, 1875, and April 1 and 3, 1876, at twelve o'clock each day. Candidates who intend to present themselves for examination in October are required to lodge with the Clerk of the University proof of their being eligible, and to pay the fee on or before October 1; and for the examination in April on or before March 3.

DOCTOR OF SCIENCE.

Bachelors of Science in the Department of Public Health may, after the lapse of one year, proceed to the degree of Doctor in the same department on producing evidence that they have been engaged in practical sanitation since they received the degree of Bachelor of Science, and on presenting a thesis on some subject embraced in the Department of Public Health. Every such thesis must be certified by the candidate to have been composed by himself, and must be approved of by the examiners.

Candidates for the degree of D.Sc. must lodge their theses with the Dean of the Medical Faculty on or before January 31 in the year in which they propose to graduate. No thesis will be approved which does not contain either the results of original observations on some subject embraced in the examination for B.Sc., or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

The fees for the degrees in Science in the Department of Public Health shall be—For the first B.Sc. in Public Health examination, £5 5s.; for the second B.Sc. in Public Health examination, £5 5s.; for the degree of D.Sc. in Public Health, £5 5s.

The following are recommended as books to be studied in preparation for the above examinations:—E. Parkes's "Practical Hygiene"; George Wilson's "Handbook of Hygiene"; Edw. Smith's "Manual for Public Officers of Health" and "Handbook for Inspectors of Nuisances"; Michael, Corfield, and Wanklyn's "Manual of Public Health," edited by E. Hart; Baldwin Latham's "Sanitary Engineering"; Henry Law's "Rudiments of Civil Engineering"; George Monro's "The Public Health (Scotland) Act"; Alexander Buchan's "Introductory Text-book of Meteorology."

UNIVERSITY OF CAMBRIDGE.

EXAMINATION IN STATE MEDICINE.

An examination in so much of State Medicine as is comprised in the functions of Officers of Health will be held in Cambridge in October, 1875, beginning on Tuesday, October 5.

Any person whose name is on the Medical Register of the United Kingdom may present himself for this examination provided he is twenty-four years of age. The examination will be in two parts.

Part I. will comprise:—Physics and Chemistry. The principles of Chemistry, and methods of analysis with especial reference to analyses (microscopical as well as chemical) of air and water. The laws of heat, and the principles of pneumatics, hydrostatics and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, and sanitary engineering in general.

Part II. will comprise:—Laws of the realm relating to public health. Sanitary statistics. Origin, propagation, pathology, and prevention of epidemic and infectious diseases. Effects of overcrowding, vitiated air, impure water and bad or insufficient food. Unhealthy occupations and the diseases to which they give rise. Water-supply, and disposal of sewage and refuse. Nuisances injurious to health. Distribution of diseases within the United Kingdom, and effects of soil, season, and climate.

Candidates may present themselves for either part separately or for both together at their option. Every candidate will be required to pay a fee of four guineas before admission to each part of the examination. Every candidate who has passed both parts of the examination to the satisfaction of the examiners will receive a certificate testifying to his competent knowledge of what is required for the duties of an Officer of Health.

All applications for admission to this examination, or for information respecting it, should be addressed to Professor Liveing, Cambridge.

DENTAL SURGERY.

REGULATIONS RELATING TO THE DIPLOMA IN DENTAL SURGERY.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

EDUCATION.

CANDIDATES are required to produce the following certificates:—

1. Of being twenty-one years of age.
2. Of having been engaged during four years in the acquirement of professional knowledge.
3. Of having attended at a school or schools recognised by this College, not less than one of each of the following courses of lectures, delivered by lecturers recognised by this College, namely:—Anatomy, Physiology, Surgery, Medicine, Chemistry, and Materia Medica.
4. Of having attended a second winter course of lectures on Anatomy; or a course of not less than twenty lectures on the Anatomy of the Head and Neck, delivered by lecturers recognised by this College.
5. Of having performed dissections at a recognised school during not less than nine months.
6. Of having completed a course of chemical manipulation, under the superintendence of a teacher or lecturer recognised by this College.
7. Of having attended, at a recognised hospital or hospitals in the United Kingdom, the practice of Surgery and clinical lectures on Surgery during two winter sessions.
8. Of having attended, at a recognised school, two courses of lectures upon each of the following subjects, viz.:—Dental Anatomy and Physiology (human and comparative), Dental Surgery, Dental Mechanics, and one course of lectures on Metallurgy, by lecturers recognised by this College.
9. Of having been engaged, during a period of not less than three years, in acquiring a practical familiarity with the details of Mechanical Dentistry, under the instruction of a competent practitioner.
10. Of having attended at a recognised dental hospital, or in the dental department of a recognised general hospital, the practice of Dental Surgery during the period of two years.

N.B.—The students of the London schools are required to register the above certificates at this College; and special returns will be required from the provincial schools.

Candidates who were in practice as dentists, or who had commenced their education as dentists prior to September, 1859—the date of the Charter—and who are unable to produce the certificates required by the foregoing regulations, shall furnish the Board of Examiners with a certificate of moral and professional character, signed by two members of this College, together with the candidate's name, age, and professional address. If in practice as a dentist, the date of the commencement thereof. Whether member or licentiate of any College of Physicians or Surgeons of the United Kingdom; and, if so, of what College. Whether graduate of any University in the United Kingdom; and, if so, of what University; and whether graduate in Arts or Medicine. The date or dates of any such diploma, licence, or degree. Whether member of any learned or scientific society; and, if so, of what. Whether his practice as a dentist is carried on in connexion with any other business; and, if so, with what business. Whether, since September, 1859, he has employed advertisements or public notices of any kind in connexion with the practice of his profession. The particulars of professional education, medical or special. The Board of Examiners will determine whether the evidence of character and education produced by a candidate be such as to entitle him to examination.

N.B. In the case of candidates in practice or educated in Scotland or Ireland, the certificate of moral and professional character may be signed by two licentiates of the Royal College of Surgeons of Edinburgh, or the Faculty of Physicians and Surgeons of Glasgow, or of the Royal College of Surgeons in Ireland, as the case may be.

EXAMINATION.

The examination is partly written and partly oral. The written examination comprises General Anatomy and Phy-

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siology, and General Pathology and Surgery, with especial reference to the practice of the dental profession. The oral practical examination comprises the several subjects included in the curriculum of professional education, and is conducted by the use of preparations, casts, drawings, etc. Members of the College, in the written examination, will only have to answer those questions set by the section of the Board consisting of persons skilled in Dental Surgery; and in the oral examination will be examined only by that section. A candidate whose qualifications shall be found insufficient will be referred back to his studies, and will not be admitted to re-examination within the period of six months, unless the Board shall otherwise determine. Examinations will be held in January and June. The fee for the diploma is ten guineas, over and above any stamp duty.

LONDON SCHOOL OF DENTAL SURGERY AND DENTAL HOSPITAL OF LONDON.

The winter session will commence on Monday, October 4.

Dental Surgeons.	*Assistant Dental Surgeons.*
Mr. Fox.	Mr. Moon.
Mr. Underwood.	Mr. Medwin.
Mr. Gregson.	Mr. D. Hepburn.
Mr. Coleman.	Mr. Lane.
Mr. H. Harding.	Mr. Bartlett.
Mr. Hill.	Mr. S. H. Cartwright.

Dental House-Surgeon—Mr. Jas. Merson.

Treasurer—Mr. Cartwright. *Dean*—Mr. T. A. Rogers.

Dental Anatomy and Physiology—Mr. C. S. Tomes.	Mechanical Dentistry—Mr. J. S. Turner.
Dental Surgery and Pathology—Mr. S. H. Cartwright.	Metallurgy—Mr. G. H. Makins.

On every day during the lecture session the surgeons of the day will, if practicable, give demonstrations, especially intended for the junior pupils, of the operations performed in Dental Surgery.

Special arrangements as regards General Medical Education are made at Charing-cross and Middlesex Hospitals.

PHARMACEUTICAL CHEMISTRY.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—SCHOOL OF PHARMACY.

The session will commence on October 4, 1875, and extend to July 31, 1876.

Lectures on Chemistry and Pharmacy will be delivered by Professor Redwood on Monday, Tuesday, and Wednesday mornings at nine o'clock, commencing on Monday, October 4. The course consists of sixty lectures, comprising an exposition of the leading principles and doctrines of the science of Chemistry, and of those branches of allied physical science, the applications of which are involved in the highest qualifications required for the practice of Pharmacy. There will be two of these courses during the session—the course which commences in October and ends in February being repeated in the following five months. Each course will be complete in itself, and will include a description of all the most important chemical and Galenical preparations used in medicine, which will be fully illustrated with experiments, diagrams, and specimens.

Lectures on Botany and Materia Medica by Professor Bentley, on Thursday, Friday, and Saturday mornings at nine o'clock, commencing Friday, October 8. During the session two courses of lectures will be delivered, each consisting of sixty lectures. The first course, extending from October to the end of February, will comprise Botany and Materia Medica, with especial reference to Structural Botany, and the use of the microscope in distinguishing the various drugs; and the second course, which commences in March and extends to the end of July, will also comprise Botany and Materia Medica, with especial reference to Systematic and Practical Botany. Each course will be complete in itself, although each will have a definite object in view. The portion of the second course on Systematic and Practical Botany, consisting of twenty lectures, will be delivered in the Royal Botanic Society's Gardens, Regent's-park, commencing in May and ending in July. Separate entries may be made for this portion.

The Laboratories for the study of Practical Chemistry will be opened on Monday, October 4, at 10 a.m., under the direction of Professor Attfield. The Laboratories are fitted up with every convenience for the study of the principles of Chemistry by personal experiment. They are specially designed for the study of Pharmacy, but are also well adapted for the acquirement of a knowledge of Chemistry in its application to manufactures, analysis, and original research. There is no general class for simultaneous instruction, each student following an independent course of study always determined by his previous knowledge; pupils can therefore enter for any period at any date. A complete course of instruction, including the higher branches of Quantitative Analysis, occupies ten full months, and dates from the day of entry to that day twelvemonth. The Laboratories are open from ten o'clock in the morning until five in the afternoon daily, except on Saturdays, when they are closed at two o'clock. Vacation months, August and September.

SPECIAL INSTRUCTION.

SCHOOLS AND OTHER PLACES OF GENERAL AND SPECIAL INSTRUCTION.

Besides the regular schools with their various departments, there are many other institutions—devoted, some of them, to special purposes—where students or practitioners may acquire a sound knowledge of various subjects which hardly enter into the ordinary curriculum. We have already indicated that in the plan of studies the student may avail himself of a year at the beginning or at the end for such purposes. If at the beginning, we could not do better than advise him to take a session at the Royal School of Mines, studying especially Chemistry and Natural History, the value of which we have already inculcated. If he takes the year at the end, then such special studies as Eye Diseases, Skin Diseases, Lunacy, Diseases of Women and Children, may well engage his attention. These may, as a rule, be studied in connexion with his school; or, if a wider field is desired, in some one or other of the following institutions:—

Preliminary.

ROYAL SCHOOL OF MINES (GOVERNMENTAL).

During the twenty-fifth session (1875-1876), which will commence on October 1, courses of lectures and practical demonstrations will be given by the Professors. The fee for students desirous of becoming Associates is £30 in one sum on entrance, or two annual payments of £20, exclusive of the laboratories. Pupils are received in the Chemical Laboratory under the direction of Dr. Frankland, in the Metallurgical Laboratory under the direction of Dr. Percy, in the Biological Laboratory under Professor Huxley, and in the Physical Laboratory under Professor Guthrie. These laboratories will be re-opened on October 1. By order of the Lords of the Committee of Council on Education, the instruction in Chemistry, Physics, Applied Mechanics, and Natural History will be given in the new buildings in the Exhibition-road, South Kensington.

SOUTH LONDON SCHOOL OF CHEMISTRY AND PHARMACY.

325, Kennington-road, and Central Public Laboratory, Kennington-cross, S.E.

Director—Dr. Muter.

Daily lectures in Classics, Chemistry, Physics, Botany, Materia Medica, and Pharmacy. Laboratory open for Practical Chemistry from ten till five. Special instruction for Medical Officers of Health in Water, Air, Gas, and Food Analysis. For fees, etc., apply to W. Baxter, Secretary, Laboratory, Kennington-cross, S.E.

THE HARTLEY INSTITUTION, SOUTHAMPTON.

In the department of preliminary medical education, which is recognised by the Royal College of Surgeons and Physicians, students are prepared for the regular curriculum of the medical schools, one winter and two summer sessions thus passed counting towards the four years' professional study required of all candidates for a diploma. Students in this department also receive instruction in dressing, taking notes of cases, etc., at the Southampton Royal Infirmary. For further information address the Principal.

DOWNING COLLEGE, CAMBRIDGE.

Every alternate year an election to a Fellowship takes place, the holder of which must be engaged in the active pursuit of the studies of Law or Medicine. These Fellowships are of the annual value of £200, and are tenable for twelve years. They are not, if practicable, vacated by marriage, and the Fellows are not required to reside. Foundation Scholarships of £50 per annum (in some cases with rooms and commons) are offered annually for distinction in Natural Science, tenable until the B.A. degree, and in cases of special merit for three years longer. Minor Scholarships of £60 per annum, tenable for two years, are offered each year for competition before entrance, and one or more of these is awarded for proficiency in Natural Science.

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UNIVERSITY OF DURHAM COLLEGE OF PHYSICAL SCIENCE, NEWCASTLE-ON-TYNE.

The College has taken over the laboratories, lecture-room, etc., of the College of Medicine, and provides the full courses in Chemistry required by the licensing boards. A chair of Natural History in connexion with the College has been established.

LONDON.

General Hospitals.

ROYAL FREE HOSPITAL,

Gray's-inn-road.

Physicians—Dr. O'Connor, Dr. Cockle, and Dr. Rickards.
Surgeons—Mr. De Meric, Mr. Gant, and Mr. Rose.

There being a wide field for medical and surgical practice at this Hospital, students have excellent opportunities for gaining a bedside knowledge of Medicine and Surgery, also for the study of Pathology and Morbid Anatomy, and can prepare for examinations by attending a course of three or six months' clinical instruction. Vacancies for Clinical Clerks and Dressers. For particulars apply to any member of the Medical Staff, at the Hospital, daily at 2 p.m.

GREAT NORTHERN HOSPITAL,

Caledonian-road.

Physicians—Dr. Leared, Dr. Hardinge, Dr. Cholmeley, Dr. Crucknell.
Obstetric Physician—Dr. Gustavus C. P. Murray.
Diseases of the Eye—Mr. B. J. Vernon.
Surgeons—Mr. Gay, Mr. W. Adams, Mr. T. Carr Jackson, Mr. B. T. Lowne, W. Spencer Watson.
Aural Surgeon—Mr. Harvey. Dental Surgeon—Mr. C. J. Fox.
Chloroformist—Mr. G. Eastes. House-Surgeon—P. N. Hart (Acting).
Junior Resident Medical Officer—Mr. F. H. Carter.
Dispenser—Mr. W. Bardsley.
Registrar of Out-Patients—Mr. F. Adams.

SEAMEN'S HOSPITAL (late *Dreadnought*), GREENWICH, S.E.

Visiting Physicians—Dr. Stephen H. Ward and Dr. Chas H. Ralfe.
Visiting Surgeon—Mr. D. Colley.
House-Physician—Dr. W. Law.
Surgeon—Mr. W. Johnson Smith.
House-Surgeon—Mr. J. R. Toose.
Secretary—Henry C. Burdett.

Special Hospitals.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST,

Victoria Park. Office—24, Finsbury-circus, E.C.

Consulting Physicians—Dr. T. B. Peacock, Dr. J. R. Bennett, and Dr. E. L. Birkett.
Consulting Surgeon—Mr. J. Hilton.
Physicians—Dr. S. H. Ward, Dr. J. Andrew, Dr. J. C. Thorowgood, and Mr. H. G. Sutton.
Assistant-Physicians—Mr. A. B. Shepherd, Dr. Eustace Smith, Dr. W. H. Corfield, and Dr. J. B. Berkart.
Resident Medical Officer—Mr. Ernest O. Bark.

The Hospital affords accommodation for 164 in-patients. Information respecting medical instruction at the Hospital may be obtained on application to the Physicians.

HOSPITAL FOR SICK CHILDREN,

48 and 49, Great Ormond-street, W.C., and Cromwell House, Highgate.

Physicians—Dr. Dickinson and Dr. Gee.
Assistant-Physicians — Dr. W. B. Cheadle, Dr. O. Sturges, Dr. A. L. Galabin, Dr. R. J. Lee, and Dr. Barlow.
Surgeon—Mr. Thomas Smith.
Assistant-Surgeons — Mr. Howard Marsh and Mr. J. W. Haward.
Surgeon-Dentist — Mr. Thomas Edgelow.
Secretary—Samuel Whitford.

117 beds. In-patients, 1874, 591. Out-patients attending, 13,250. The practice of the Hospital, in both in- and out-patient departments, is open at nine every morning. Fee for six months' attendance, £3 3s.; perpetual, £5 5s.

BELGRAVE HOSPITAL FOR CHILDREN.

1, Cumberland-street, Eccleston-square, S.W.—Thirty beds.

President—His Grace the Duke of Westminster.

HONORARY MEDICAL STAFF.

Physicians—Dr. Farquharson and Dr. Fenwick.
Surgeons—Mr. Bernard E. Brodhurst and Mr. Thos. P. Pick.
House-Surgeon—Mr. Malcolm McHardy.

New patients last year—in, 90; out, 900. Pupils will be admitted to the practice of the Hospital upon producing a certificate of being duly registered as medical students, and on such other conditions as the Committee may from time to time direct.

EVELINA HOSPITAL FOR SICK CHILDREN.

Southwark-bridge-road.

Founded and endowed in 1869 by the Baron F. de Rothschild.—100 beds.
Consulting Physician—Dr. Arthur Farre.
Consulting Surgeon—Mr. Prescott G. Hewett.

Physicians — Dr. E. Buchanan Baxter and Dr. Fredk. Taylor
Physicians to Out-Patients — Dr. T. Crawford Hayes and Dr. Jas. Goodhart.
Surgeons—Mr. W. Morrant Baker and Mr. H. G. Howse.
Surgeon to Out-Patients—Mr. R. Clement Lucas.
House-Surgeon—Mr. W. E. Paley.
Secretary—Mr. Wm. Calvert Sbone.

ST. LUKE'S HOSPITAL FOR LUNATICS,

Old-street, E.C.

Physicians—Dr. Henry Monro and Dr. William Wood.
Surgeon—Mr. Alfred Willett.
Resident Medical Superintendent—Mr. George Mickley.

There are two resident Clinical Assistants, whose appointments are tenable for six months. The Visiting Physicians are also allowed by the Committee to take pupils. Patients admitted gratuitously, or on payment according to their circumstances. For information address the Secretary, H. Crespin, Esq.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN,

Waterloo-bridge-road.—Instituted 1816.

Consulting Physicians—Dr. Samuel Wilks and Dr. John Williams.
Consulting Surgeon—Mr. J. Cooper Forster.

Physicians—Dr. G. V. Poore, Dr. Wm. Park, Dr. George Roper, and Mr. J. E. Sparks.
Surgeon—Mr. Edwin Canton.
Surgeon-Dentist — Mr. Thomas Roberts.
Resident Medical Officer—Mr. Edmund Overman Day.
Secretary—Mr. William Champion.

Advanced students in Medicine, and such practitioners as may desire it, are permitted to attend the practice of this Hospital gratis. If a certificate signifying such attendance be required, the sum of five guineas must be paid to the Physicians and Surgeons in ordinary conjointly.

VICTORIA HOSPITAL FOR CHILDREN,

Gough House, Queen's-road, Chelsea.

This Hospital contains fifty-four beds, and has a large Out-patient Department of over 400 weekly. The Physicians attend daily at 9 a.m., and on Mondays and Thursdays at noon. The Surgeons attend at 10 a.m., except on Wednesday and Saturday. The Surgeon-Dentist attends on Saturday at 9.30 a.m.

Physicians — Dr. Evans and Dr. Cavafy.
Assistant-Physicians—Dr. Jones, Dr. Grigg, Dr. Laking, Dr. Pearson Irvine, and Dr. W. H. Allchin.
Surgeon—Mr. Cowell.
Assistant-Surgeons — Mr. F. Churchill and Mr. Fisher.
Dental-Surgeon—Mr. Risdon.
House-Surgeon and Registrar—(Vacant.)
Secretary—Captain Blount, R.N.

FEVER HOSPITAL, ISLINGTON.

260 beds.

Consulting Surgeon—Mr. De Morgan.

Physicians — Dr. Tweedie, Dr. Murchison, Dr. Broadbent, and Dr. Cayley.
Resident Medical Officer — Mr. Shirley F. Murphy.
Secretary—Mr. Charles Finn.

BRITISH LYING-IN HOSPITAL,

Endell-street, St. Giles's, W.C.

Consulting Physician—Dr. Priestley.
Consulting Surgeon—Sir William Fergus-on, Bart.
Physicians—Dr. Heywood Smith, Dr. Arthur Edis, and Dr. Wiltshire.
Matron—Miss Freeman.

ROYAL LONDON OPHTHALMIC HOSPITAL,

Blomfield-street, Moorfields, E.C.—Founded 1804.—70 beds.

Consulting Physician—Dr. F. J. Farre.
Consulting Surgeon—Mr. J. Dixon.
Surgeons—Messrs. Critchett, Bowman, Wordsworth, Streatfeild, J. W. Hulke, G. Lawson, J. Hutchinson, J. Couper, and Dr. J. Soelberg Wells.
House-Surgeons—Messrs. F. Buller and C. W. Owen.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL,

King William-street, Charing-cross.

The Hospital contains nine wards with thirty-six beds, and the patients (10,000 new cases annually) are seen daily at one, and operations performed at two. The following are the days of attendance of the Surgical Staff:—Monday and Friday, Mr. Power and Mr. Rouse. Tuesday, Thursday, and Saturday, Mr. Hogg. Wednesday and Saturday, Mr. Cowell.

The practice of the Hospital is open to students. Fees—for six months, £3 3s.; perpetual, £5 5s.

Secretary—Mr. Geo. C. Farrant.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC,

23 and 24, Queen's-square, Bloomsbury.

The Hospital contains 74 beds (to be increased in 1876); the County Convalescent Branch, at Finchley, 25 beds. The Physicians attend every Monday, Tuesday, Wednesday, and Friday, at half-past two o'clock. In- and out-patients' electrical room and general practice at that hour.

Physicians—Drs. Ramskill, Radcliffe, Hughlings-Jackson, Buzzard.
Assistant-Physicians—Drs. Charlton Bastian, Elam, Maclure, Gowers.
Medical Superintendent—Dr. Tibbits.
Surgeon—W. Adams, F.R.C.S. Medical Registrar—Dr. Sturge.

Medical practitioners and students will be admitted on showing their cards.

HOSPITAL FOR DISEASES OF THE SKIN,

52, Stamford-street, Blackfriars.

Surgeons—Mr. Jonathan Hutchinson, Mr. G. Naylor, and Mr. Waren Tay.
Assistant-Surgeon—Mr. Wyndham Cottle.

THE BRITISH HOSPITAL FOR DISEASES OF THE SKIN,

Great Marlborough-street, W., and Finsbury-square, E.C.

Surgeons—Mr. Balmanno Squire, and Mr. George Gaskoin.

ST. PETER'S HOSPITAL FOR STONE AND GENITO-URINARY DISEASES,

54, Berners-street, W.

The practice is free to hospital students.
Surgeons—Mr. Walter J. Coulson, and Mr. W. F. Teevan.
Assistant-Surgeon—Mr. F. R. Heycock.

HOSPITAL FOR DISEASES OF THE THROAT,

Golden-square, W.

Consulting Physicians—Dr. Billing, Sir W. Jenner, Bart., M.D.
Consulting Surgeon—Sir W. Fergusson, Bart.
Physicians—Dr. Morell-Mackenzie, Dr. Semple, and Dr. Prosser James.
Surgeon—Mr. Pugin Thornton.

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PROVINCIAL.

NORFOLK AND NORWICH HOSPITAL.

120 beds.

One year's attendance recognised by Examining Boards. Fees: for the Physician's practice, £10 10s.; for the Surgeon's practice—one year, £20; two years, £30; perpetual, £40. Pupils resident and non-resident.

Physicians—Dr. Copeman, Dr. Eade, Dr. Bateman.
Honorary Consulting Surgeon—Mr. Nichols.
Surgeons—Mr. Firth, Mr. Cadge, Mr. Crosse.
Resident Medical Officer—Mr. J. R. Baumgartner.
Assistant-Surgeons—Mr. Williams, Dr. Beverley.

WEST RIDING LUNATIC ASYLUM, WAKEFIELD.

Dr. J. Crichton Browne, F.R.S.E., the Medical Director of the West Riding Lunatic Asylum, lectures on Mental Diseases during the summer session. The systematic lectures are given at the School, and the clinical lectures at the Asylum, which now accommodates 1500 patients. It is needless to point out how great and unusual an advantage is here presented to those inclined to make themselves conversant with the improvement made of late years in the treatment and management of the insane.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

(A Clinical and Training Institution for Gentlemen intended for the Medical Profession.)

Medical Officers—Dr. Millington, Dr. Totherick, Mr. Vincent Jackson, Mr. J. O'B. Kough, Mr. C. A. Newnham.
House-Surgeon—Mr. Taylor.
Physicians' Assistant—Dr. Nankivell.

This Hospital contains 210 beds; large male and female accident wards; wards for cases of burn; general medical and surgical wards; a ward for diseases peculiar to women; a children's ward, and a detached fever wing; also a commodious semi-detached out-patient department. To the general wards a clinical-room is attached, in which the analysis and microscopic inspection of the urine are conducted, also ophthalmoscopic and laryngoscopic examinations. Instruction is given in Chemistry, in Natural Philosophy, and in the Anatomy of the Dry Bones, Ligaments, Viscera, and Topographical Anatomy. The course of Practical Surgery includes the use of surgical apparatus, the performance of surgical operations, and the demonstration of Morbid Surgical Anatomy. In the Hospital the pupils are required to attend daily in the casualty-room, in the out-patient department, and in the wards, the instruction afforded being of a practical nature, including bandaging, the application of splints, tooth-drawing, and every kind of elementary professional detail, likewise how to observe and examine patients. The art of dispensing, the preparation of drugs, and of pharmaceutical compounds, can also be learnt in the Hospital Dispensary and Laboratory. Operations are performed every Thursday at eleven o'clock, and practitioners are admitted. The practice of the Hospital is recognised by all the examining boards.

Fees for hospital practice—For one year, ten guineas; perpetual, twenty guineas. Some members of the honorary staff receive resident pupils. For further particulars apply to Mr. Vincent Jackson (Honorary Secretary to the Medical Committee), 46, Darlington-street, Wolverhampton.

ROYAL DISPENSARY, EDINBURGH.

Consulting Physician—Professor Sanders.
Consulting Surgeon—Professor Spence.
Consulting Physicians-Accoucheur—Dr. Keiller and Dr. J. Matthews Duncan.
Medical Officers—Dr. William Stephenson, Dr. Linton, Dr. W. Husband, Dr. James Andrew, Dr. D. Wilson, Dr. R. P. Ritchie, Dr. F. W. Moinet, Dr. A. J. Sinclair.
Midwifery Department—Dr. Wilson, Dr. Andrew, and Dr. Stephenson.
Vaccination—Dr. Husband.
Apothecary—Mr. R. Urquhart.
Secretary to Medical Officers—Dr. Andrew.

ROYAL HOSPITAL FOR SICK CHILDREN, MEADOWSIDE HOUSE, EDINBURGH.

Consulting Physicians—Professor Sir Robert Christison, Bart., Drs. Charles Wilson, Graham Weir, and Matthews Duncan.
Consulting Surgeon—Professor Spence.
Pathologist—Professor Sanders.
Ordinary Physicians—Drs. Stephenson, Ritchie, Linton, and Dunsmure.
Extra Physicians—Drs. James Andrew and James Cumming.
Assistant-Physician—Dr. William Ballinghall.
Surgeon-Dentist—Dr. Smith.
Ophthalmic Surgeon—Dr. Argyll Robertson.
Resident Physician—Dr. James Crabb.
Honorary Secretary—Mr. John Henry, 20, St. Andrew-square.

Fees: To Hospital, three months, £1 1s.; to Dispensary Department, three months, £1 1s.

GLASGOW ROYAL ASYLUM.

The Asylum contains nearly 600 patients, including all classes, and the yearly admissions are about 300. Clinical instruction is given, and Dr. Yellowlees, Physician-Superintendent, lectures on Mental Diseases at the University in summer; fee, £2 2s.

GLASGOW EYE INFIRMARY,

Berkeley-street, and 76, Charlotte-street.

Physician—Dr. Harry Rainy.
Consulting Surgeon—Dr. George Buchanan.
Surgeons—Drs. Thomas Reid, Hector C. Cameron, Thos. S. Meighan.
Assistant-Surgeons—Drs. Robert Watson and Henry E. Clark.
Resident Clerk—Dr. John I. Joyce.
Secretary—George Black, 88, West Regent-street.

Hour of visit, 1 p.m. Sixty-four beds. Student's fee for six months' attendance, £2 2s.; or for one year's attendance, £3 3s. To those attending, or who have attended, the lectures on the Eye in Glasgow University, £1 1s. for six months; or £1 11s. 6d. for twelve months.

GLASGOW DISPENSARY FOR DISEASES OF THE EAR,

241, Buchanan-street.

A course of lectures and clinical instruction are given to the students attending the Dispensary during the months of May, June, and July. Average number of cases treated, 800 annually.

Surgeon and Lecturer—Dr. James Patterson Cassells.

DISPENSARY FOR SKIN DISEASES,

63, John-street, Glasgow.

Physician—Dr. McCall Anderson.
Assistant-Physician—Dr. Provan.

Number of new cases annually, about 1400.

Practical courses on Diseases of the Skin are held during the summer session. This Dispensary is in connexion with the cutaneous wards in the University Hospital.

Hon.-Secretary—James Grahame.

GLASGOW UNIVERSITY LYING-IN HOSPITAL AND DISPENSARY FOR DISEASES OF WOMEN AND CHILDREN.

152, Wellington-street.

Physicians—Dr. Leishman and Drs. John Wilson, G. P. Tennent, and M. Cameron.

There are also Dispensaries for Diseases of the Skin and Ear, and the Royal Lunatic Asylum, Gartnavel, has been thrown open to students of Medicine on payment of a small fee.

DUBLIN INFIRMARY FOR DISEASES OF THE EYE AND EAR,

Ely-place.

Ophthalmic and Aural Surgeon—Dr. Archibald Hamilton Jacob.
Consulting Physician—Dr. Evory Kennedy.
Consulting Surgeon—Mr. George H. Porter.
Obstetric Physician—Dr. John Cronyn.

ST. MARK'S OPHTHALMIC HOSPITAL AND DISPENSARY FOR DISEASES OF THE EYE AND EAR.

Attending Surgeons—Sir William Wilde, M.D., F.R.C.S.I., Dr. Henry Wilson, and Mr. Richard Rainsford.

Instruction is given on the mornings of Mondays, Tuesdays, Thursdays, and Fridays, from eleven to one o'clock, and operations performed on Wednesdays and Saturdays from eleven to one o'clock. Fee for three months' attendance, £3 3s.

COOMBE LYING-IN HOSPITAL.

Masters—Dr. John Ringland, Dr. James H. Sawyer.
Obstetric Surgeon—Dr. George H. Kidd.
Assistant to the Masters—Mr. A. Hill Ringland.
Assistant to the Obstetric Surgeon—Dr. William Roe.
Supernumerary Assistant to the Masters—Dr. Thomas P. Mason.

This Hospital contains forty beds, and an extensive Dispensary is attached. Women, during their confinement, are attended at their own residences, and provided with whatever medicines their situations may require.

CORK OPHTHALMIC AND AURAL HOSPITAL.

SPECIAL DEPARTMENT FOR DISEASES OF THE THROAT.

Ophthalmic and Aural Surgeon—Dr. H. Macnaughton Jones.
Surgeon Extraordinary—Dr. Thomas Gregg.
Consulting Physician—Dr. Wm. Jackson Cummins.
Dentist for Throat Department—Mr. Joseph Corbett, jun.

There are twenty beds for intern patients. The attendance of extern patients during the present year has been over 1600.

Fee for three months' hospital attendance, £2 2s.

ARMY MEDICAL DEPARTMENT, WHITEHALL-YARD.

QUALIFICATIONS OF CANDIDATES FOR COMMISSIONS IN THE ARMY MEDICAL SERVICE, WITH A SUMMARY OF THE RULES BY WHICH THE PAY, PROMOTION, AND RETIREMENT OF MEDICAL OFFICERS ARE REGULATED AND DETERMINED.

(I.)—1. Every candidate desirous of presenting himself for admission to the Army Medical Service must be not under twenty-one nor over twenty-eight years of age. He must produce a certificate from the District Registrar, in which the date of birth is stated; or if this cannot be obtained, an affidavit from one of the parents or other near relative who can attest the date of birth will be accepted. He must also produce a certificate of moral character from the parochial minister, if possible.

2. The candidate must make a declaration that his parents are of unmixed European blood, and that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate. His physical fitness will be determined by a Board of Medical Officers, who are required to certify that the candidate's vision is sufficiently good to enable him to perform any surgical operation without the aid of glasses. A moderate degree of myopia would not be considered a disqualification, provided it did not necessitate the use of glasses during the performance of operations, and that no organic disease of the eyes existed. The Board must also certify that he is free from organic or other disease, and

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from constitutional weakness or other disability likely to unfit him for military service in any climate.

3. The candidate must possess two diplomas or licences, one to practise Medicine, and the other Surgery, in Great Britain or Ireland, and must be registered under the Medical Act in force at the time of his appointment.

4. Certificates of registration, character, and age must accompany the declaration when filled up and returned.

5. Candidates will be examined by the Examining Board in the following compulsory subjects, and the highest number of marks attainable will be distributed as follows:—*a*. Anatomy and Physiology, 1000 marks; *b*. Surgery, 1000; *c*. Medicine, including Therapeutics, the Diseases of Women and Children, 1000; *d*. Chemistry and Pharmacy, and a practical knowledge of drugs, 100. N.B. The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside. The eligibility of each candidate for the Army Medical Service will be determined by the result of the examinations in these subjects only. Examinations will also be held in the following voluntary subjects, for which the maximum number of marks will be—French and German (150 each), 300 marks; Natural Sciences, 300. The knowledge of modern languages being considered of great importance, all intending competitors are urged to qualify in French and German. The Natural Sciences will include Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica. The number of marks gained in both the voluntary subjects will be added to the total number of marks obtained by those who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of modern languages and natural sciences.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction at the Army Medical School on—(1) Hygiene; (2) Clinical and Military Medicine; (3) Clinical and Military Surgery; (4) Pathology of Diseases and Injuries incident to Military Service.

7. At its conclusion the candidate will be required to pass an examination on the subjects taught in the School. If he give satisfactory evidence of being qualified for the practical duties of an Army Medical Officer, he will be eligible for a commission as Surgeon.

8. During the period of his residence at the Army Medical School each candidate will receive an allowance of 5*s*. per diem with quarters, or 7*s*. per diem without quarters, to cover all cost of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a Surgeon, but without the sword).

9. All candidates will be required to conform to such rules of discipline as the Senate may from time to time enact.

(II.)—The pay, promotion, and retirement of Medical Officers of the Army are regulated by the following rules:—

1. The daily rates of pay of Medical Officers of the Army are as follows:—Pay daily: Director-General special; Surgeon-General £2, after twenty-five years' service £2 5*s*., after thirty years' service £2 7*s*., after thirty-five years' service £2 10*s*.; Deputy Surgeon-General £1 10*s*., after twenty-five years' service £1 12*s*., after thirty years' service £1 15*s*., after thirty-five years' service, £1 17*s*.; Surgeon-Major 17*s*. 6*d*., after fifteen years' service £1, after twenty years' service £1 4*s*., after twenty-five years' service £1 7*s*.; Surgeon, on appointment 10*s*., after five years' service 12*s*. 6*d*., after ten years' service 15*s*., after fifteen years' service 17*s*. 6*d*. Charge pay: The principal Medical Officer of an army in the field, of 10,000 men and upwards, £1 daily; of 5000 men and upwards, 15*s*. daily; of less than 5000, 10*s*. daily. Or, the principal Medical Officer of a colony where the number of commissioned officers and enlisted men is 1500 and upwards, £1 daily.

2. A Surgeon must pass such examination as the Secretary of State for War may require before he can be promoted to the rank of Surgeon-Major.

3. A vacancy in the rank of Surgeon-Major, occasioned by death or promotion, shall, unless it be expedient that it be otherwise filled, be given to the senior qualified Surgeon of the Department. If a vacancy arise from any other cause, it shall be filled by a qualified Surgeon, recommended by the Commander-in-Chief, and with the approval of the Secretary of State. In cases of distinguished service, however, a Surgeon, if qualified, may be promoted without reference to seniority.

4. All promotion from the rank of Surgeon-Major to that of Deputy Surgeon-General, and from the rank of Deputy Surgeon-General to that of Surgeon-General, shall be given by selection for ability and merit.

5. Service of Medical Officers upon the West Coast of Africa shall be voluntary, except for those who enter the Department especially for African service.

6. Each year or portion of a year shall be allowed to reckon double towards retirement, but not towards increased pay, provided that the officer shall serve at least twelve months on the West Coast of Africa.

7. For each year's service on the Coast, a Medical Officer shall be entitled to a year's leave at home, and for every additional period beyond a year he shall have an equivalent extension of leave.

8. Officers who may enter the Army Medical Department expressly for service on the West Coast of Africa, and those who may volunteer for that service from the General Department, shall receive double pay while actually serving on the Coast.

9. Officers who enter the department expressly for service on the West Coast of Africa shall pass the same examination as other Medical Officers, but they may be admitted at a later age. They will be required to complete three years' actual service on the Coast, after which they shall be eligible for general service. If it shall be certified by a Medical Board that any such officer is unfit for further duty on the West Coast of Africa, he may be employed elsewhere, notwithstanding that he may have served for less than three years on the Coast.

10. Good service pensions shall be awarded to the most meritorious Medical Officers of the Army, under such regulations as shall be from time to time determined. Six of the most meritorious Medical Officers of the Army shall be named Honorary Physicians, and six Honorary Surgeons to the Queen.

11. Medical Officers shall have a right to retire on half-pay after twenty years' service; Medical Officers of the rank of Surgeon-Major, or Surgeon, shall be placed on the retired list at the age of fifty-five, and all Surgeons-General and Deputy Surgeons-General at the age of sixty-five years.

12. A Medical Officer placed on half-pay by reduction of establishment, or on the report of a Medical Board, in consequence of wounds or ill-health caused in and by discharge of his duties, or on account of age (under Rule 11), shall be entitled to half-pay at the following daily rates:—Surgeon-General, after thirty years' service, £1 17*s*. 6*d*.; after twenty-five years' service, £1 13*s*. 6*d*.; after twenty years' service, £1 10*s*. Deputy Surgeon-General, after thirty years' service, £1 5*s*. 6*d*.; after twenty-five years' service, £1 2*s*. 6*d*.; after twenty years' service, £1 1*s*. Surgeon-Major, after twenty-five years' service, £1; after twenty years' service, 16*s*. 6*d*.; after fifteen years' service, 13*s*. 6*d*.; after ten years' service, 11*s*. Surgeons, after ten years' service, 10*s*.; after five years' service, 8*s*.; under five years' service, 6*s*.

13. The rate of half-pay awarded to Medical Officers retiring for their own convenience after twenty years' service on full pay shall not exceed one-half of their full pay at the time of retirement.

14. Every Medical Officer who shall retire after a service upon full pay of twenty-five years shall be granted a rate of half-pay equal to seven-tenths of the daily pay he may have been in receipt of when thus retiring or proceeding on half-pay, provided he shall have served three years in his rank, or shall have served abroad for ten years in all ranks, or for five years with an army in the field. An officer of twenty-five years' full-pay service, whose service does not fall within any of these conditions, shall be entitled to only seven-tenths of the daily pay he was in receipt of prior to his last promotion.

15. A Medical Officer placed on half-pay from any other cause shall be allowed only a temporary rate of half-pay (not exceeding the rates specified in Rule 12) for such period and at such rate as the Secretary of State for War shall decide, with reference to the services rendered to the public by such officer.

16. Medical Officers of twenty years' full-pay service, placed temporarily on half-pay under Rule 15 on account of ill-health, may, however, be allowed to retire on permanent half-pay at the rate fixed by Rule 12, if after one year on half-pay they

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shall be reported by a medical board to be permanently unfit for further service.

17. Medical Officers are entitled to quarters, fuel, and light, free of charge, or allowances in lieu thereof; also to an allowance for a servant when not provided with a soldier to act as such.

18. These allowances are determined by the relative rank of Medical Officers, which is as follows:—

Surgeon-General after three years' service, or with an army in the field	ranks as Major-General.
Surgeon-General after three years' service	„ „ Brigadier-General.
Deputy Surgeon-General after five years' service as such ..	„ „ Colonel.
Deputy Surgeon-General under five years' service	„ „ Lieut.-Colonel.
Surgeon-Major of twenty years' service	„ „ Lieut.-Colonel.
Surgeon-Major under twenty years' service..	„ „ Major.
Surgeon of six years' service ..	„ „ Captain.
Surgeon under six years' service	„ „ Lieutenant.

19. Forage will be granted to Medical Officers for such number of horses as are necessarily kept by them for duty.

N.B.—The rates of pay of British Medical Officers serving in India are the same as those sanctioned for the India Medical Service.

ARMY MEDICAL SCHOOL.

President of the Senate.—Sir William M. Muir, K.C.B., Director-General of the Army Medical Department.

Members of the Senate.—Surgeon-General Joseph Fayrer, Esq., M.D., C.B., C.S.I., Physician to the Council of India; Sir Alexander Armstrong, M.D., K.C.B., F.R.S.; Surgeon-General J. Fraser, M.D., C.B., Principal Medical Officer Royal Victoria Hospital; Surgeon-General T. Longmore, C.B., Professor of Military Surgery; Surgeon-General W. C. Maclean, C.B., Professor of Military Medicine; William Aikin, M.D., Professor of Pathology; E. A. Parkes, M.D., F.R.S., and F. S. B. F. De Chaumont, M.D., Conjoint Professors of Military Hygiene.

Assistant Professors.—Surgeons-Major T. H. Porter, W. H. Webb; and Surgeon F. H. Welch, F.R.C.S.

Candidates for commissions in the Army and in the Queen's Indian Service proceed to Netley after passing the examination in London. At Netley they attend the medical and surgical practice of the Royal Victoria Hospital, and learn the system and arrangements of military hospitals. During four months they attend the lectures given by the professors and assistant-professors, and go through a course of practical instruction in the hygienic laboratory and microscopical room.

NAVAL MEDICAL DEPARTMENT, ADMIRALTY.

QUALIFICATIONS AND REGULATIONS FOR THE EXAMINATION OF CANDIDATES FOR COMMISSIONS IN THE MEDICAL SERVICE OF THE ROYAL NAVY.

The Lords Commissioners of the Admiralty are pleased to direct that the following regulations, relative to the examination of candidates for the appointment of Surgeon in the Royal Navy, shall in future be adopted:—

1. Every candidate desirous of presenting himself for admission to the Naval Medical Service must be not under twenty-one nor over twenty-eight years of age. He must produce a certificate from the District Registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth, will be accepted. He must also produce a certificate of moral character, signed by a clergyman or a magistrate to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated.

2. He must be free from organic disease, and will be required to make a declaration that he labours under no mental or constitutional disease or weakness, nor any other imperfection or disability that can interfere with the most efficient discharge of the duties of a Medical Officer in any climate. His physical fitness will be determined by a Board of Medical Officers, who are to certify that his vision comes up to the required standard, which will be ascertained by the use of Snellen's test types. He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so.

3. He must be registered under the Medical Act in force at the time of his appointment as licensed to practise Medicine and Surgery in Great Britain or Ireland.

4. Certificates of registration, character, and age must accompany the schedule when filled up and returned.

5. Candidates will be examined by the Examining Board in the following subjects:—Anatomy and Physiology; Surgery; Medicine, including Therapeutics and the Diseases of Women and Children; Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) The eligibility of each candidate for the Naval Medical Service will be determined by the result of the examinations in these subjects only. Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to Materia Medica, also in French and German; and the number of marks gained in these subjects will be added to the total number of marks obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to their knowledge of these branches of science.

6. After passing this examination, every candidate will be required to attend one entire course of practical instruction in the Medical School at Netley on—(1) Hygiene, (2) Clinical and Naval and Military Medicine, (3) Clinical and Naval and Military Surgery, (4) Pathology of Diseases and Injuries incident to Naval and Military Service.

7. At its conclusion the candidate will be required to pass an examination on the subjects taught in the school. If he give satisfactory evidence of being qualified for the practical duties of a Naval Medical Officer, he will be eligible for a commission as Surgeon.

8. During the period of his residence at the Netley Medical School each candidate will receive an allowance of 5s. per diem with quarters, or 7s. per diem without quarters, to cover all costs of maintenance; and he will be required to provide himself with uniform (viz., the Regulation undress uniform of a Surgeon, but without the sword).

9. All candidates will be required while at Netley to conform to such rules of discipline as the Senate may from time to time enact.

10. After completing three years' full-pay service, Surgeons will be allowed to be examined for the rank of Staff Surgeon, but no Surgeon can be promoted to the rank of Staff Surgeon until he shall have served five years, two of which must have been in a ship actually employed at sea.

REGULATIONS SHOWING RANK, PAY, AND POSITION OF NAVAL MEDICAL OFFICERS.

1. Promotion to the rank of Fleet Surgeon is open to officers for distinguished or special service, although twenty years on full pay may not have been completed; such Fleet Surgeons will have 16s. a day half-pay.

2. Fleet Surgeons rank with Commanders, according to date of commission.

3. The whole time served on full pay as a Surgeon to be allowed to Staff Surgeons to qualify for the rank of Fleet Surgeon, provided the examination for Staff Surgeon is passed before the officer completes ten years' service, otherwise only ten years served as Surgeon will be allowed to count.

4. Fleet Surgeons are appointed to the flag ships of commanders-in-chief on foreign stations, with an allowance of 5s. a day in addition to their established pay.

5. The hospital allowances for Naval Medical Officers at home and abroad in lieu of provisions, for themselves and servants, and for fuel and light are as follows:—Inspectors-General of Hospitals, £85 at home, £130 abroad; Deputy Inspectors-General, £65 at home, £112 abroad; Fleet-Surgeons and Staff-Surgeons, £53 at home, £112 abroad; Surgeons, £39 at home, £108 abroad. In cases where Medical Officers draw provisions or fuel from public stores, they will be charged for the same at cost price.

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6. The travelling allowances, extra pay, lodging money, and compensation for losses are fixed for Naval Medical Officers according to their relative rank in the service.

7. Medical Officers have cabins according to their relative rank in the service, excepting always that the Senior Executive Officer of whatever rank has the one most suitable for his duties.

8. The full and half-pay of Naval Medical Officers is in accordance with the following scale:—

Full-pay: Surgeon—Under five years' service (except during the session at Netley) [see Regulations], 11s.; under eight years' service, 12s. 6d.; under eleven years' service, 14s.; under fourteen years' service, provided he passed his examination for Staff Surgeon while under ten years' service, 15s. 6d.; above fourteen years' service, ditto, 17s. Staff Surgeon—On promotion, or under fourteen years' service, 18s.; ditto, or under seventeen years' service, £1; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 2s. Fleet Surgeon—On promotion, or under twenty years' service, £1 3s.; ditto, or above twenty years' service, £1 4s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 10s. Deputy Inspector-General of Hospitals and Fleets—On promotion, or under twenty-two years' service, £1 11s.; ditto, or above twenty-two years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s. Inspector-General of Hospitals and Fleets—On promotion, or under twenty-five years' service, £2 5s.; ditto, or above twenty-five years' service, £2 6s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £2 10s. Half-pay: Surgeon—Under five years' service, 6s.; under eight years' service, 8s.; under eleven years' service, 10s.; above eleven years' service, provided he passed his examination for Staff Surgeon while under ten years' service, 17s. Staff Surgeon—On promotion, or under fourteen years' service, 11s.; ditto or under seventeen years' service, 13s.; ditto, or above seventeen years' service, 14s. Fleet Surgeon—On promotion, or under twenty years' service, 16s.; ditto, or above twenty years' service, 16s. 6d.; and for each additional year of service 6d a day more until the maximum is reached—namely, 18s. 6d. Deputy Inspector-General of Hospitals and Fleets—On promotion, or under twenty-two years' service, £1 1s.; ditto, or above twenty-two years' service, £1 2s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 7s. Inspector-General of Hospitals and Fleets—On promotion, or under twenty-five years' service, £1 11s.; ditto, or above twenty-five years' service, £1 12s.; and for each additional year of service 1s. a day more until the maximum is reached—namely, £1 18s.

9. Retirement is provided for according to age and service, under special regulations.

10. My Lords will consider, and publish hereafter, the manner in which it may be found most advisable to assist Naval Medical Officers in their professional education after examination and admission into the Navy.

DECLARATION.

Recommended by _____ I _____ _____ years of age in _____ last—vide accompanying Certificate—a Candidate for appointment as a Medical Officer in the Royal Navy, do hereby engage for general service, and attest my readiness to proceed on duty abroad whenever required to do so.

I declare that I labour under no mental or constitutional disease or weakness, nor any other imperfection or disability which can interfere with the most efficient discharge of the duties of a Medical Officer in any climate.

Signature, _____

Date, _____

Place of residence, _____

SCHEDULE OF QUALIFICATIONS.

I have in my possession the following Degrees, Diplomas, and other Qualifications in Medicine, Surgery, and in Arts:—

I wish to be examined in the following voluntary subjects, viz.:—

Signature, _____

CIRCULAR No. 12, C.W.

Admiralty, March 6, 1875.

(*Medical Officers of the Navy.*)

My Lords Commissioners of the Admiralty having had under their consideration the position of the Medical Officers of the Navy, are pleased, under the authority of Her Majesty's Order in Council of February 4, 1875, to establish the following regulations:—

1. Surgeons on entry to have the same relative rank as Paymasters, Chief Engineers, and Naval Instructers—namely, to rank with Lieutenants under eight years' seniority, and to wear uniform corresponding to such relative rank.

2. Staff Surgeons to be denominated "Fleet Surgeons," and Staff Surgeons second-class simply "Staff Surgeons"; the distinction in rank between these two grades to be denoted by a small difference in the uniform of the Staff Surgeon, who, instead of three stripes of gold lace round the sleeve of the coat, which the Fleet Surgeon will wear, will wear two stripes of gold lace, with a stripe of narrow gold braid between.

3. Inspectors-General to be compulsorily retired at the age of sixty; to be allowed £2 per day, provided they shall have completed the period of service now required to entitle them to the maximum half-pay of their rank; should they not have completed such period of service, they will be retired at the rate of half, or retired pay, specified in the Order in Council of February 22, 1870.

4. Deputy Inspectors-General to be compulsorily retired at sixty; if in the first six of their rank, to be allowed 33s., others 30s. per diem, provided that they shall have completed the period of service now required to entitle them to the maximum half-pay of their rank; should they not have completed such period of service, they will be retired at the rate of half or retired pay specified in the Order in Council of February 22, 1870.

5. Fleet Surgeons and Staff Surgeons to be placed on the same scale of retirement as chaplains and naval instructors, secretaries and paymasters; that is, the maximum to be £450 per year instead of £400.

6. Fleet Surgeons to have the option of retiring after twenty years' full pay service in all ranks at 15s. per day, and after twenty-five years' full pay service at 21s., subject in each case to their Lordships' approval; but of those now on the list, not more than ten to retire under this clause in each year (the Officers having the option according to seniority), unless their Lordships should approve (with the consent of the Treasury) of a larger number so retiring. Applications from Officers wishing to retire under this clause should be lodged at the Admiralty before November 30 in ecah year, in order that they may be dealt with, according to seniority, before the end of the year.

7. All Medical Officers hereafter entered to have the option of so retiring, subject to the approval of their Lordships in each case.

By command of their Lordships,

ROBERT HALL.

To all Commanders-in-Chief, Captains, Commanders, and Commanding Officers of Her Majesty's Ships and Vessels.

THE INTRODUCTORIES.

THE following are the days and hours of the various Introductory Lectures, with the names of the respective lecturers:—

Hospital.	Date.	Lecturer.	Hour.
St. Bartholomew's	Friday, Oct. 1	None.	
Charing-cross	"	Mr. Fairlie Clarke	4 p.m.
St. George's	"	Dr. R. Barnes	4 p.m.
Guy's	"	Dr. Stevenson	2 p.m.
King's College	"	Dr. Curnow	4 p.m.
London	"	Dr. Bathurst Woodman	3 p.m.
St. Mary's	"	Dr. Randall	3.30 p.m.
Middlesex	"	Mr. Lowne	3 p.m.
St. Thomas's	"	Dr. Payne	3 p.m.
University College	"	Dr. Corfield	3 p.m.
Westminster	"	Mr. Richard Davy	3 p.m.

THE WORCESTER INFIRMARY.

WE mentioned last week that the Executive Committee of this charity had adopted the resolution, come to by their sub-committee, that there is no reason for any alteration of the rules concerning the attendance of the honorary medical staff; and that the medical staff, being still dissatisfied, had intimated their intention of bringing the subject before a general meeting of the governors. But the matter deserves a little more notice. The medical staff asked that one of the rules (Rule 59) should be altered, so as to allow that, "in the event of the unavoidable absence of any one of the honorary medical staff from the Infirmary at the time appointed for his attendance," he shall, if possible, secure the services of a colleague, but that, failing to do so, the house-surgeon should attend to such patients as might be in waiting to see the absent physician or surgeon; and that "on every such occasion the particulars of such absence, and the reason for failing to comply with the rules, shall be laid before the House Committee at their meeting." We cannot but think it a great pity that the Executive Committee should have refused so small and so reasonable a concession as this; and we do not see that matters are improved by the formal expression of their opinion that "they are persuaded that fairness and liberality of construction of the circumstances which may occasion an infringement of the

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rule will always be extended to the honorary medical staff, if the Executive Committee are treated with the confidence to which they are justly entitled." It is difficult to believe that a committee of gentlemen meant to convey the idea that they would not feel bound under all circumstances to treat the staff with fairness and liberality; or that any apparent want of confidence on the part of the medical officers could justify their being treated with any unfairness or illiberality. But if this was not meant, the expressions used were most unhappily chosen. Further, it is to be observed that the executive do not appear willing to place in their staff the "confidence" they demand from them, for they say that their quarrel with Dr. Inglis was not that he had infringed the rules, but that he did not give the explanation which, in their opinion, he ought to have given. The change proposed by the medical staff provides for full explanation in the future, and we cannot but hope that the differences still existing between them and the executive may be settled amicably. We observe with pleasure that our contemporary the *Worcestershire Chronicle* has commented on the subject very ably and fairly.

COMMUNICATIONS have been received from—

Mr. James D. Gunning, Fyzabad; Mr. Turner, Aylesbury; Dr. A. Inglis, Worcester; The Registrar of Apothecaries' Hall; Mr. Hooker, London; Mr. G. R. Gilruth, Edinburgh; Dr. Corfield, London; Dr. Lush, Fyfield; Dr. Sparks, Weymouth; Dr. Chapman, Paris; Dr. Denton, Bridlington.

BOOKS AND PAMPHLETS RECEIVED—

Tatham's Report on the Health of the Borough of Salford—Programme et Règlement Congrès Periodique International des Sciences Médicales, 4e Session, Bruxelles—Liddle's Report of the Sanitary Condition of Whitechapel.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Practitioner—L'Archives Générales de Médecine—The Surrey Sentinel and Review—Bucks Advertiser—Worcestershire Chronicle—Southsea Observer and Hampshire Post—Sanitary Review—Courier and East London Gazette.

APPOINTMENTS FOR THE WEEK.

September 11. *Saturday (this day).*

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

13. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

14. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

15. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

17. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 4.

BIRTHS.

Births of Boys, 1175; Girls, 1129; Total, 2304.
Average of 10 corresponding years 1865-74, 2090·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	755	674	1429
Average of the ten years 1865-74	685·3	655·7	1341·0
Average corrected to increased population	...	...	1435
Deaths of people aged 80 and upwards	...	...	36

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	19	2	4	...	2	1	25
North	751729	2	6	23	2	13	...	6	...	24
Central ...	334969	...	1	7	1	10	...	3	...	16
East	639111	...	6	18	1	15	1	5	3	45
South	967692	...	7	32	3	18	...	4	2	67
Total	3254260	2	22	99	9	60	1	22	6	198

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·925 in.
Mean temperature	60·0°
Highest point of thermometer	74·9°
Lowest point of thermometer	44·6°
Mean dew-point temperature	54·7°
General direction of wind	S.W.
Whole amount of rain in the week	0·23 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 4, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Sept. 4.	Deaths Registered during the week ending Sept. 4.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2304	1429	74·9	44·6	60·0	15·56	0·23	0·58
Portsmouth ...	122632	27·3	87	60	...	...	...	...	...	...
Norwich	82842	11·1	68	55	74·8	49·8	59·0	15·00	0·38	0·97
Bristol	196186	44·1	131	107	71·6	47·4	58·7	14·83	0·72	1·83
Wolverhampton ...	71718	21·1	50	41	70·6	45·1	58·3	14·61	0·77	1·96
Birmingham ...	366325	43·6	286	222	70·6	46·5	59·2	15·11	0·57	1·45
Leicester	109830	34·3	78	73	70·5	45·0	58·9	15·50	0·50	1·27
Nottingham ...	92251	46·2	53	64	70·9	42·7	57·9	14·39	0·65	1·65
Liverpool	516063	99·1	363	257	66·7	51·6	58·4	14·66	1·16	2·95
Manchester ...	356626	83·1	292	194	74·0	46·0	58·7	14·83	2·00	5·08
Salford	135720	26·3	124	94	72·0	42·9	58·5	14·72	2·01	5·11
Oldham	87437	18·7	41	42	...	...	...	...	...	...
Bradford	168305	23·3	119	114	...	...	...	...	...	...
Leeds	285118	13·2	223	170	69·0	51·0	58·2	15·11	0·84	2·13
Sheffield	267881	13·6	233	129	71·4	47·2	58·7	14·83	0·68	1·73
Hull	133932	36·8	89	77	69·0	44·0	57·6	14·23	1·51	3·84
Sunderland ...	106342	32·2	86	49	...	...	...	...	...	...
Newcastle-on-Tyne	137665	25·6	121	82	65·0	46·0	53·4	11·89	0·75	1·90
Edinburgh	211626	50·5	120	101	...	...	...	...	...	...
Glasgow	534564	88·6	396	251	66·3	41·2	55·6	13·12	1·00	2·54
Dublin	314666	31·3	188	129	73·6	46·0	60·4	15·78	0·80	2·03
Total of 21 Towns in United Kingdm	7742889	37·0	5457	3740	74·9	41·2	58·3	14·61	0·91	2·31

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·93 in. The lowest was 29·70 in. on Sunday morning, and the highest 30·11 in. on Wednesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

SYMPATHETIC OPHTHALMITIS.

A CLINICAL LECTURE DELIVERED AT ST. MARY'S HOSPITAL.

By HAYNES WALTON, F.R.C.S.,
Surgeon to the Hospital, etc.

GENTLEMEN,—In this affection the eyeball is attacked with inflammation, the effect of some morbid force in the fellow-organ associated with tissue-spoiling, constituting more or less disorganisation, springing out of the following conditions:—Intra-ocular impaction of extraneous bodies; intra-ocular deposits of cretaceous or bony material in an eyeball already spoiled; intra-ocular tumours; injuries which penetrate, lacerate, or bruise; chemical damage; inflammatory action from any cause, whether originating within or without the eyeball, except, perhaps, acute ophthalmitis followed by suppuration.

Sympathetic ophthalmitis is a very dangerous malady. If left to itself it invariably ends in blindness. It commences insidiously, and may spoil the eye, when occurring in childhood, almost before it is perceived.

The patient, as you see, is a juvenile one, only nine years old. He was brought here three months ago, with his right eyeball ruptured by a street accident, the cornea having been torn across. He was sent to bed, and his eyelids closed with court-plaster, and subsequently treated as if he had undergone an operation on the eyeball. This was not with a view of saving vision, for the eye was destroyed as an organ of sight, but for the purpose of reducing inflammatory action, and getting the eye into a quiet state, as a security against the setting up of sympathetic ophthalmitis. It was so far an indirect treatment of the other eye—a therapeutic principle in traumatic cases which you ought to remember. The parents of the boy, failing to see the advantage of what I was doing, took the little sufferer away from the hospital after a few days, and allowed him to return to the streets. Six weeks afterwards he was brought back again in the following condition:—The right eyeball—that originally hurt—was in a state of chronic inflammation and very tender; the left displayed a furious attack of ophthalmitis. Now, although the activity of such sympathetic symptoms are a little reduced, you might imagine you were looking at an eye spoiled by what is called traumatic iritis, which is, indeed, general or pan-ophthalmitis, for all the tissues of the eyeball inflame. The pupil is contracted, adherent to the capsule of the lens, and the small remaining area of it is filled with exudation. The iris is discoloured, is without lustre, and bulges. The sclerotica is dusky and hyperæmic, and the ciliary region is covered by enlarged veins. The posterior elastic lamina of the cornea is hazy. The eyeball is rather soft. Vision is lost—indeed, it was destroyed before the re-admission of the patient. Any treatment would be useless.

Sympathetic ophthalmitis is more liable to occur in children or in young persons, and is more rapid in its effects than in adults.

Now, there are three questions which specially concern us in this affection.

The first is, What is sympathetic ophthalmitis? It may be expressed as inflammatory changes, generally of a low or subacute form, in the vascular tissues of the eyeball, attended by effusions which are quickly organised, and ultimately by disorganisation. It is, therefore, a destructive ophthalmitis.

The second question is, How are you to know sympathetic ophthalmitis when you see it? As the subjective and objective symptoms are not unlike those which may be met with in inflammatory affections of the eyeball from other causes, we cannot rely on them alone for our guidance. We must study at the same time the exciting cause as well as the effect. That is, we must examine the two eyes and seek to discover such association.

The exciting eye—that originally diseased—is always blind and partially or wholly disorganised, having been so affected by intra-ocular tissue-changes, separately and distinctly from any physical incapacity arising out of opacity of the cornea or cataract, before the exciting force is set up. By "partial disorganisation" I mean destructive changes in the ciliary body, in which the iris and the anterior part of the choroidea and the neighbouring portions of the retina and the vitreous body participate. By "entire disorganisation," destructive changes in the iris, the ciliary body, the choroidea, and the retina.

If there be much vascular excitement—a state met with only where the eyeball is not reduced, or but in the least degree so altered—there are symptoms according to the extent of the disorganising inflammation, whether it be in the front of the eyeball or general. In the first there is irido-cyclitis, or inflammation of the iris and the zone of the eyeball corresponding to the ciliary region. A belt of the sclerotica and the conjunctiva is red, and the anterior ciliary veins are much enlarged. In the second there is ophthalmitis or inflammation of all the interior of the eyeball; that is, irido-cyclitis, and something more, the entire sclerotica being hyperæmic—what some call inflamed. But there may be no vascular excitement as an objective symptom. In all cases the eyeball is tender when pressed or squeezed between the fingers, whether it be of abnormal size or reduced, vascular or not.

The sympathising eye shows these signs:—

1st. *Subjective ones.*—Intolerance to light, for the most part with slight lachrymation, is usually the first result; some form of impaired sight is the next bad omen, and this is shown in incapability of sustaining vision on minute objects, loss of definition, and a feeling of discomfort or distress which ensues when the eye is used. This simulates asthenopia. Muscæ, spectra, flashes, stars, and coruscations follow. I have twice met with complete loss of sight, occasionally for a few seconds.

2nd. *Objective ones.*—These are like those of subacute rheumatic iritis, in addition to which there is corneitis, usually of the punctiform kind. The changes in the iris are always the most prominent among them, and, at last, all which are possible to occur in plastic inflammation are passed through. By this the pupil is contracted, universally adherent to the capsule of the lens, its area filled with lymph, and the body of the iris thinned and projecting. After that the eyeball may or may not atrophy.

An ophthalmoscopic examination affords no help in diagnosis, because visible internal ocular organic changes are not early. Late in the disease, the choroidea and the retina inflame, and then the vitreous body becomes hazy.

The exciting action may be set up at any time in a disorganised eye, so long as it is the subject of vascular excitement, or acquires such irritation from any accidental cause, even after it has long been in a quiescent state. This contingency induces many surgeons to extirpate disorganised eyes, whether they be atrophic or not.

The third and last question inquires about the treatment. This is not founded on a knowledge of the nature of the sympathetic action, since this is unknown, although many suggestions respecting it have been made. Experiments on the lower animals to solve the matter have given but negative results.

No general measures, no local applications, are of any avail in checking unequivocal sympathetic ophthalmitis. The affection can be stopped only by treatment applied to the eye originally hurt, although the arrest may be hastened by other treatment. Any extraneous body within it which irritates should, if possible, be extracted. In the case of a wound especially, or under any other condition where the centre of the irritation is limited to the front of the eyeball, that part only should be removed by abscission or amputation. Where there is complete internal disorganisation of the eyeball, or general enlargement or atrophy, extirpation is necessary. The beneficial effect on the ophthalmitis from such treatment is truly marvellous. In any case in which there is not appreciable structural change in the eye, complete recovery may ensue, and be as rapid as it is perfect. Even where disorganisation is going on, it may be arrested, and useful, though somewhat imperfect, sight may be saved. So thoroughly and completely has the inflammatory action been stopped on some occasions, that I have been enabled to restore sight by establishing an artificial pupil, or removing a cataract which had formed from loss of nutrition to the crystalline lens.

We may certainly help to reduce any inflammation in the sympathising eye by local and general measures—those which we would apply in ophthalmitis from direct mechanical injury.

Even where no objective symptom is present, recovery will be brought about all the sooner by resting the eye for some weeks or months, and protecting it from bright day or artificial light.

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ORIGINAL COMMUNICATIONS.

ON ABSCESS OF THE FRONTAL SINUSES.

By W. SPENCER WATSON, F.R.C.S. Eng.,
Surgeon to the Great Northern Hospital, etc.

THE rare cases in which these sinuses are affected possess considerable interest on account of the difficulties of diagnosis, and also from the close proximity of the parts involved to the cranial contents. The diagnosis in the early stage of abscess is extremely obscure; and even when the walls of the sinus have become considerably protruded, the seat of the malady only is clearly established, while the nature of the contents of the cavity may remain as uncertain as ever. It is only when there is manifest fluctuation, with protrusion and thinning of the walls of the cavity, that abscess can be clearly detected. Even at this stage the swelling and redness of all the surrounding parts may be so great that the aspect is not unlike that of erysipelas or of acute abscess of the lachrymal sac. From erysipelas it differs in being associated at an early period with severe pain and tenderness in the frontal region, and from the absence of the polished and shining surface peculiar to that disorder. From lachrymal abscess it differs in the primary seat and extent of the swelling, and in the absence of any but very slight interruption to the free escape of the tears through the excreting lachrymal passages. Abscess in the frontal sinus is often associated with or preceded by an offensive discharge from the nostril, and in some cases all sense of smell is lost. Neither of these conditions are observed in connexion with ordinary abscess of the lachrymal sac; but they may both be present exceptionally if the bones of the nasal fossæ are involved, and the lachrymal abscess is only a secondary result of this condition. The removal of pieces of necrosed bone from the walls of the sinus has often been accomplished, but should never be attempted until they are found to be lying quite or nearly loose and detached. In the following cases the portions of diseased bones occupied the anterior wall of the sinuses; but, in any cases in which the posterior walls are involved, it is extremely dangerous to attempt the removal of sequestra, the dura mater being very liable to be ruptured in the act of tearing away the partially detached bone. I have, however, never seen this accident happen, nor have I ever known or read of any case in which fatal results have followed an operation of this kind.

Case 1.—*A Case of Necrosis of the Orbital Plate of the Frontal Bone following an Acute Abscess of the Frontal Sinus.*

J. E. L., aged thirty-two years, a perfumer's assistant, married, had always been in good health, never having had a day's illness, and never having had venereal or other disease till January, 1874, when he was suddenly seized with severe pain in the head, forehead, and across the eyes. He had not had any fall or injury, nor was he aware of anything having happened to him likely to have produced this condition. The pain he describes as having been so severe that he was unable to keep still for a moment, but "kept rolling himself about in agony." In a day or two this was succeeded by swelling, redness, and heat of the forehead and eyelids, and it was supposed that he was suffering from erysipelas; and at length a swelling formed over the inner side of the right orbit, which at last broke. From the time of the outbreak of erysipelas, and up to the time that I first saw him in April, he was very frequently annoyed by the escape into his nostrils of some very foul-smelling discharge, but no bone had escaped. When seen by me, in April 29, 1874, there was a swelling of about the size of half a walnut immediately under the inner extremity of the superciliary ridge, the skin over this being red and inflamed, and perforated near its centre by a sinus, from which thick foul-smelling pus was constantly flowing. On probing this sinus I found several pieces of bone lying loose in the frontal sinus. I therefore suggested that an operation should be performed for the removal of these sequestra. Bichloride of methylene was given, and the sinus was then enlarged and two fragments of bone easily drawn out. The larger of the two pieces was about three-quarters of an inch across, about the thickness of an egg-shell, and concavo-convex in form. Having compared the fragments with the bones in this region, they evidently came from the orbital plate of the frontal bone at its junction with the inner extremity of the superciliary ridge. Very free arterial hæmorrhage followed the removal of the dead bone, but this was easily controlled by pressure. The cavity was dressed with dry lint. In a few days all the swelling had subsided, and by the use of carbolic acid lotion as an injection, all offensive odour was soon destroyed; healthy granulations sprang up, and the wound gradually contracted, leaving a depressed cicatrix, however, and a fistulous opening that only closed about the end of August or early in September. When seen in October no opening remained, the general health was very good, and there was no distortion of the eyelid, as I had at one time anticipated. He still occasionally notices an offensive smell coming into his nostrils from the part.

Case 2.—*Case of Necrosis of the Frontal Bone following Abscess.*

Thomas C., aged twenty-six years, came to King's College Hospital under my care in May, 1864, with an ulcer occupying the left side of the root of the nose, and a swelling of that part of the forehead corresponding to the frontal sinus of the same side. A foul-smelling discharge had commenced nine months before to come down his nostrils, and had continued ever since. There was great tenderness over the frontal swelling. He denied ever having had syphilis. All his symptoms rapidly subsided after the escape of a piece of necrosed bone that had evidently formed part of the anterior wall of the frontal sinus.

In some rare instances such as the following a spontaneous discharge of the pus makes its way through the nostril:—

Case 3.—*A Case of Abscess of Frontal Sinus opening into the Nostril.*(a)

A woman, fifty years of age, who had suffered from syphilis, had on the anterior part of her frontal bone a fluctuating and indolent tumour. When pressure was made on this tumour, and continued for some time, it caused it to empty itself; a large quantity of pus then flowed from the nose. An affection of the frontal sinus, with destruction of the anterior wall of the sinus, was diagnosed. There were besides three exostoses on the arms and forearms.

This woman died from albuminuria, and at the autopsy the frontal sinus was found to be much dilated and full of pus; its anterior wall was destroyed to a great extent; around this perforation the osseous tissue was thickened and condensed. The diploe had disappeared, the entire thickness of the bone being made up of a compact and very hard tissue.

(To be continued.)

THE TREATMENT OF TAPEWORM BY CREASOTE.

By HENRY BRICKWELL, M.R.C.S.

SOME fifteen years ago, a man discharged from the army with lung disease and tapeworm came under my notice, when it occurred to me that the destructive properties of creasote to the lower grades of animal life might be made available for killing or so weakening the vitality of intestinal worms that they could easily be got rid of. I therefore gave him some three times a day, shortly after meals, for six days, and on the seventh a dose of castor oil and turpentine, which brought away a worm twelve yards long. I have since tried creasote for destroying round worms with great success. In one case a large mass of more than a hundred worms of all sizes came away, and the patient has not been further troubled by them. I have not succeeded so well with the troublesome thread worms of adults, but have some doubts if the remedy were fairly tried. I have just had the following case of tapeworm:—

W. E., aged twenty-three, labourer, pale, sallow, and sickly-looking, but fairly fleshy, came to me with hæmoptysis and symptoms of tubercle in the lung, which passed off, and he was able to work through the winter. Four months ago he came to me suffering with the prevailing malady, bronchitis, and he then first began passing portions of tapeworm. I deferred treating him for the latter until his health was better. A month ago he returned in fair health, having frequently passed portions of worm since his last visit. I gave him one drop of creasote made into a pill with pulv. tragacanthæ co. three times a day, half an hour after each meal, so as to impregnate the ingesta. As the stomach bore the medicine well for two days, I increased the dose to two drops three times a day for

(a) Demarquay on "Diseases of the Orbit," pp. 88, 89.

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two more days, and then to three drops at a time for two more days. On the seventh day I gave him a dose of castor-oil (aperients acted very strongly on this patient, or I should have combined it with sp. terebinthinæ). On the fifth day of the treatment a worm eight yards long came away, and he had slight diarrhœa. Not seeing me, he continued the creasote on the sixth day, and took the oil on the seventh, which acted very freely, but brought no more worm away. There appear to have been no symptoms to indicate the presence of the worm until he began to pass portions of it. He had, however, complained of a feeling of weakness, sinking, and faintness for several years, more particularly in the evening. These feelings have now disappeared, and he is stronger, better, and more healthy-looking than before.

The two points that have struck me are—first, that he began passing the worm during a febrile attack (could that have influenced the vitality of the worm, and so tended to its passage?); and, secondly, that he had a chest complication. It is a curious coincidence that these symptoms should have co-existed in the only two cases of tapeworm that have come under my notice.

Somersham, Hunts.

CASES OF PURULENT OPHTHALMIA WITH MEMBRANOUS DISCHARGE.

By EDWARD NETTLESHIP, F.R.C.S.,
Surgeon to the South London Ophthalmic Hospital.

Among the valuable "Suggestions for Clinical Work in Ophthalmology," by Mr. Hutchinson, in the recent numbers of the *Ophthalmic Hospital Reports*, "diphtheritic ophthalmia," or cases in any way allied to it, are mentioned as deserving record on account of their rarity. The four cases of membranous ophthalmia recorded below, although only one of them is as complete as it should be in respect to inquiries about scarlet fever, etc., may be of some interest. With regard to the last three cases, it is interesting to observe that they all came under my notice at the South London Ophthalmic Hospital within a few weeks of each other. I do not know whether any unusual frequency of such cases was observed in other hospitals at the same season; but I have been informed by Dr. Wilton, of Sutton, that several cases of purulent ophthalmia, with distinctly membranous discharge, occurred during the summer months among the children of the South Metropolitan (Poor-law) School, of which he is the medical officer. There had been some measles, but no scarlet fever in the School.

Although none of the last three cases (Nos. 2, 3, and 4) were very well-marked examples of membranous ophthalmia, they were sufficiently so to at once attract attention, while since their occurrence no cases resembling them have come under my care.

Case 1.—*Membranous and Purulent Ophthalmia in an Infant, probably the subject of Congenital Syphilis—One Eye much Damaged.*

I saw the following case while I was clinical assistant at the London Hospital, and am indebted to Mr. Rivington for permission to use it:—

Cornelius B. H., aged five weeks, was brought on January 1, 1870, with severe ophthalmia; the eyes had been very bad for a week or ten days. There was great swelling of the eyelids, and a good deal of discharge. My notes state that "on everting the lids, I found them lined more or less perfectly with false membrane, which I was able to peel off with forceps. This caused considerable bleeding, especially in the right eye, where the membrane was most abundant and consistent. There was some infiltration of the lids, but not to an extreme degree. The discharge from the left eye was more purulent and less membranous than that from the right." The left cornea was certainly clear; the right was not satisfactorily seen. A lotion of nitrate of silver, two grains to the ounce, was ordered.

A week later the eyes were much better. There was no false membrane, and the discharge was much less abundant. The left cornea was clear, but there was a large central leucoma of the right, without any apparent ulceration. At the end of second week (January 15) there was nothing fresh to note as to the eyes.

The above-described rare form of ophthalmia was in this case associated with a general eruption on the skin, the nature of which must remain somewhat doubtful; syphilis, however, furnished the most probable explanation, although there was no history of suspicious symptoms in the previous children, and the mother would not admit having had any local or general symptoms of the disease herself. There was no history of either scarlet fever or sore throat having occurred in the neighbourhood. It is, perhaps, worth while in such a case to record the details of the skin disease, which are as follows:—When the child was ten days old the mother noticed some discharge from his eyes; soon after, a rash came out under the armpits, and spread to the body and limbs. When admitted (January 1), the skin of the body and limbs was erythematous and desquamating, the epidermis separating in more or less large scales; while on the abdomen the skin beneath was raw as if it had been superficially scalded; there were, however, no bullæ. The scalp and eyebrows were covered with a dry eczema crust of considerable thickness, a form of eruption suspicious of inherited syphilis. The child snuffled moderately; there was no thrush. In addition to the treatment for the eyes, mercurial inunction was ordered, and zinc ointment for the eruption. The child did not remain under care long enough, however, to give the constitutional treatment a fair trial, and the considerable improvement which immediately occurred in the state of the skin must probably be set down to the zinc ointment.

Case 2.—*Conjunctivitis with Membranous Discharge and Infiltration of Conjunctival Tissue coming on during the course of a severe Corneal Ulceration in a Feeble Child, and most marked on that part of the Eyelid in contact with the Corneal Ulcer—The Conjunctivitis possibly produced or increased by Belladonna and Compress.*

Jesse H., aged four years, was admitted on July 8, 1874, for an ulcer of the right cornea, near the lower margin. Atropine and a compress were ordered.

On August 1 there was a slight hypopyon, and on the 8th it is noted that there was purulent infiltration at the base of the ulcer, and more hypopyon. The whole cornea was steamy, and there was considerable congestion of the eye. The child was pale and languid. Treatment continued, with the addition of warm belladonna lotion and an iron mixture.

On the 15th the hypopyon larger, and cornea more steamy, but child more comfortable. There was some muco-purulent discharge, and to check this, alum (four grains to the ounce) was added to the belladonna lotion.

On the 19th the following note was made:—"More discharge, and slight swelling of lids; the discharge is now membranous, and over a large patch on the lower lid it is somewhat adherent. The conjunctiva beneath this adherent patch is yellow and thickened, as if infiltrated, and the folds of the conjunctiva are here adherent to one another. The appearance is like that caused by superficial ulceration of the conjunctiva from over-use of solid caustic, but nothing of the kind has been used. There is also a pellicle of discharge on the upper lid, but no infiltration. Hypopyon and ulcer as before; pupil scarcely dilated. Mitigated silver stick to be applied to the conjunctiva twice a week or oftener, and washed off; continue atropine, belladonna and alum lotion, and compress."

August 22.—Eye better. Alum increased to eight grains in the ounce, and the lotion to be used cold; the silver to be continued. The conjunctiva rapidly improved, the effect of the nitrate of silver being most marked; during the first few days after this application was begun the pellicular discharge and the redness of conjunctiva returned somewhat between each application, but this ceased after several applications, and although there was a slight return of discharge after the mitigated caustic had been left off, perhaps in part due to atropine irritation, it did not again become pellicular, nor the conjunctiva become infiltrated.

It was remarkable, however, that though the condition of the eyelids improved so very definitely, the corneal disease progressed, threatening perforation, and the iris became vascular. I made a free iridectomy, and removed the flaky purolymph from the chamber, the corneal wound being close to the ulcer. On August 26 the immediate effect was excellent, the ulcer becoming vascular and almost entirely filled up, and the cornea somewhat clearer. A fortnight later the ulcer, however, deepened again for a few days, but again healed, when atropine, lotion, and silver were all discontinued. The cornea subsequently cleared up enough to allow of a good artificial pupil being made inwards, but without any apparent improvement in sight.

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The child was pale, feeble, and languid throughout, taking food badly. She had had measles eight months before the eye inflamed, but there was no history of any more recent illness. Neither iron nor (later in the case) cod-liver oil and bitters had any apparent effect on her health.

Case 3.—Purulent Ophthalmia in One Eye only, with Membranous Discharge, in a Young Child who also had Purulent Discharge from Vagina—Self-inoculation probable.

Annie P., aged two years, admitted August 29, 1874, suffering from purulent ophthalmia of the left eye with pellicular discharge. The eye had been bad for a week. Some lotion had been ordered at another ophthalmic hospital, but the child was thought to be getting worse. I made the following note:—"Much swelling of the lids, but not brawny; profuse pellicular (definitely membranous) discharge; palpebral conjunctiva much swollen but soft, and bleeding on the slightest touch; no chemosis can be made out. Cornea perfect."

The other eye was not affected. Under the application of a thirty-grain solution of nitrate of silver every alternate day, and the very frequent use of an alum and zinc lotion, she was well in about ten days.

In this case the child on admission had purulent discharge from the vagina, and the mother stated that this had been present for a week or two before the eye began to inflame; it is, therefore, most probable that the child inoculated its eye with its own vaginal discharge; I have seen the same occurrence in another case. It must be mentioned, however, that in the present instance the child's mother was also suffering from a discharge, which may have been the source of the child's ophthalmia. It had been present since her last confinement, ten months previously.

Case 4.—Severe Ophthalmia, with Membranous Discharge, in a Baby.

Jane P., aged six months, was brought on August 15, 1874, with severe ophthalmia and membranous discharge. The palpebral conjunctiva of the upper and lower lids of the right eye was very œdematous and thickened, but not brawny; there was profuse discharge, which was noted to be "very definitely pellicular and somewhat adherent to the conjunctiva; enough so to cause bleeding in some parts when lifted off." This eye had begun to inflame a week before; the discharge was said to have been watery at the outset.

When admitted the left was also affected, but much less severely than the right. The child was in good health, and there was no history of contagion. The child was not brought again, and I have failed to trace her.

A Splendid Midwifery Fee.—Prof. Depaul, of the Paris Faculty, has been sent for to Rio Janeiro to attend the daughter of the Emperor of Brazil in her confinement. The fee is to be 200,000 fr. (£8000), and 50,000 fr. for his expenses. —*Union Méd.*, September 11.

Large Pleuritic Effusions in Phthisis.—M. Leudet read at the recent meeting of the French Science Association at Nantes a paper upon this subject, which he terminated with the following conclusions:—1. In the course of pulmonary tuberculosis the pleura may become filled with an effusion. 2. While this may be serous, purulent, or hæmorrhagic, it is most commonly pseudo-membranous. 3. Pleurisy occupying the entire pleura is more often tubercular in its nature than idiopathic. 4. Patients dying during the existence of these effusions frequently present caverns and tubercles in part arrested, or cretaceous—*i.e.*, the lesions of regressive tuberculosis especially appertaining to irregular phthisis. More rarely the tuberculosis is double, and softened; and, more rarely still, only miliary tubercles may be met with. 5. The tuberculosis is not more extensive and advanced on the side of the effusion; it is even often less so. 6. The pleurisy does not generally induce death by its abundance. 7. Some patients die in a cachectic condition before the complete absorption of the effusion. 8. Two-thirds of these patients are cured of the effusion. 9. The cure is in general slower than in the non-tuberculous. 10. Purulent pleurisy in tubercular patients is susceptible of cure. 11. Abundant effusion does not, for the most part, increase pulmonary tuberculosis, and in general it does not induce a more rapid evolution of tuberculosis in the lung of the side of the effusion than in that of the opposite side. 12. Purulent pleurisy does not seem to accelerate the development of tuberculosis.—*Gaz. Hebd.*, September 3.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

CASES OF PARTIAL CONVULSION FROM ORGANIC BRAIN DISEASE, BEARING ON THE EXPERIMENTS OF HITZIG AND FERRIER.

(By Dr. HUGHLINGS-JACKSON.)

(*Continued from page 266.*)

Case 20.—Convulsions beginning in the Left Great Toe—Paralysis of the Third Nerve—Autopsy.

Charles B., aged forty-three, was admitted an in-patient under my care September 23, 1874. For the following notes of his case I am indebted to Mr. Charles Mercier:—

He had had very good health until seven years ago. Twenty years ago he had gonorrhœa and orchitis. He had after the gonorrhœa a bubo, which broke and discharged, but he denied having had chancre, rash, sore throat, etc.

Seven years ago he had pain in the left shoulder, and soon after "lumps on the head," which "were driven away" by the medicine he took as an out-patient (probably nodes, relieved by iodide of potassium).

His first nervous symptom was six years ago. It was a convulsive seizure—a miniature one. One morning as he was dressing he felt a beating in his left big-toe. The beating went up as far as the knee and then ceased, lasting about a minute. He had another similar attack a month later. The next attack showed the real nature of these limited convulsions.

Some two months after, he had another of these feelings, which began in his left big toe. It was a beating; not pins and needles, not a pain, but a beating. "It set the leg to work very strong." He imitates this by swaying the leg backwards and forwards. This feeling went up his left side into his arm, and set his arm to work, and then "went into his head and pulled him down to the ground." Then he became insensible, and when he came-to he could not use either the left arm or the left leg. After the fit his speech was not affected; he did not pass motions or water; was not sick; went to sleep.

He never had another fit from that time until the beginning of August last. He had then been attending here for two months as out-patient.

The day after he left off attending and taking the medicine he had another fit. It began in his big toe, like a beating, as before, and travelled up his leg, up his side, *and down the arm*. Both the arm and the leg worked. It did not go into his head, and he was sensible all the time. After the fit he felt weak all over, but especially in the left arm and leg. A fortnight afterwards he had another fit similar in every respect, except that it took away his senses for about five minutes.

After the fits he feels rather queer, not very; is not sick; gets up if he can, but finds his left leg "so useless," and his left arm also, the leg being worst. His speech is "thick" after the fits. People can understand what he says. He has no difficulty in finding words to express himself. He cannot tell when the fits are coming on until the beating begins. About a month ago he was getting up a ladder, and having got some distance up, as he was lifting his left leg he suddenly lost all power over it; "it" went rapidly up his side into his hand and head, and he can just remember that it took away the use of his hand, and that he had begun to fall, when he became insensible. The fits always begin in the foot; never anywhere else. Once, in the last fit, the feeling went down the right arm, and shook it a little, before he became insensible. With this exception he has never known it go into his right side.

For five years or more he had been subject to recurring attacks of pain in the left leg. He had suffered from it before the first attack beginning in his toe. It was a sharp pain, at times darting and shooting. It would begin in the left buttock, and go down the outer and back side of thigh to the leg, affecting the whole leg more or less, the calf chiefly. For two or three years he had had it in the left arm, and for about the same time in the right. He had never been quite free for a twelvemonth. It was always worse at night.

I was much interested in this local pain on account of certain of Brown-Séquard's researches on the artificial production of epilepsy in guineapigs by section of the sciatic nerve.

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The next nervous symptom was paralysis of the right third nerve three years ago; this persists.

Next follows the evidence as to organic ("coarse") disease. The best evidence was that there was double optic neuritis, which will, however, be described later. The rest of the evidence follows.

He has never had any discharge from ear or nose. His head is hot, he says, and he has very bad headaches occasionally. He had a very bad one when his eye first became closed, and has never had so bad a one since. It has kept him awake at night, many and many a time. When asked the position of the pain, he passes his hand down on the right side of the middle line of the scalp, and says that the headache has always been on that side, never on the other. This is interesting. No leading questions were asked. He is never sick; has never been sick. The pain in the head has never made him sick; he is quite sure he never even retched.

Mr. Mercier gives details of a very careful examination of the patient, both as to facts bearing on the nervous system and the general constitutional state. The general health was good when he came in, except for an abscess on the front of the chest, connected with disease of the first rib. We may here dispose of an incidental illness. For about a week or ten days, beginning October 3, the patient had an acute affection; his temperature was high, and there were slight changes in his lungs. It was believed that this was a slight attack of pyæmia consequent on the bone disease just mentioned. As no nervous symptoms attended this acute affection, and as it left him just as it found him, no details need be given of it. We now pass to the nervous symptoms the patient had.

His smell and taste were carefully tested, and were found to be normal. Curiously, no note was recorded as to his ears; but, speaking from memory, there was no defect of hearing.

Aye. There is the long-standing paralysis of the right third nerve. The paralysis is complete. It is needless to give details of this paralysis. The superior oblique and the external rectus act perfectly. For the rest, the ocular condition is a little complex. There are in each eye signs of impending neuritis; the changes are slight, but there is a little swelling. In the fundus of the left eye there is seen a large patch of pigment to the outer side of the yellow spot. This is evidently very old, and possibly congenital. The sight of the eye is so much affected that the patient can only read 4½ Snellen. With the right eye he cannot, of course, from loss of accommodation, read ordinary type at all; but, by using large letters, the sight of that eye was found to be $\frac{20}{10}$. Unfortunately, there is a slight corneal nebula of the left eye, and some astigmatism. I am indebted to Mr. Couper for many notes of the patient's ophthalmic state, but the above account will serve my present purpose.

He can do all the motions of the face—frown, lift his brows, screw up his eyes, show his upper teeth, lower teeth, whistle, blow out his cheeks, and perform all facial motions. Can protrude his tongue in all directions. When he does this several times, the tongue inclines to the right. No difference to be detected in the muscles of mastication of the two sides; both act well. Palate rises well and equally. Voice, articulation, and speech are good.

The trapezii are good, and apparantly equal both in action and to the touch. The supra and infra spinati, deltoid, and generally all the muscles of the arm and forearm on the right side, are decidedly small and flabby compared with those on the left; and their action is very much weaker, although no motions are actually lost. There is little, if any, difference in the muscles of the hands, and the finer movements are equally well performed by both.

Muscles of back appear normal, and those of abdomen are thin but seem equal.

The finer movements of the left foot are very imperfect compared with those of the right, and the left knee does not lift a weight so well as the right. His walk is heavy and rather unsteady: when he puts the left leg down, his whole body inclines to that side; the left toes scuffle along the ground as he brings the foot forwards; this is not so with the right foot. Electric reaction and sensation about normal on the two sides.

Treatment by iodides made no difference in his condition. He had no fits when under my care. As his surgical condition (disease of first rib) was really the urgent thing, he was transferred to my colleague Mr. Rivington. I saw him no more. The following short account of the rest of the case was obtained for me by Mr. Mercier. To Mr. Mercier I am also indebted for an opportunity of examining the encephalon (the only part of the body examined).

He was made an out-patient by Mr. Rivington, as the portion of the first rib which was necrosed was not yet loose enough to be removed. He was to return in two months' time in order to have sequestrotomy performed.

He was afterwards treated at home by Dr. Frank Couper, of Leytonstone. He had no more fits, but he got gradually worse and worse—*i.e.*, weaker and less himself, until he had to be taken about wherever he went; and at last, about the beginning of February, 1875, he was unable to get out of bed even. From this he gradually got comatose, and at last died, April 20, from "exhaustion," not having taken food for several days. He had complained a good deal of pain in the head, had had no more fits, had not had any great sickness. His chief trouble had been pain in the limbs. He would cry out when people went near him, and beg them not to touch his legs.

Autopsy.—On opening the skull, the contents were not tense and bulging, but readily separated from the surface of the bone. The outer surface of the skull was very rough and bossy, and closely adherent to the pericranium. When the dura mater was slit up, it was found to adhere with unusual tenacity to the surface of the brain, so that it was impossible to separate them without cutting the membrane or tearing the surface of the brain. The convolutions of the frontal lobes were a good deal wasted, the sulci large, and the pia mater thick and milky, as is usual in cerebral atrophy. Besides this, however, the surface of the pia mater in a few places contained small, semi-opaque, yellowish, round masses from the size of a millet-seed to that of a split-pea, single or grouped. At the middle of the right hemisphere, close to the median fissure, the dura mater was especially adherent, and when cut into was found very much thickened—nearly a quarter of an inch in thickness. There was no gummatous material. When this had been with difficulty removed, by cutting through its connexions with the brain, there was found a marked depression on the surface of the hemisphere, and a general squeezing together and diminution of the convolutions. The exact spot at which this was situated was at the upper part of the posterior ascending or ascending parietal convolution, extending over part of the upper end of the ascending frontal and over several of the adjacent convolutions of the parietal lobule. The ventricles were large and full of serum. The anterior part of the right corpus striatum, instead of being highly convex, was very decidedly concave; the difference in bulk between it and the body of the opposite side being fully equal to a large hazel-nut. The surface was of normal colour and consistence. On cutting into it, the caudate nucleus was found very much softened, evidently old, with a small cavity just beneath the ventricular surface, from which a little serum ran out. Below this cavity, and extending far downwards towards the base, and also a long way back towards and into the optic thalamus, was a large patch of typical yellow softening, with a smaller isolated patch here and there. The arteries at the base were thickened, and of an opaque dead-white appearance, very unlike a healthy artery, and yet not like atheroma. They were not gummatous. On the right third nerve, a quarter of an inch from its origin, was a tumour of the size of a pea on the outer side of the nerve. The left third was healthy.

The neuroma on the third nerve was examined microscopically by Mr. McCarthy, who reported that the connective tissue of the nerve was very greatly increased, showing in some places dense fibrillar structure, and in others copious aggregations of round nuclei. The nerve fibres were so much destroyed that it was not easy to discover even their remains.

ROYAL INFIRMARY FOR CHILDREN AND WOMEN, WATERLOO-ROAD.

TWO CASES OF PLEURITIC EFFUSION IN CHILDREN —PARACENTESIS THORACIS—RECOVERY.

(Under the care of Dr. SPARKS.)

[For the notes of these cases we are indebted to the Resident Medical Officer, Mr. E. O. Day, M.R.C.S.]

Case 1.—Charles H., aged eight years, admitted June 5. He had been suffering from cough for about a fortnight, but, according to his mother, his breathing had only become short,

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and he had only been feverish for a day or two. He had had no shivering or pain in his side.

State on Admission.—4 p.m.: Temperature 103·6°; pulse 156; respirations 48. The right side of the chest is dull in front to the second rib (lying down), third (sitting up), the dulness extending to the same level in the axilla. Behind, dulness absolute to middle of scapula, and above this point resonance is very deficient. Breath-sounds, both front and back, very weak and distant, but there is no bronchial breathing. Vocal fremitus diminished; intercostal muscles acting. The right side is two inches larger than the left; the edge of the liver can be just felt below the ribs. The heart's apex beats just to the outer side of the left nipple, fifth interspace. On the left side resonance is good throughout. Breathing puerile, with an occasional dry rhonchus at the base. Bowels open. Has a short hacking cough. Slept fairly last night. Ordered—℞. Vini ipecac. ℥vj., potass. citr. gr. xv., aq. ℥ss., sextis horis; milk diet; wine ℥iij.

9th.—No change in the physical signs. If anything, there is a slight increase in the extent of dulness. The evening temperature has not been lower than 102·6°. Ordered—℞. Pot. iodidi gr. jss., pot. acet. gr. xv., sp. æth. nitrosi ℥xx., decoct. scoparii ℥ss., 6tis horis.

11th.—Tapped at 10 a.m. in axillary line between the sixth and seventh ribs, with No. 3 trocar of Weiss's old single-action aspirator, and two ounces five drachms of clear serous liquid drawn off, which coagulated in a few minutes into a thin jelly on the addition of a drop of blood. Temperature, before operation, 99·8°; respirations 50. Temperature, 3 p.m. 101·5°; 6 p.m., 102·8°; 11 p.m., 101·8°.

12th.—Temperature, 1.20 a.m., 100·4°. Resonance improved everywhere; breath-sounds heard at the base. Slept well, and takes his food well. Evening temperature, 101·6°.

15th.—To-day ordered tinct. cinchonæ co. ℥ss. t. d. s., and to continue diuretic mixture.

19th.—Since the tapping on the 11th, the evening temperature has not reached 101°, but to-day, without any assignable cause, it rose to 101·8°. Dulness is slowly disappearing, and respiration improving.

22nd.—Again tapped with the same trocar at the same spot, and three drachms of clear serous fluid exactly similar to the first were drawn off. Temperature before tapping 98·4°; afterwards it was taken several times during the day, and was found to rise steadily until it reached 102·8° in the evening.

23rd.—Temperature, morning 101·3°, evening 101·8°. With the exception of the rise in the temperature, the second tapping has produced no general disturbance.

27th.—Evening temperature 99·8°. The front of the chest is now resonant to the sixth rib, and the axilla is resonant to about the same level. Breathing good now to the fourth rib in front, and behind audible to base, though weak.

July 4.—Temperature 98·4°.

6th.—Diuretic mixture stopped. To take ol. morrhuæ ℥ij. vin. ferri ℥ij. ter die. Breath-sounds natural everywhere, though weak behind; heart's apex in normal position; resonance over the back still somewhat deficient. General appearance healthy. His appetite has been excellent throughout. He was allowed meat soon after the first tapping.

Discharged on July 11.

Case 2.—Henry McD., aged five years, admitted on June 30. Ill four days. Two children in the same family died of tubercular disease.

State on Admission.—11 p.m.: Temperature 104·2°; respirations 52; pulse 120. The right side is absolutely dull up to the clavicle in front, the dulness extending downwards two inches below the ribs, where the edge of the liver can be felt. The dulness extends round the axilla to within three inches of the spine, where there is fair resonance. Under the clavicle, high-pitched tubular breathing, with expiration much prolonged. Lower down there is some subcrepitant rhonchus. Behind there is weak breathing, with an occasional rhonchus heard on deep inspiration. Bronchophony, with a nasal twang, at the angle of the scapula. Left lung hyper-resonant throughout. Breathing puerile, with an occasional sonorous râle. Heart not displaced. Sweats profusely. ℞. Mist. ammon. c. senega ℥ij. 4tis horis; milk diet.

July 6.—Temperature, morning 100·2°, evening 102·2°. Physical signs much as on admission. Ordered mist. quiniæ ℥ij., vin ipecac. ℥v., 6tis horis.

10th.—Morning temperature 99·4°. There is absolute wooden dulness to clavicle, and the liver is now two inches and a half below the ribs. The vocal fremitus below clavicle on right side is much increased. In spite of this and the axillary dulness, there is so much resonance over the back as to make it doubtful whether the lung is not bound down by adhesions posteriorly, so that it cannot be compressed. Tapped with the same trocar as in Case 1, in the seventh interspace a little in front of the angle of the scapula. Temperature at 2 p.m., just after the operation, 101°. Three ounces two drachms of clear serous fluid removed. Resonance on percussion directly afterwards to second rib in front.

11th.—The temperature, which was taken several times yesterday afternoon and evening, never rose above 101°. He slept well and is looking cheerful and bright to-day; appetite good. There is resonance now in the upper part of the axilla. The tubular character of breathing in front has now disappeared, and weak normal breathing is heard at the upper part of the right chest. Temperature, 8 a.m. 100°, 8 p.m. 102°.

14th.—Fluid steadily absorbing. Morning temperature 99°, evening 101°. Ordered—℞. Pot. iodidi gr. ij., pot. acet. gr. v., tinct. cinch. co. ℥xv., decoct. scoparii ℥ijss. t. d. s.; wine ℥iij.; ol. morrhuæ ℥ij. bis die; and the side to be painted with tincture of iodine.

On the 28th the whole front was resonant to the sixth rib, and the liver was only a finger's breadth below the ribs. With a view to determine whether some dulness still remaining over the base of the lung, especially near the angle of the scapula, was due to fluid or to pleuritic thickening and adhesions, the side was tapped a second time in the eighth interspace, just below the angle of the scapula, but no fluid issued from the trocar, even with the aspirator vacuum. The temperature was not in the least degree affected by this puncture; it reached the same point (101·8°) on this evening as on the evenings before and afterwards.

August 4.—Temperature normal in the evening. Is up and running about the ward.

7th.—Ordered vin. ferri ℥ijss. t. d. s. instead of previous medicine.

11th.—Right side is half an inch smaller at the level of nipple than the left (ten inches and ten inches and a half). The liver can no longer be felt. Resonance is nearly as good on the right as on the left side. The breathing, good elsewhere, is still weak at the base. Vocal fremitus is now only slightly more marked below right than left clavicle. The boy has gained flesh and looks very well. He has no cough.

12th.—Discharged.

Remarks by Dr. Sparks.—The above cases illustrate several points with regard to pleuritic effusion in children. They show—1. That the fluid is not, as some persons have supposed, necessarily purulent at the end of two weeks in a child of five years, or of nearly three weeks in a boy of eight. 2. That the fluid removed at a second operation, twelve days after the first, may retain its serous character. 3. That it is unnecessary to remove a large quantity of the fluid, for immediate improvement may follow the withdrawal of only a few ounces. 4. That fluid sufficient to cause considerable depression of the liver may be completely absorbed in less than eighteen days (Case 2). 5. That a temperature of 101° at the time of the operation is no contra-indication to it. 6. That the operation may be followed by a rise of temperature of as much as three or four degrees Fahrenheit (Case 1), which is not attended by marked constitutional disturbance; or else there may be an inconsiderable rise of a degree, or a fraction of a degree; or, lastly (Case 2, first tapping), there may be no rise at all. This point is further illustrated by another case (a boy aged three years), who had a curiously fluctuating temperature, with dulness and weak breathing over the lower half of the right lung persisting for several weeks, and in whom fluid was suspected to exist. No fluid was, however, found, but two separate punctures were made with the same trocar as in Cases 1 and 2, and the temperature rose from 99° to 100° only in the course of the day. In the second case (H. McD.) the physical signs were somewhat anomalous in character; not only the dulness, but also the sense of resistance on percussion, was much more marked over the front than over the back of the right chest, although the child had been in bed from the first onset of his illness. There was also an exaggeration of the vocal resonance, and fremitus in front on the right, which rather interfered with the idea of pleurisy, and suggested pneumonia. The displacement of the liver, the general course of the temperature and the pulse-respiration ratio, on the other hand, made it almost certain that it was not pneumonia, but pleurisy, and led to the use of the trocar, with confirmation of the

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diagnosis. An attempt was made in both the above cases to determine whether there was any appreciable effect produced on the excretion of urine by the diuretics which were given. The amount of liquid drank, and of urine excreted, were carefully measured, and the mean temperature of the ward, and the amount of febrile disturbance, as well as the number of stools, were recorded and tabulated; but after carefully examining the results, and throwing them into the form of curves, I find that they are too imperfect for publication. In both cases, however, the rise and fall in the quantity of urine excreted correspond almost exactly to the quantity of liquid drank in the twenty-four hours, being almost invariably from two to five ounces less than the latter. The relation to any alteration in the temperature of the ward, or in that of the body, is scarcely traceable at all. No effect of the diuretics in increasing or altering the flow of urine can be made out in either case. The problem is, however, such a complicated one, that I do not lay the least stress on these observations.

NORTH-EASTERN CHILDREN'S HOSPITAL.

[For notes of the following case we are indebted to Mr. T. Burtonshaw, M.R.C.S., House-Surgeon.]

CASE OF PSEUDO-HYPERTROPHIC PARALYSIS (DUCHENNE'S PARALYSIS) IN A BOY AGED TEN YEARS—IMPROVEMENT UNDER TREATMENT—DEATH FROM MALIGNANT SCARLATINA.

(Under the care of Dr. BATHURST WOODMAN.)

Charles C., aged ten years, was admitted an in-patient on February 18, 1875. His father is a carman of extremely intemperate habits. The mother states that her husband was almost always intoxicated when they were first married, *ac etiam in coitu ipso ebriatus*. Charles was the first born. She has three other children who are delicate, but they have no special disease. She has had one born dead at the full time, but she attributes this to an accident. The patient broke his right collar-bone by falling out of bed when twelve months old. He had whooping-cough at two years and measles at four years of age. He was never very strong on his legs, but used to run about pretty well until two years ago, when she noticed that he began to walk badly, and often tumbled down. He began to wet the bed, and had some incontinence of fæces five weeks before admission. There is no history of fits, even whilst teething. Although the lobules of his ears were badly developed, and his hard palate extremely high-arched (Λ-shaped or Gothic palate), the boy was fairly intelligent. He could talk nearly as well as most boys of his age, although the palate hindered the clear enunciation of some letters. He could also read pretty well. Whilst in hospital he wrote the following letter without any prompting or aid:—"My dear Mother,—I hope I shall see you on Sunnday. I have lots of books to look at here. Good-bye.—Your loving son, Charles C——r." He also copied from a child's book in the wards with quite as much accuracy as most boys of his age.

State on Admission.—Is so helpless that he can scarcely turn in bed. On attempting to walk he falls forward, but if supported by the hands, or if he can lay hold of anything, he walks almost on tiptoe, straddling, and often falling. There is no paralysis of any of the cranial nerves. Tactile sensibility all over the body but slightly, if at all, impaired. The glutei muscles are very markedly developed, and feel hard. The lumbo-sacral curve is greatly exaggerated. The flexors at back of thighs are much hypertrophied, as are the muscles of both calves—these are also very hard. The extensor muscles on the outsides of the legs are apparently normal, and the same may be said of the peronei muscles. The quadriceps femoris on both sides is somewhat enlarged. The tensor vaginæ femoris of both legs is well developed, and can be both seen and felt as a prominent band. The sartorius and adductor muscles are small and wasted. The feet are normal in position, but in each the dorsum is very prominent, the arch extremely rounded, and the whole foot hoof-like. Abdomen normal in size, but the muscles are hard and tense. The spinous processes can be distinctly felt, and the erector spinæ is not hypertrophied, except, perhaps, between the last rib and the ilium, where it may be felt as a hard edge. Chest deep, narrow above, broad below, the costal angle very wide. The pectoral muscles and upper extremities much wasted, and form a striking contrast with the lower limbs. These wasted small muscles, are, however, fairly strong, and respond well to both the continuous and interrupted current, and to that from one of the ordinary rotary medical magnetic apparatus; whilst the muscles of the trunk and lower extremities, which are hypertrophied, are all but entirely paralysed, and respond but feebly to the currents from any kind of apparatus—in fact, the currents are scarcely felt, except when very intense and interrupted, although common tactile sensation is but little impaired. Ice and hot water can be distinguished with difficulty, or not at all, below the sixth dorsal vertebra. The temperature of the right side of the body is a little less than that of the left half.

The following observations were taken by Mr. Burtonshaw shortly after admission:—Reading of thermometer in contact with right axilla 97·4° Fahr., left 97·6°; in contact with right thumb 95·6°, left 96·6°; in contact with right groin 97·4°, left 97·6°; in contact with right great toe 96·4°, left 96·4°. Three or four days after, the nurse took the following readings:—In contact with right axilla 98°, left 99°; in contact with right groin 98·8°, left 100°; in contact with right great toe 96·8°, left 97·2°. Similar observations were taken by Dr. Woodman, prior to admission, with a like result.

The following measurements show well the differences between upper and lower extremities:—From acromion to acromion, 10½ in.; circumference below axillæ on expiration, 21 in.; ditto on inspiration, 21½ in.; circumference at ensiform cartilage on expiration, 22 in.; ditto on inspiration, 23 in.; circumference at centre of upper right arm, 4¾ in., left 5 in.; ditto just below right elbow 5¼ in., left 6 in.; ditto just above right wrist, 4 in., left 4 in.; from one anterior superior spine of ilium to the other, 8 in.; round the pelvis at the most prominent part, 21½ in.; from anterior superior spinous process to the outer condyle, 11½ in.; circumference at middle of thigh, 10 in.; ditto at thickest part of calf, 9 in.; just above ankle, 5½ in.; across dorsum of foot, 7 in. Whilst the patient was in the hospital, the heart, lungs, and other organs were repeatedly examined and found normal. His digestion was good. Urine contained traces of sugar, and some slight excess of phosphates and lithates, but was otherwise healthy.

Treatment.—At first he was kept strictly in bed, and given a nourishing diet, with much milk. The continuous current was applied daily to the muscles of the lower extremities. He also took syr. ferri phos. one drachm, with the same quantity of cod-liver oil, three times a day. Under this treatment his general strength greatly increased. He got stouter, could turn well in bed, and after a few weeks he began to walk a little without assistance. The incontinence of urine, etc., also disappeared. He remained in the hospital until April 30, when, in consequence of an outbreak of scarlatina in the wards, he was discharged. Three days after, he was attacked at his own home with malignant scarlatina and (apparently) diphtheria. From these or their sequelæ he died on May 28. Throughout his last illness it is believed that he was attended by an unqualified practitioner.

Remarks.—After the patient was discharged from the hospital, Dr. Woodman lost sight of him, and there was unfortunately no post-mortem examination. It is also to be regretted that the muscles were not examined whilst the boy was alive by harpooning portions and submitting them to the microscope. The results of treatment up to the time of his discharge were encouraging. In a clinical lecture on the case, Dr. Woodman remarked that, although a comparatively rare affection, it had this in common with many other nervous diseases of childhood, notably epilepsy and many cases of idiocy and of disease of the spinal cord—namely, that one parent at least was addicted to alcoholic excesses. There was, further, the history of an accident, which is again a common factor in diseases of the nervous system. Then, as regards its pathology, we have the absence of cerebral symptoms, the affection of the sphincters, the increased size and paralysis affecting the muscles supplied from the lower half of the cord (the wasting of the upper half being of the ordinary kind, and perhaps partly due to insufficient nourishment); although the altered temperature seemed to point to an affection of the upper part of the cord as well as the lower, as do some of the measurements. Lastly, Dr. Woodman remarked on the importance of early recognition of these cases, since in the later stages they must be regarded as incurable.

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Medical Times and Gazette.

SATURDAY, SEPTEMBER 18, 1875.

HEALTH AS A QUALIFICATION FOR THE MEDICAL PROFESSION.

The choice of a profession is one of the most important events in the life of every man. The day that his choice is made he exchanges the more or less aimless monotony of boyhood for the varied activity of a life-long struggle, in which natural capacity, perseverance, diligent study, and the courage which honesty begets, are generally supposed to be the chief elements of final victory. At the moment when we write, with October and the winter session so close at hand, there must necessarily be a large contingent of young men whose career in life is already decided on, but who have not as yet entered on it practically.

The considerations which have guided either themselves or their friends, in selecting the medical profession for their adoption, are probably various. Old-established practices require to be kept up by the introduction of younger blood; assistance is wanted in a practice which has developed until it has become unmanageable; some friend provides an opening which must be accepted at all hazards; or else there is a natural inclination to doctoring shown by the lad, which must not be suppressed. When we look round on those medical brethren whom we have known as students, or have become intimate with in after-life, or if we make ourselves acquainted with the family history of the medical practitioner in almost any country town, we shall find that the practice of medicine is to a remarkable degree an hereditary occupation. Fathers send not only one son, but two, and even three sons into a profession which is difficult, laborious, and too often (as they well know) inadequate in its returns to the toil which its pursuit involves. We may say, then, without serious exaggeration, that the medical profession is chiefly recruited from the offspring of its own members; that is, from the sons of those men whom we should *à priori* expect to be the best fitted to estimate both the mental capacity and the bodily vigour of those they select or permit to enter it. We should *à priori* suppose that they would lay great stress on the element of physical strength and a good constitution in deciding whether their sons should become doctors or not, and that the weakly and delicate, or those with hereditary tendencies to disease, and especially to pulmonary disorders, would be carefully weeded out and reserved for some less arduous and more healthy occupation.

We do not presume for a moment to say that this process of elimination does not frequently take place, and that many young men are not annually denied admission to the medical profession because they cannot pass the health-scrutiny of their parents; nevertheless, we are convinced, from a number of instances which have come under our notice, that this scrutiny might be made more searching and effectual than it is at present.

We wish, therefore, in the remainder of this article, to call the special attention of those who have sons intended to become doctors, broadly speaking, to the aspect of the study of medicine from the health point of view; and since, in dealing with such a subject, we can only expect to reach the ears of the laity, so to speak, second-hand, we here appeal to our medical brethren for sympathy in our views—first, for the reasons already given, that so many of their own children enter the profession; and secondly, because they can, in their position as health-advisers of families, do much to dissuade parents from launching their weakly sons on a career for which they are physically unfitted.

The medical student has to struggle against unhealthy conditions from an early period of his education. The exigencies of study require his presence in a large town or city, where subjects for dissection can be procured, and where he can follow every phase of disease in the wards and out-patient rooms which large and overcrowded districts feed. Here he exchanges the pure country air for the mist and smoke and dust, which are the chosen atmosphere of trade. In a few weeks, perhaps at once, he must brave the horrors of the dissecting-room, and breathe day after day for months the mingled odour of decaying corpse and sopping sawdust which characterises that sanctum of anatomists. The laboratory, redolent too often of unsavoury and pernicious gases, must receive its share of his attention; and he may possibly be required to spend a part of his early days in ignorant inspection of a passing mob of surgical out-patients in an over-crowded and ill-ventilated room.

We pass over many of the health-trials which a medical student *must* go through—the work at night, after sufficient work by day; the toils of midwifery cases, which must be "done"; the hours that must be given to the post-mortem room, to ward-work, and to lectures too often uninteresting and wearisome. We might contrast the medical with other so-called "learned" professions, and point out how much less injury to health is involved in the study of law, the preparation for the church, or the cultivation of the higher walks of art and literature, but space will not allow us to make the comparison. We cannot help thinking, however, that anyone who will seriously and conscientiously compare for himself what he knows of the calls on health and strength which are required of young men entering various professions and trades, will agree with us that the study of medicine, if rightly pursued, is the most exacting of any. The medical student, most of all, requires a "*corpus sanum*" with which to start in life. It is merely the bare and literal truth to say that every year students break down and drop out of the course, because the wear and tear of their necessary work, with its unhealthy accompaniments, is too much for their reserve of strength. Every year the requirements of examining bodies become more severe, and the amount of knowledge which a medical student must acquire increases with alarming speed. If we look

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beyond his period of education, and consider the future life of the medical man, the element of health is of no less importance than in the earlier stages of his career. The successful practitioner is, with few exceptions, a man of unusually sound constitution, and gifted with great powers of physical endurance. Weakly men must either be content with a modicum of success, or they must fall exhausted in aiming at a goal which is beyond the reach of their utmost efforts.

The moral with which we would point these remarks is one which is dictated by our ever-deepening conviction of its truth: "No one should enter the medical profession whose health is not, humanly speaking, sound in every respect." The duty of determining this devolves first on the parents or guardians of intending students; and, secondly, it seems to us, on the authorities who at each medical school register or enter their *alumni*. The latter, however, must be in future much more self-sacrificing than we fancy they are at present, when every fresh name is too eagerly welcomed to swell the list of entries for the session.

The views we have ventured to propound—the strict exclusion of the weakly and delicate from the medical profession—may be considered by some too visionary and Utopian. Still, we cannot but hope that others may accept them and endeavour to carry them out. The passing chagrin and disappointment, which those experience who are simply forbidden to attempt a career fitted only for the robust, are nothing to the thoughts of shattered hopes and the bitter memories of wasted years which follow loss of health in later life.

THE TREATMENT OF INTERNAL ANEURISM.

The proper treatment of aneurism has long been one of the most interesting questions in medicine and surgery; and the reason is not far to seek. Few medical or surgical maladies are more difficult of accurate diagnosis than internal aneurisms, especially in certain situations. They are not easily made out; and when made out, what a prospect!—in too many cases only early and painful death; sometimes instantaneous, sometimes only as the result of utter exhaustion from prolonged torture. No wonder, then, that surgeons were eager to devise measures which promised any success in such a formidable malady; and it was a proud boast when they were able to hold out a reasonable hope of safety by operation in nearly all cases of external aneurism. It was even sought by tying the aorta to stay for a time the course of an iliac aneurism; but this, it was clear, could only be resorted to under extraordinary circumstances. But the day of conservative surgery was at hand. Men in these latter days sought to deal less with the knife than their fathers did, and other plans of curing aneurism than by tying vessels were discovered. It is no disgrace to our surgeons on this side the water to admit the great services rendered to this division of surgical knowledge by our Irish compeers; and at the thought the names of many Dublin surgeons rise to our lips. It was in Dublin that the system of curing aneurism by pressure was perfected. First, it was shown that pressure could do all that tying could, provided the stream of blood was for a time arrested; next, that a cure was still possible if the volume and force of the stream were only for a time reduced; and finally, that constant and continuous pressure was no longer required. These were mighty steps in advance, and it was high time that something should be done for the cure of internal aneurisms.

For the sake of convenience, internal aneurisms are commonly grouped as thoracic and abdominal, and to a certain number of the latter the same system of pressure could be applied as to those more external. This system has been fairly tried, with a certain amount of success. The patient is chloroformed or etherised, and the tourniquet screwed down so as nearly to arrest all arterial flow. This has been continued for some hours, and pressure then removed, with good results; but in other cases death has occurred under the influence of the pressure. Besides, all cases, especially when the aneurism is situated high up in the aorta, are not amenable to such treatment. Is there any help for such? Many and many drugs and therapeutic methods have been used, but success has been rare. Acetate of lead and iodide of potassium strike us as being among the most recent. But here, too, measures semi-surgical have been used. Electricity has been called into play, and has in some cases succeeded; needles have been introduced into the aneurismal sac, and by an electric current it has been sought to cause coagulation. But this does not seem to be the thing which should be chiefly aimed at; it is not a clot, but an organised deposit—if we can use such a description—which is wanted. And death has followed the use of the needle, as it has in other methods. Of late years, however, a method to which there can be no possible objection—for it can do no harm—has been making its way especially, again under the auspices of our Irish brethren, and of this we are forcibly reminded by the appearance of the second edition of Mr. Joliffe Tufnell's little treatise on the Treatment of Internal Aneurism. When, some time ago, this gentleman read a paper on the subject before the Royal Medical and Chirurgical Society here in London, the impression it made was very deep, but here in his work we have ampler details, and to these we would now briefly refer.

The examination of cases where an aneurism has become completely consolidated, and practically healed, shows that this has been accomplished by the laying down of successive layers of fine fibrine on the wall of the sac, thus gradually adding to its thickness and strength until something like safety has been attained. What are the conditions of this deposit, and how shall we best imitate them artificially? For the formation of fibrine it is probable that a good dry diet would suit best; for its deposit, diminution in the strength and fulness of the blood-current. The diet should be good but not bulky; dry, that the quantity of blood should not be too suddenly increased, as must happen after a deep draught of any fluid. Then the strength and rapidity of the blood-current may be lessened by diminishing the necessity for a strong and rapid one—by keeping the body nearly horizontal and as nearly as possible at absolute rest.

Such are the principles of procedure. Now let us see how Mr. Tufnell carries them out. As to diet, in the twenty-four hours he gives ten ounces of solid food and eight ounces of fluid, and *no more*. For breakfast, two ounces of bread-and-butter and two ounces of milk or cocoa; for dinner, three ounces of cooked meat with three ounces of bread or potatoes, and four ounces of water or light claret; for supper, the same fare as in the morning. When thirst is very troublesome, a small piece of ice to suck gives relief. Such is the bill of fare; but it is not absolute, and may, we are quite sure, be departed from, though not, perhaps, with advantage.

Next as to rest. Here the rule is absolute, but it is even more difficult to enforce than the other. The recumbent posture should be kept for perhaps two months or more, and it requires a man at once intelligent and strong of mind to appreciate this necessity and rigidly to carry out the rule. Here, indeed, is the rock on which we commonly break down. A patient comes to the hospital suffering severely from the effects of an aneurism; he is placed in a proper attitude, and enjoined to keep himself absolutely quiet. This he will do for a time, but by-and-by his pains depart, he feels nothing the matter with him, and he can no longer be persuaded to lie quiet. He probably insists on

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getting up, he leaves the hospital, but only to experience a speedy and lamentable relapse. This experience applies, if possible, still more frequently to women than to men. For this restlessness there is nothing like morphia subcutaneously. Mr. Tufnell gives formulæ for a variety of sedatives which may be used; but for these, as well as many other details, we must refer the reader to his most interesting book. In our own experience, however, we have found no practical difficulty in keeping patients under the influence of morphia for days and weeks. And assuredly this is a great thing; the keeping the subject of an aneurism quiet, as already said, is all in all. Such, then, is the modern plan of treating internal aneurism, and, as is well shown by Mr. Tufnell, the plan is still more readily applicable to external aneurism. It is impossible as yet to say what the final experience may be. We may, however, be quite sure that it will not succeed in all cases, but as far as we have seen as yet it has always done good.

THE WORCESTER INFIRMARY.

Memory is, unquestionably, an invaluable servant; but it may, nevertheless, be trusted too implicitly, and then may play us strange tricks. Especially may there be danger in accepting its promptings without proving their accuracy when they are particularly *àpropos* and valuable in support of any argument we may be using: our wish may then be father to our memory. And this appears to have happened—no doubt quite unconsciously—to the Rev. J. Pearson, a member of the Executive Committee of the Worcester Infirmary, when the proposed alteration of the rule as to the attendance of the medical staff was discussed. Mr. Pearson was strongly opposed to the desired alteration, and in arguing against it said that he did not see why the necessity for the alteration should arise, "or any difficulty occur in the future any more than had occurred up to the present hour." And he enforced his opinion by remarking that "they had had the rules proposed to be altered upon their books, so far as he knew, for a great many years; they had had medical men of great eminence in their profession, and of great independence of character, upon the staff—such as Sir Charles Hastings and Mr. Carden—who had had great arguments upon the rules for the practice of the honorary medical staff; and not one of them had suggested an alteration of those rules which were said now to require alteration." This was, very probably, thought to be rather telling; but it is a great pity that no other member of the Executive Committee—not even Mr. Clarke, who, both in the sub-committee and in the Executive, had argued well and ably for the proposed alteration—remembered enough about the history of the Infirmary to ask Mr. Pearson, "Would it greatly surprise you to know that Mr. Carden resigned his appointment of Surgeon to the Infirmary because an alteration in the rules in question, carried at one quarterly meeting, had been rescinded at the next? And would it greatly surprise you to know that you were a member of a committee which had recommended the said alteration?" Yet Dr. Inglis, in a letter to our contemporary the *Worcester Chronicle* of the 11th inst., shows that in December, 1860, a special committee was, on the proposal of the Rev. John Pearson, appointed to revise the rules of the Infirmary; that in February, 1861, this committee adopted an alteration of the rule regulating the attendance of the medical staff, much in the sense of the change lately asked for; that this proposed alteration was carried at the quarterly meeting held in April, 1861, but was rescinded at the next quarterly meeting, held at the end of June of the same year; and that in the following July, Mr. Carden, who, as well as Sir Charles Hastings, had been a member of the Revision Committee, sent in his resignation, and stated as his reason for so doing "that the doctrines applied to the attendance of the honorary medical officers, and carried out at the last quarterly meeting of those governors into whose hands the legislation of the Infirmary appears to have fallen, are too stringent and compulsory for my observance. Had the more conciliatory policy recommended by the special committee, and apparently adopted by the previous quarterly meeting, to which the report was presented, not been set aside, I should have continued to give you my services, such as they were." It is said, also, that Sir Charles Hastings, as well as Mr. Carden, strongly advocated the alteration of the rule, and that at the quarterly meeting in April, when the proposed alteration was carried by a small majority, Sir Charles Hastings spoke of the old rule as being a constant source of irritation between the governors and the medical men. In May of that year he resigned his post as Honorary Physician, saying, "Events have occurred to induce me to do now what I had proposed to do a year hence,"—a statement which surely must be interpreted as signifying a knowledge or belief that the accepted alteration would be rescinded. The bearing of all this on the dispute between the Executive Committee and the medical staff is very obvious. If the erroneous recollections of Mr. Pearson as to what Sir Charles Hastings and Mr. Carden thought and did had any weight, as no doubt it was intended they should have, in determining the action of the Executive the other day, it must be held that Dr. Inglis's corrections, unless they can be refuted—which seems most improbable,—have immensely strengthened the case of the medical staff. An appeal was made to Cæsar: to Cæsar let it go.

THE WEEK.

TOPICS OF THE DAY.

It would appear that the Treasury has at length decided to take up the case of the poisonings by strychnine at Norwood. How many more years will it take to convince the Legislature of this country that a public prosecutor is an absolute necessity? It has not yet been discovered where the prisoner obtained the large quantity of strychnine found in his possession, but as he had a six-ounce bottle, three-quarters full, a teaspoonful of which it is calculated would be sufficient to destroy life, he must have carried about with him enough of the poison to have killed about thirty people.

Our attention has been called to a case in which a gentleman, retiring from the post of Medical Officer to the Workhouse Infirmary of the Portsea Island Union, has received a sum of money from the successful candidate who succeeded him, for the purpose of influencing his election by all legitimate means at his disposal. The affair appears to have excited a large amount of local indignation; but in the absence of full particulars, and bearing in mind that the successful candidate was elected without any undue influence (seeing that the members of the board in whom the election rested were entirely unaware of any arrangement between the gentlemen in question), we are rather at a loss to understand the precise grievance which it has been sought to ventilate. Neither do we comprehend in what way the Portsea Board of Guardians have been outraged by this private arrangement between the out-going and in-coming medical officer, when it is remembered that the latter was selected for the post entirely on his own merits. Thus far as relates to the Guardians; but as regards the gentlemen concerned we have a different opinion.

It is a gratifying circumstance to note that in his evidence before the court-martial assembled to investigate the particulars of the loss of H.M.S. *Vanguard*, Captain Dawkins, the commander of the ill-fated vessel, bears testimony to the prompt and judicious arrangements which were made by the medical officers attached to the ship for the care and removal of the sick from the sinking vessel to the *Iron Duke*. By the way, have we not lately heard something about the sinking of

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a French despatch-boat, and the consequent court-martial, to which these proceedings present a somewhat painful likeness?

Whatever may actually have been the result of the exertions put forward by those who undertook the details of superintending this year's Hospital Saturday collection—which, it will be remembered, was taken on July 31 last—there appears to be no hurry to make public the amount realised. From an advertisement which lately appeared in some of the daily papers, it would appear that the accounts of receipt and expenditure are presently to be audited, after which they are to be published; but we are somewhat surprised to read that, after July 31 was conspicuously announced as *the* day for receiving all amounts contributed, "the *employés* of firms *who have yet to make their collections* are reminded that the subscription-list will close on the 30th inst." The Hospital Sunday Fund, with its collection of close on £30,000, announced the amounts received almost from day to day. But then the exertions of these unwearied representatives of the working-classes are sure in the long run to meet with due appreciation, and, doubtless, a pecuniary reward—say a public testimonial. Witness the following:—The proceedings of the Council of the Hospital Fund will, in all probability, soon occupy the attention of a judge and jury. A former member of their body, a working-man named Patrick Kenny, having been charged with issuing a libellous handbill imputing dishonest conduct on the part of Captain Mercier and those associated with him in the management of the Hospital Saturday Fund, appeared before Mr. Newton at the Marlborough-street Police-court. At the hearing the prosecution offered to accept an apology, but the defendant persisted in his statement that irregularities had been committed by the Council, and he believed it to be his "duty to his conscience and his God" to submit to whatever the law required in order to have the affairs of the movement fully investigated. He was therefore committed for trial, his own recognisances for £25 being accepted for his appearance.

The Registrar-General's return of births, deaths, and marriages for the week ending the 4th inst., for the eight principal towns of Scotland, gives the totals as 848 births, 515 deaths, and 166 marriages. The numbers during the corresponding week of 1874 were—births 776, deaths 518, and marriages 175, showing a decrease of 72 births, and an increase of 3 deaths and 9 marriages. The rainfall registered during the week ending September 4 of this year shows 1·08 inches.

An inquest was recently held at Swindon on the body of a woman, thirty-nine years of age, the wife of a quarryman. On the 3rd inst. the deceased, being near her confinement, was attended by a neighbour who had never acted as a midwife. The case proved a difficult one, and several doctors were applied to, but from various reasons none attended until nine o'clock the following night, when Dr. Powne found the woman in a pulseless and exhausted state, the result of prolonged labour. In about half an hour after his arrival she was delivered of a female child, which had been dead twenty-four hours, the deceased having been in labour fifty-seven hours. There were no stimulants in the house, although it was stated that the husband had received twenty-five shillings the previous day as his week's earnings. Deceased died in a few hours after her confinement, and Dr. Powne attributed death to unnatural labour, unaided by professional assistance until too late. He was moreover, of opinion that had the woman been attended by a professional man the same morning she would not have died. The jury returned a verdict in accordance with the medical evidence, adding that they were of opinion that the husband deserved censure for not providing medical and other necessaries required under the circumstances.

The many friends of Mr. George Southam, not only in Manchester, but in this metropolis, will regret to hear that the state of his health is such as to cause considerable anxiety to his family. It will be recollected that this estimable gentleman was elected a member of the Council of the Royal College of Surgeons in 1873.

The following statement of the scale of diet adopted for each man attached to the present Arctic Expedition may be interesting to some of our readers:—1 lb. of biscuit every third day. and 1 lb. of flour for bread on each of the two intervening days; every other day 1 lb. of corned beef or corned pork alternately, and on the intervening days ¾ lb. of preserved meat and ¼ lb. of salt meat; every fourth day 1 lb. of compressed vegetables, and on the others ¼ lb. of preserved potatoes; ½ lb. of preserved soup every fourth day; ¾ lb. of flour, suet, and raisins every fourth day; ¼ lb. of split peas every fourth day, with ½ oz. of celery seed to every 8 lb. of peas; 1 oz. of lime-juice, which every man is called upon deck to drink, each forenoon; 1 oz. of sugar for lime-juice, 1 oz. of pickles, and ½ gill of rum daily; ½ oz. of mustard and ¼ oz. of pepper a week; 2 oz. of preserved fruit and ¾ oz. of sugar for fruit twice a week; and oatmeal, vinegar, and salt as necessary. It is further intended to add ¼ lb. of preserved meat on salt meat days, so as to give some fresh meat for consumption every day, as the salt beef is hard and dry, and, if anything, enters too largely into the scheme of diet.

If any confirmation were required of the direful effects of the West African climate on Europeans, it might easily be found in the following statistics as to the present state of health of the 2nd Battalion Rifle Brigade (one of the regiments which took part in the recent Ashantee campaign), which have lately been published. The daily average of sick before proceeding to the Gold Coast (October 15 to November 15, 1873) was 13·12; the daily average of sick before proceeding to Gibraltar for duty (October 15 to November 15, 1874) was 24·50; the daily average sick of the garrison at Gibraltar (July 15 to August 15, 1875) was—1st Battalion 4th Regiment, 17·32; 31st Regiment, 15·8; 69th Regiment, 22·29; 2nd Battalion Rifle Brigade, 37·06. In addition to the daily average sick, two officers, two sergeants, and four men have been invalided since the arrival of the battalion at Gibraltar, and one man has died of fever. On August 23 last forty-eight men of the battalion were patients under treatment in hospital.

At the recent meeting at Bristol of the British Association for the Advancement of Science, Dr. F. J. Mouat, F.S.S., read a paper "On the Value of European Life in India in its Political, Social, and Economic Aspects." The writer regarded the risks to life in India of persons sound in constitution, and moderately prudent in their habits, as not so much in excess of that in temperate climates as to be a source of anxiety with regard to those who were proceeding for a temporary sojourn in that country. The subject broached by Dr. Mouat gave rise to a long and interesting discussion, but no one can be surprised to find that the views expressed by him are anything but universally adopted. Not many weeks back we gave the death-rates of several of the principal towns in India, and showed, by comparison with the Registrar-General's returns for this country for a similar period, how much in excess they were. In further proof of the relative value of life in the two countries, it is only necessary to refer to the rates of premiums of those life assurance offices which lay themselves out for Indian business, and a study of these will show that the amount demanded for Asiatic risks is nearly double what is set down as the European tariff. It is, of course, a matter of congratulation to find that rigorous sanitary measures have largely contributed to the safety of European life in India, but much still remains to be done before the death-rates of

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the two countries can be placed upon an equality. This is however, a matter of such importance and widespread interest that we hope to be able to return to it ere long.

The Artisans' and Labourers' Dwellings Acts Bill will enable all the London parishes to set their houses in order; and, accordingly, the St. Pancras Vestry have lost no time in making a commencement. At a recent meeting of the parochial authorities it was stated that the Assessment Committee had made it their business to examine the dwellings in Augustus-street, Regent's-park. In one house they found one of the inmates lying dead of fever, and two others, who had since been removed, also suffering from fever. The back rooms of these houses had no windows, nor any ventilation or light whatever, except what they received from the door leading to the front room. The window of the front room faced a common privy for the whole of the inhabitants, and even that was a wretched structure, and was partially supported by the water-tank out of which the inhabitants received their supply. This property was stated to belong to a person of the name of Flight, who, it was alleged, had hundreds of houses of a similar character all over London, from which he derived an immense income. Immediate action was ordered to be taken for the improvement of the buildings in question.

The will of the late Sir Charles Locock has been proved by his sons, who were appointed executors. The personal estate was sworn under £100,000. After expressing a wish that his funeral should be private, and that he might be buried at Kensal-green with his late wife, Sir Charles desired that, in the event of his dying suddenly from any obscure or doubtful disease, his body should be opened and examined. All the presents received by him from Royal personages he bequeaths to his eldest son.

The latest despatches received by the Sanitary Board at Constantinople from Syria report that the outbreak of cholera appears to be declining everywhere except at Aleppo, at which place, in one week, from August 8 to 15, 341 cases were registered, and 253 deaths. At Damascus there were only 9 new cases and 20 deaths from the 9th to the 11th of last month, while from the 12th to the 15th no further attacks were reported. In this immunity from the epidemic, however, the suburbs were not included, several cases having occurred there. At Antioch, from August 4 to 8, 3 persons were attacked and 2 died. At Tripoli, on the 11th there were 5 cases, of which 1 proved fatal; whilst at Beyrout, from the 8th to the 12th of the same month, 49 people were attacked, of which number 28 died. At Lattakia, from the beginning of August to the 16th, there had been 35 cases and 23 deaths; and a few cases of the disease were lately reported from Sieuket-Haib, in the Lebanon.

The last Franco-Prussian War brought into prominent notice the excellent discipline of the German troops; but if the accounts of the way in which the men are trained in peace—which have lately reached this country—are correct, the sacrifice of health and life to maintain efficiency must be regarded as excessive. The physical standard for the recruits is raised so high that there is no longer in practice any chance of escape for those who come up to it, and the duty at the autumn manœuvres has now been made so severe that the press of the country has protested against a system which fills the hospitals with sick men. They argue, that although exertion, and even danger, are inseparable from the making of a soldier, there is a due moderation to be observed in all things, and it is naturally asked whether this moderation can have been borne in mind when marches have been ordered on which strong men have died like flies! In confirmation of these statements it is reported that one division of the Fifteenth Corps lost fourteen men during the late manœuvres from overfatigue; and further, that a single company of another division had forty-five patients in hospital at the close of the movements. This is paying a somewhat high price for military supremacy.

The erroneous ideas which the humbler classes entertain with regard to the London hospitals has just been strikingly evidenced at an inquest held before Dr. Hardwicke in Broad-street, Bloomsbury. Edward McDonald, aged thirty years, a cellarman, had been suffering from pleurisy, and had been an in-patient at Charing-cross Hospital; when in a sinking state his friends insisted upon removing him from his comfortable bed in the Hospital, and taking him home in a cab. Upon reaching his lodgings his relatives applied to the parochial medical officer for his attendance, but when this gentleman arrived he found him insensible, and he remained unconscious until his death. The brother stated that deceased knew he was about to die, and therefore would not remain in the Hospital because he thought that after death his body would be dissected. The Coroner explained that the Hospital authorities had no right to do such a thing without the consent of the relatives of a deceased patient, and he hoped that this case would have the effect of enlightening the minds of those who entertained such absurd ideas about hospital practices; at the same time it should be a warning as to the risks which relatives ran by setting aside medical advice and removing patients when in a dangerous condition.

In a recent issue we noticed the lamented death of Lady Cottesloe from accidentally taking a poisonous liniment intended for external application, instead of some medicine prescribed for an attack of rheumatism. We stated at the time that we were not in a position to say whether the proper safety bottle had been used for the liniment by the chemist who prepared the medicines; we think it right, however, to remark that since then it has come to our knowledge that greater care could not have been exercised by the dispenser in distinguishing the mixture from the liniment, the latter having been sent out in one of the bottles indicated. The error rested entirely with the lamented lady, and there is nothing to deplore but the fatal want of caution which resulted in such a painful catastrophe.

ROYAL COLLEGE OF SURGEONS.

From a notice which appears in another column, it will be seen that a special meeting of the Council will be held on Wednesday, October 13, for the election of three Fellows of the College as members of the Court of Examiners. It is understood, however, that two of the retiring members will offer themselves for re-election, Mr. Henry Hancock, a late President, declining to be put in nomination. The Library of the College will be re-opened on Friday, October 1, and the Museum the following Monday.

HOMES FOR ARTISANS.

The Corporation of the City of London has just completed the first of a series of handsome blocks of dwellings intended for the use of artisans. The situation of the new dwellings is at the back of New Charterhouse-street, which was formerly crowded with tumble-down houses and filthy courts. The block is four storeys high, built of white bricks picked out with red and blue tiles, and furnishes accommodation for forty families, each storey or flat being divided into ten separate tenements, consisting of parlour, bedroom, and sitting-room, each furnished with a private staircase. The "flats" are reached by a stone staircase running through the centre of the building, and on each landing are washing-places, coal-bins, and every sanitary requisite. The roof, which is a flat one, covered with asphalte, has been laid out as a drying-ground, and will also serve as a playground for the children.

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THE SEWAGE QUESTION.

The Native Guano Company have concluded an agreement with the authorities of Kingston-on-Thames for the disposal and treatment of the sewage of that town by the A B C process. The land conceded for the works is on the bank of the river; and the works are being pushed forward with all speed, and will probably be completed by March next. If the A B C process is successful at Kingston, it is probable that it will be applied to many other towns on the banks of the Thames. The same process is now being tested at Leeds, and, up to the present, with satisfactory results. Here twelve million gallons of sewage are treated daily at a cost of thirty-seven shillings per million gallons. The value of the manure at Leeds is not so much as at most places, in consequence of the acids and chemicals used at the works. Large quantities of the manure had been given to farmers in the neighbourhood for the purpose of testing its quality, and about twenty-five reports have been received, of which five or six are highly favourable; a like number are unfavourable, and the remainder neutral. The town of Leeds is prepared to pay £15,000 per annum for the works, and the Company expect to make about 20,000 tons of manure, valued at £1 per ton. This will more than pay the expenses of working the process. A new plan of dealing with sewage and excrementitious matter has recently been introduced by a working man named Wilks, who resides at Bloxwich, Staffordshire, which is said to be more efficacious, simple, and economical than any other system. The essential principle of the process is the separation of liquid refuse from solids, and the deodorising of both by means of a powder obtained by mixing calcined vegetable refuse and the contents of ashpits. The plan has been tested during the last nine months at Mr. Ward's chemical works, West Bromwich, and, it is said, with the most satisfactory results. As Mr. Ward employs a large number of workpeople, a very fair test has been afforded. The liquid matter is separated from the solid by the division of the receiving-pan into two parts; the former is allowed to flow into a receptacle filled with the deodorising powder, which so effectually absorbs the moisture and destroys any effluvium that no offensive odour can be detected, even after the receptacle has been in use for several months. Solid matter is received into a receptacle which may be made in the form of a movable pan or fixed chamber to be emptied periodically. The powder is sprinkled on the solid matter either mechanically, as in the case of Moule's earth-closets, or by hand. In either case no smell can be detected. When the receptacles are full the matter is taken away and laid in heaps to dry. After this it is pulverised and can be sold as a manure, it is stated, at so high a rate as £6 10s. per ton. The manure, when ready for transport, has the appearance of fine cement, and is devoid of odour. Mr. Wilks' patent also embraces a very ingenious method of dealing with slop-water from the house. The apparatus consists of a set of filters, the water in its passage percolating through two small tanks filled with the powder, and exuding at the end so pure as to allow of its being used for scouring purposes. Unless the merits of Mr. Wilks' invention are greatly exaggerated, it promises to settle the sewage question in a very satisfactory and simple manner.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

The first meeting of this Society was held on the 3rd inst., when the following office-bearers were elected:—*President:* Dr. James Morton. *Vice-Presidents:* Dr. D. Richmond, Paisley; Dr. Robert Perry. *Council:* Dr. R. Stewart, Coatbridge; Dr. James Scanlan; Dr. Alexander Patterson; Dr. James Dunlop; Dr. D. Taylor, Paisley; Mr. A. Macfarlan; Dr. Thomas Reid; Dr. T. McCall Anderson. *Secretaries:* Dr. Joseph Coats; Dr. Gavin P. Tennant. *Treasurer:* Dr. Hugh Thomson.

HONOUR TO WHOM HONOUR IS DUE.

Many of the older readers of this journal will doubtless remember Mr. Clift, the indefatigable Conservator of the Hunterian Museum, and the first and only apprentice of the celebrated John Hunter. Several years ago Dr. Hugh Diamond, unknown to any members of the Council, placed an excellent and most life-like bust of him on one of the vacant pedestals in the hall of the College, and there it remained until a week or two ago; when, at a meeting of the trustees of the collection, Sir James Paget, the President of the College, who so thoroughly understood and appreciated the long and zealous services of Mr. Clift, suggested that an appropriate bracket should be placed over the entrance to the Museum for the bust, with the following inscription:—"William Clift, F.R.S., the first Conservator of this Museum,"—to which post, on reference to the Calendar of the College, we find he was appointed in 1800.

A SICK PAUPER'S ALLOWANCE.

There was a time when to be an inmate of the sick wards of the parish workhouse was scarcely held to be a condition calling for congratulation; but, according to the return of the Visiting Committee of the St. Pancras Workhouse, it would appear that those who are on the sick-list in the above institution are able to command a greater variety and more liberal supply of delicacies than fall to the lot of most persons when suffering from disease. The following is described as the allowance of one of the patients of the above institution, under the head of "medical extras," for one week, viz.:—Bread, 5¼ lbs.; eels, 3½ lbs.; meat 3½ lbs.; 14 eggs; tea, 14 pints; rice-pudding, 3½ lbs.; butter, 8 ounces; milk, 7 pints; porter, 3½ pints; arrowroot, 14 ounces; sugar, 14 ounces; whisky, 42 ounces; and 14 lemons. By way of variation, soles and poultry were sometimes substituted for eels. This is said to be a fair sample of the allowance to those on the sick-list of the workhouse medical officer; and as this gentleman holds out no hope of reduction, the guardians have decided to send the report to the Local Government Board.

ENLARGEMENT OF CHARING-CROSS HOSPITAL.

We are pleased to hear that the governors of Charing-cross Hospital have decided to carry out some extensive alterations and additions to the present building, which, when completed, will almost double the accommodation for patients. At present the Hospital is only three storeys high, but it is at once intended to remove the old roof, raise the third storey two feet, and build an entirely new storey, extending over the whole building. By removal of the party-walls and partitions the present small wards will be converted into one huge ward on each floor. Proper attention will be paid to warming and sanitary arrangements. During the alterations the Hospital will be closed to all except urgent surgical and medical cases.

BOGUS DIPLOMAS.

The advertisements of the bogus diploma-mongers still continue to find insertion both in London and provincial newspapers, notwithstanding that it has been repeatedly shown that the trade is a fraud upon the public. In a recent issue of the *Times*, Mr. A. L. Sparkes, of Stoke-upon-Trent, states that a short time ago he replied to the advertisement of one of the diploma-mongers, and was told that he could be accommodated with the "M.D." and "M.A." degrees from the American University of Philadelphia at the small cost of £20. Before sending the money, Mr. Sparkes wrote to the Minister of Education at Washington to ask whether the advertiser was authorised by the University of Philadelphia to grant degrees; and in reply the Acting Commissioner of Education stated that the charter of the University of Philadelphia was revoked some two or three years ago, on account of the notorious and

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shameless sale of degrees and similar rascalities. Hence the University has no actual or real existence. The Commissioner also stated that no respectable institutions of learning in the United States confer degrees for money; their degrees, when granted, are conferred from other motives than pecuniary gain. He likewise said that the reason for the success attending this particular fraudulent institution is that the University of Pennsylvania, whose name it imitates, is an institution of great corporate wealth and high intellectual character.

HEALTH OF ST. MARYLEBONE.

In his annual report on the health of the parish of St. Marylebone, Dr. Whitmore, Medical Officer of Health for the parish, regrets that, during the year 1874, there has been an increase in the mortality, more especially among the poorer of the parishioners. The increase in the death-rate is mainly referable to two causes, the first being an epidemic of scarlet fever, which destroyed 106 lives, as against nine in the previous year, and the second, the unusual prevalence of bronchitis and other diseases of the respiratory organs during the last two months of the year. Dr. Whitmore discusses at some length the question whether any portion of this sickness and death could have been averted. With regard to diseases of the respiratory organs, he arrives at the conclusion that although these are not in the strict sense preventable any more than frost or snow are preventable, yet, to a certain extent, they are controllable, and that control, if wisely exercised, will necessarily result in the saving annually of many lives. On the question of scarlet fever, he says—"It cannot be concealed that the obstacles to its ultimate extinction, or, indeed, to its material decrease, are of great magnitude, and apparently very difficult to overcome; they confront us first of all in the intensely contagious and infectious nature of the disease; secondly, in the domestic and social habits of the poorer classes; and thirdly, in the character of our domestic legislation, the prominent features of which are a recognition of individual right and freedom, and respect for the privacy of family life." His experience is that the poor altogether disregard the simplest measures of precaution whenever diseases of an infectious character break out amongst them: remonstrate with them as you will,—pourtray, in the strongest and most forcible language you can employ, the risk and danger to which by their carelessness and neglect they expose themselves, their children, and their neighbours,—all is of no avail. They will listen to you, and probably agree with you, but the moment after you have left them they have forgotten all you have said. In his monthly report, just issued, Dr. Whitmore again deplores the inability of medical science or sanitary organisation in checking the spread of scarlet fever and other contagious diseases, through either the obstinacy, stupidity, or reckless carelessness of the poorer classes. In his district last month there were seventeen deaths from scarlet fever, and forty-one deaths from diarrhœa. Every house in which scarlet fever was known to exist had been visited, and the best available means resorted to for preventing the spread of infection; but to contend against the obstinacy, stupidity, and carelessness of the humbler classes is very uphill work, and often very unprofitable. As an instance of the gross carelessness of the poor in regard to scarlet fever he relates the following:—The sanitary inspector reported a few days ago that in visiting a house situated in a very crowded court of the pariah, where a death from scarlet fever had occurred, he actually saw a healthy baby lying on the bed that had been previously occupied by the dead child, and which bed was saturated with its excreta. Such an instance shows the impossibility of preventing the spread of contagious diseases unless more arbitrary powers are placed in the hands of medical officers of health than are contained in the Sanitary Act of 1866.

SINGULAR OUTBREAK OF SCURVY.

A very fatal outbreak of scurvy is reported from San Francisco as having occurred on board the ship *Bremen*, which recently arrived at that port from Liverpool with a cargo of coals. The vessel sailed from Liverpool on February 6, under the command of Captain L. S. Leslie, with a crew of fifty, nearly all of whom were coloured men. Before reaching the Horn, scurvy developed itself among the crew, and off the Horn so many were disabled that a temporary shelter was rigged on deck, and five or six men were employed on active duty, the others being allowed to rest below, a few, however, being detailed for relief on call. When the ship got into warm latitudes, the reaction from the cold weather off the Horn was severely felt, and, as the Captain expresses it, "the coloured men dropped off like sunflowers." Before reaching San Francisco, eleven coloured men and one white man succumbed to the disease, and twenty-two of the remainder of the crew were disabled. When the ship entered port, only two of the coloured men were able to keep their legs on deck. Captain Leslie says he is utterly at a loss to account for the presence of scurvy, unless it be that the crew, before being shipped, had come off a long voyage, and were thus peculiarly susceptible to attack. The vessel was well provisioned; there was not only the ordinary amount of beef and pork salted, but a plentiful supply of vegetables in tins, Australian mutton, and antiscorbutics. Up to the time of reaching the Horn the mutton was served twice a month, and in rounding the Horn twice a week, afterwards three or four times a week. Lime-juice was given in triple doses, and lasted well throughout the voyage. Several of the crew, however, refused to take the lime-juice, and persisted in the refusal at the penalty of death. The men who were sick had a proper change in their rations—rice, sago, preserved potatoes, oatmeal, and other vegetable diet being served to them regularly, together with medicines. Towards the end of the voyage the supply of medicines ran short. Messrs. Bates and Sons, owners of the *Bremen*, write to say that the only explanation of the outbreak which they can suggest is the unconquerable repugnance of negro sailors to take lime-juice or articles of food of a blood-purifying character. They were unwilling that black men should be shipped as portion of the crew, but were induced to yield to the remonstrances of the captain, who represented that white sailors would be much more likely to desert the vessel.

THE PHYSIOLOGICAL PROPERTIES OF ALDEHYD.

Acetic aldehyd, C_2H_4O, a volatile liquid, prepared by the slow oxidation of alcohol in various ways, has recently been examined, from a physiological point of view, by Drs. Albertoni and Lussana, of Padua, and the following account of their results is an abstract of a portion of their recently-published monograph "On Alcohol, Aldehyd, and the Vinous Ethers."(a) Aldehyd agrees in its elementary properties with those of alcohol; it coagulates albuminous substances, and whatever dissolves in alcohol is also soluble in aldehyd. It possesses powerful antiputrescent properties: meat can be kept for months, with scarcely any alteration, in an aqueous solution containing from 1 to 3 per cent. of aldehyd. Two hundred grammes of urine, to which four grammes of aldehyd had been added, remained three months without undergoing the slightest decomposition. Its vapours are also equally active. A few grammes of aldehyd poured on the bottom of a vessel containing such easily decomposing bodies as the brain and liver, will preserve them quite fresh for two months. The physiological action of aldehyd on animals is a very powerful one. From three to five grammes diluted with water and injected into the veins of a moderate-sized dog almost instantaneously arrest

(a) Padua, 1875.

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the respiration, and produce a condition of coma. The heart's action is, however, only slightly weakened, but the muscles are paralysed, and sensation and reflex excitability are temporarily destroyed. As a rule, however, the animals recover completely in a little while. In smaller doses the aldehyd produces an intoxication similar to that of alcohol, but there is an almost complete loss of sensibility. If the drug is given by the stomach, larger doses of it are required to produce the same effects than if it is injected into the veins, and it gives rise to intense irritation in that organ, and even to gangrene of the mucous membrane, owing to its caustic properties.

Owing to its great volatility, large quantities of aldehyd can be inhaled through the lungs. The most remarkable action of aldehyd in the organism is that which it exerts on the respiratory apparatus: while small quantities immediately accelerate the respiration, large ones arrest it altogether. The animal may then continue without breathing for as much as half an hour, while all the time the heart's contractions remain either normal, or slightly less frequent in number and somewhat increased in strength. Dogs which have not made a single inspiration for ten or fifteen minutes may thus completely recover without any artificial aid. During the stage of asphyxia, irritation of the pneumogastric nerves has not the slightest influence on the heart, and it is only when the breathing recommences that the nerves gradually recover their irritability. As long, however, as the animal is at all under the action of the aldehyd, all attempts to stop the heart by irritation of the vagus are unsuccessful; its pulsations are only rendered smaller and less frequent while the blood pressure is diminished. Aldehyd diminishes the temperature of the body in proportion to the dose exhibited. During the stage of asphyxia the temperature may fall even as much as 4° to 5° Cent. (7° to 9° Fahr.). Animals forcibly resist attempts to make them inhale the vapours of aldehyd; but their sensibility and power of motion are completely abolished in about a minute. If the inhalation is continued, their pupils become widely dilated respiration ceases, and they lie, to all appearance, dead—the only sign of life being the movements of the heart. In spite of all this, they quickly recover if the inhalation is stopped, without vomiting or other unpleasant symptoms. Of thirty deeply narcotised dogs only two died. The vessels of the brain, observed through an opening in the skull, are dilated at the beginning of inhalation, but they contract and leave the brain anæmic when the animal is narcotised, just as they do in animals under chloroform or ether.

The anæsthetic effect of the aldehyd on human beings has been as yet very little investigated, but it is doubtful whether its properties of arresting the breathing, and its irritating action on the lungs and stomach, will not seriously interfere with any attempt to employ it in surgical operations.

ALEPPO BOIL.

The disease, which, under the above title, or under that of "Bouton d'Aleppe," has puzzled various observers since its first discovery by Pococke in 1745, and which has been hitherto regarded as *sui generis*, and restricted to Aleppo and its immediate neighbourhood, has just been carefully investigated in a way that it had never been before, and with most interesting and remarkable results, by Dr. Edward Geber, a distinguished pupil of Professor Hebra's, and Docent of Dermatology at Vienna. After spending a considerable time in Aleppo, and in other parts of Syria and the East, he has published his conclusions in the *Vierteljahrschrift für Dermatologie und Syphilis*, 1874, Viertes Heft, pp. 445-490, under the title of "Experiences of my Journey in the East," and his memoir is worthy of most careful perusal. We can only here state his main results, with the proviso that, as far as we can judge, they are deserving of the utmost credit and confidence.

"By far the majority of the cases," says Dr. Geber, "which in various parts of the East go by the name of Aleppo, Bagdad, or Diarbekir boil, are only cases of syphilis (hereditary or acquired), lupus, and scrofula, or else of eczema, psoriasis, prurigo, etc. Only a small proportion consist of inflammations of the skin arising from mechanical injuries, which are especially remarkable for their *long duration*. The latter occur chiefly on the backs of the feet and hands, or on the legs and forearms, as slightly elevated nummular reddish patches, which at first are either itchy or slightly painful, and which later on, in consequence of continued irritation, pass on to suppuration. Another form of this inflammation consists of furuncles of various sizes, which chiefly attack the face, and which gradually coalesce with one another. All these eruptions, if carefully attended to, protected from irritation, and kept clean, will get well in from two to five weeks, and only leave scarcely perceptible scars behind them; but if neglected in the ordinary Eastern fashion, or else unsuitably treated, they will last for months, and terminate in ugly-looking cicatrices."

To these eruptions, if to any, the name of Aleppo boil ought, according to Dr. Geber, to be restricted; but since their origin is in great part dependent on external causes, and their duration and extent depends on the continuance and intensity of the latter; since, too, they occur in all parts of the East, without being frequent in any one particular place, he thinks that it would be incorrect to ascribe to them the character of an endemic disease, or to attach any special importance to them. He would rather consider them as "the result of abnormal functional activity of the skin, due partly to geographical position and its attendant climatic conditions, and partly to habits of life, religious observances, and peculiarities of race."

The loose and unscientific way in which the term Aleppo boil is used by the natives will be evident from Dr. Geber's remark that it is applied to any chronic circumscribed skin affection attacking a person for the *first* time in his life. The attendant symptoms and the special form and duration which the disease assumes are, in their minds, of no importance whatever; and the name is denied to a second attack in the same individual, as "Aleppo boil can only occur once in a lifetime." This prejudice, as Dr. Geber clearly shows, is not restricted to the natives, but taints the opinions even of foreign medical men resident in Aleppo and other parts of the East. It is, therefore, to be hoped that the new light thrown on the Aleppo boil by his researches will induce the latter to study it more carefully for the future, not only in order to discriminate the various affections which it comprises, but to institute a more rational and scientific treatment of them. We may add, in conclusion, that the hypotheses which make "Aleppo boil" depend on bad water, or its kindred disease the Bagdad boil—a precisely similar congeries of disorders—on the excessive use of dates as a food, are found to have no basis in fact when carefully investigated.

PHARMACEUTICAL SOCIETY OF IRELAND.

Pursuant to a letter received by Sir D. J. Corrigan, Bart., M.D., from Sir M. Hicks-Beach, Bart., Chief Secretary for Ireland, the first meeting of the Council of this Society took place at the King and Queen's College of Physicians, Kildare-street, Dublin, on Friday, the 10th inst. Sir Dominic Corrigan, Bart., the President, took the chair. The following members of the Council attended:—Dr. Aquilla Smith, Vice-President; Mr. William Allan, Dublin; Dr. Burke, Limerick; Dr. Collins, Dublin; Dr. Frazer, Dublin; Mr. Goodman, Dublin; Mr. Goulding, Cork; Mr. Harrington, Cork; Mr. Hodgson, Dublin; Mr. Holmes, Dublin; Dr. Leet, Dublin; Dr. Pring, Belfast; Dr. Macnamara, Dublin; Dr. Owens, Dublin; and Professor Tichborne, Dublin. A ballot was taken to decide what members of the Council should retire at the close respectively of the first and second years, the Act providing that one-

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third shall retire at the close of the first year, one-third at the close of the second year, and the remaining third at the close of the third year. The meeting adjourned to the 22nd inst.

THE LEPER ASYLUM OF TRINIDAD.

By Dr. GAVIN MILROY.

This Asylum, about three miles distant from the principal town, Port of Spain, is decidedly the best in the West Indies, and a model in most respects for our other colonies. Since my frequent visits to it in 1871-72, the female inmates have been removed to a distinct building within the grounds, at some distance from that for the males. The diet is wholesome and nutritious, and the nursing and general management are extremely good. I strongly urged the importance of introducing systematic industrial occupation, outdoor and indoor, of all the inmates who were not absolutely bedridden. This appears to me a very necessary part of the regimen in every leper asylum, on the ground of health, as well as of useful discipline.

Dr. Espinet, one of the ablest and most zealous students of the disease in the tropics, and to whom I was much indebted for valuable co-operation in my inquiries, prepares an annual report, which is regularly published by the local Government. His report for 1873 has only very recently reached me; and that for 1874 will, I believe, be shortly received. The following memoranda and extracts from the former will be read with instruction by all interested in the subject of leprosy:—

The total number of inmates at the end of 1872 was 87, of whom 63 were males and 24 females. At the end of 1873 the number was 86, or 63 males and 23 females. In the interval 27 fresh patients were admitted, and 18 of the inmates had died. During the same period, 6 of the inmates were "discharged, relieved, at their own request," 3 deserted, and 3 were expelled.

The immediate causes of death in the 18 fatal cases were diarrhœa or dysentery in 5, lung disease in 5, gangrene of foot in 3, debility and exhaustion in 3, and ascites in 2.

In relation to the much-mooted inquiry as to the necessity of improving the diet and hygiene of the labouring classes of the colony, Dr. Espinet remarks: "That these are very defective will be denied by no one acquainted with the nature and quality of the food of most of the inhabitants of this island. Our hospital surgeons know well that a very large proportion of the patients sent to hospital suffer more from insufficient and bad alimentation than from real disease, and require, therefore, sustenance more than physic."

The importance of the "great food question" on the health and work-power of a population is doubly great in a community where a large portion of the industrial labour has to be supplemented by a system of immigration. Trinidad is one of our colonies that is most largely indebted to this artificial aid. In the six years from 1868 to 1873 the number of adult coolies that arrived was no less than 15,556—viz., 10,884 males and 4672 females. Now, unhappily, leprous disease is by no means infrequent among these Hindoo strangers, as is shown by the fact that, of the eighty-six inmates of the Asylum, no fewer than twenty-four were natives of India, together with three Chinese immigrants. The following observations of Dr. Espinet are most interesting and suggestive:—

"In the absence of statistical data, but judging from the yearly increasing number of coolies admitted into the Asylum, and of those who have applied and were not admitted from want of room, I am disposed to believe that leprosy is on the increase among the Indian immigrants in this island. To what cause, it may be asked, is this increase to be ascribed? Is it that the coolie arrives in this colony already afflicted? or does he come with the hereditary taint lurking in his system, the disease developing itself subsequently? or is it that he becomes predisposed by his peculiar dietary, condition of dwelling, insufficient clothing, neglect of personal cleanliness, exposure to damp and cold, or the practice of dirt-eating to which the coolie is so strongly addicted on his arrival here? Dr. de Vertueil, who has the examination of coolies on their being landed, and on the accuracy of whose observations I can depend, informs me that he has in some instances observed suspicious symptoms amongst the newly-arrived immigrants. When coolie lepers are admitted into the Asylum, I always endeavour to trace the date of origin of their disease, and I have, as a rule, found that they have become afflicted after several years' residence in the colony. In two patients, however, now in the Asylum, the disease broke out in one three months after his arrival, and in the other a year after. With regard to family history, it is as difficult to obtain any reliable information from the coolie as from other races—there being a natural reluctance amongst people to admit that leprosy exists in any member of their family. In India the disease is endemic, as it is in this island; it is very prevalent amongst some of the East Indian tribes, and presents itself under a greater variety of forms than it does in the West Indies. It is not, therefore, improbable that some of the Indian immigrants arriving here may have been born of leprous parents, from whom they may have inherited the leprous diathesis, and that under the influence of our climate, approaching in many respects to that of India, the disease has manifested itself. Again, the Indian immigrant feeds on but a limited number of articles of food, some living almost exclusively on rice. May not this kind of alimentation so deteriorate his system as to predispose him to leprosy? Physiologists have proved experimentally that animals cannot live long on one article of food only. The state of great anæmia and debility also induced by the practice of dirt-eating so very prevalent, and, by the way, so frequently fatal amongst new coolies during their time of indenture, must render them more liable to become afflicted."

Richmond.

FROM ABROAD.

The Continued and Frequent Dose.

Prof. Edward Clarke, late of Harvard University, in a paper bearing this title, read at the American Medical Association (*Boston Journal*, August 5), observes that the plan adopted in all treatises on Materia Medica, of stating the smallest and largest doses in which any article of the Materia Medica may be administered, although a necessary one, does not embrace the whole point. "These statements are true as far as they go, but they do not represent the whole truth. They fail to give to the student and the practitioner an accurate notion of what an important factor in therapeutics the dose is; and especially do they fail to convey an accurate notion of the therapeutical importance of variation of dose and method of administration."

Doses may be considered under four heads—1. Single doses; 2, continued; 3, frequent; and 4, toxicological. The first and last of these are the doses given in our treatises on Materia Medica, and are recognised as representing the therapeutic and poisonous action of a drug. But the bare statement of the average single dose of an article like opium, for example, gives no adequate or intelligent notion of what the continued or frequent dose of the same drug is, or of the physiological action and consequent therapeutical power of such continued or frequent dose. By the term *continued dose* is meant the administration of a drug in such a way that the elimination of one dose shall not be completed before the absorption of the following dose has commenced—the blood being thus kept constantly charged with the drug. Much of the discrepancies of the statements made concerning the physiological and toxicological properties of different drugs has arisen from the different therapeutical and toxicological effects produced by single and continued doses not being borne in mind. Many therapeutical effects can be produced by continued dosing which are not attainable from single doses, while some objects are sufficiently attainable by single doses. Thus, ammonia given in single doses, or in doses with sufficient time for elimination, is a well-known stimulant, diaphoretic, and antispasmodic; but given continuously for a long period, without such intervals, it produces an action upon the blood-corpuscles which is toxical. Gallic acid, again, is a drug that is so rapidly eliminated by the kidneys, that after two hours it exerts no appreciable action on the blood. Given in single

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doses of ten grains, more or less, three times a day, as it usually is for the restraint of certain forms of hæmorrhage, the blood will be subjected to its restraining action only during six hours out of the twenty-four—a period not long enough to hold steadily in check a hæmorrhagic disposition. But if the continued dose be substituted, so that, the ratio of elimination to absorption being constantly regarded, the blood is kept constantly charged with the acid, the effect is a continuity of action much more likely to prove efficacious. Alcohol also well illustrates the difference between the effects of the single and continued doses; and the want of observing this has led to the discordance of many of the results derived from experiments with it. It has been shown that six or eight hours after the ingestion of a single dose of alcohol the whole of it has disappeared; so that alcohol given in a single dose, leaving the blood free from its presence during two-thirds of the twenty-four hours, and alcohol taken in continued doses so as to charge the blood with it for more than two-thirds of that time, must be regarded as substantially different drugs, producing different physiological phenomena, and to be employed for different practical ends. Bromide of potassium is another article very illustrative of the differences specified.

"Illustrations of single and continued doses, and of the therapeutical importance of recognising them as factors in the treatment of disease, might be multiplied indefinitely. It was impossible to recognise and use them as separate therapeutical factors till physiological observation and experiment had discovered the time and method of the absorption and elimination of drugs, and the ratio of the former to the latter. Nor can the practitioner apply them clinically until he knows, at least with approximate accuracy, the way every article he uses gets into and out of the system, the length of time it remains in the system, and its behaviour while there. The administration of medicines to the sick, without regard to the different and often opposite results, physiological or therapeutical, that follow the single and the continued dose, is both unsatisfactory and unscientific. It is unsatisfactory because it fails to secure the legitimate action of medicinal agents. It is unscientific because it ignores some of the most important physiological conditions upon which scientific therapeutics rest. The time has come for the clinician to recognise and use these and other phenomena of the *modus operandi* of drugs which the physiologist has discovered, and whose accuracy he has demonstrated."

The *frequent dose* is the giving the medicine so as to induce one or more of its actions, whether primary or secondary, with great rapidity—hitting blow after blow in quick succession upon some organ which it is desirable to affect, in accordance with evident indications, with rapidity and power. It is usually, perhaps always, some action of a drug, manifested soon after its absorption, which it is desirable to obtain, and which can be obtained by the frequent dose. Obviously the administration of the frequent dose is limited by the physiological behaviour of the system under its influence. After a certain period the frequent dose is equivalent to a single full dose or a toxic one. The primary stimulant action of opium almost immediately after absorption soon passes off, but may be prolonged and enhanced by administering it every five, ten, or fifteen minutes. The physiological action of aconite illustrates the same principle. Fleming has shown the powerful sedative effect produced by five drops of the tincture. But if half a drop be given every half-hour ten times, or one drop every hour five times, a different physiological, and consequently a different therapeutical, result is obtained.

Subcutaneous Injection of Carbolic Acid in Rheumatism.

At the Berlin Medical Society (*Berlin. Med. Woch.*, Aug. 16), Herr Senator read a paper which will hereafter be published at length, entitled "The Local Employment of Subcutaneous Carbolic Acid Injections in Rheumatic Polyarthritis," containing an account of the results of the practice which, on the recommendation of Kunze, he has followed in some cases in private practice, and in many in the Augusta Hospital. At first he used a solution of 1 per cent., and later of 2 or 3 per cent., injecting this in the vicinity of the various joints affected. These injections had never been attended by any ill consequences, and had often given rise to the disappearance of the pain and other local symptoms. Complications and relapses of the disease were, however, not prevented. Herr Goldbaum stated that he had for several years been employing subcutaneous injections in articular rheumatism, as also in muscular rheumatism, and the anæsthetic effect has been remarkable, continuing for five or six hours. As the patient complains chiefly of the excessive pain and the immovability of the joint, this means is much to be recommended, for by it not only is the pain relieved, but the joint becomes movable, such mobility remaining as long as the pain is absent. He believes that in several cases a favourable influence is exercised on the general course of the disease. The efficacy of the practice is especially seen in muscular rheumatism, so that patients who were motionless from lumbago were after the injections able to move; and after these had been repeated several times the affection disappeared. In answer to a question from Herr v. Langenbeck as to whether the general febrile action was influenced, Herr Senator said that he could not pronounce on this point, as in articular rheumatism the febrile action depended on the affections of the joints, rising or falling with these. The carbolic acid, he further observed, is only a palliative. He has used the 3 per cent. solution with great advantage in a case of ischias, but he has met with no success in chronic articular rheumatism. Herr Goldbaum observed that in no form of neuralgia in which he has tried the remedy has any benefit been derived, so that when no result attends the use of the remedy, the conclusion he comes to is, that a nervous, not a muscular affection, is under treatment. He has, however, found that some of a 2 per cent. solution put into the ear effectually relieves otitis externa, the patient renewing the application as soon as the pain returns. Herr Citron, while confirming what had been said of the anæsthetic effect of the acid in rheumatism, said that on taking the temperatures he had found no effect produced on these. Herr Waldenburg called attention to an old and very simple palliative that had very seldom failed him, viz., pouring ether over the part. Applied as ether-spray he had found it less efficacious. Herr Retzlag, having suffered himself from the disease, had found the ether of no service, except during the moment of application. He had derived most benefit from blisters kept on for twelve hours, until vesicles had formed, which were then opened. Herr Frankel had not tried carbolic acid, but among other local remedies he preferred the immobilisation of the joint for ten or twelve hours, when the pain ceased.

The Antifebrile Action of Salicylic Acid.

At the same meeting of the Society, Herr Senator also read a paper on the above subject, giving an account of numerous trials which he had made in consequence of the recommendation published by Fürbringer and Buss (*Centralblatt*, 1875, No. 18), of the employment of salicylic acid as a means of abating temperature in fevers. He had especially tried it in the hectic of phthisis, having made fifty observations in ten cases. He found that under its use the temperature was undoubtedly diminished, but not so certainly as under the influence of quinine. In some of the cases its influence was quite surprising, while in others it was doubtful or not recognisable. He thinks that these negative results may be due to his having begun with too small doses, or to the mode of administration. The effect was much more marked in intermittent fever. In five out of ten cases of this, the cure was complete after once or twice employing the medicine. The other five, being dispensary patients, did not reappear. The dose was from one to two grammes, either given altogether or in separate doses shortly before the paroxysm; correspondingly smaller doses being given to children. At first it was given as a powder, but later in warm water and glycerine, viz.—two parts of acid to 200 of boiling water, and sufficient glycerine to effect the solution. The mixture was warmed each time before it was taken. A good deal of discussion ensued upon the mode of administration, most speakers considering the forms of powder or emulsion undesirable, while the quantity of water required, on account of the great insolubility of the acid, was also objectionable. Glycerine was generally recommended, and it was stated that fifty parts of this and fifty of water constituted a vehicle that held the acid in permanent solution.

The Riberi Prize.—The Turin Academy has unanimously adjudged the Riberi Prize of 20,000 lire (about £800) to Dr. Moritz Schiff, Professor of Physiology at Florence, for his "Contribuzione alla Fisiologia Patologica del Midollo Spinale."

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REVIEWS.

The Mind of Man; being a Natural System of Mental Philosophy. By Alfred Smee, F.R.S., F.R.C.S. Eng., Fellow of the Chemical Society, Member of the Royal Institution; Medical Officer to the Bank of England, etc. Illustrated with engravings. George Bell and Sons, York-street, Covent-garden. 1875.

The acquirements of Mr. Smee are by no means inconsiderable. He has done good service in the department of Electro-Metallurgy, and is the inventor of the battery that bears his name. The art of horticulture is also indebted to him for "My Garden." Other works and memoirs on various subjects might be mentioned, some of which are considered introductory to that just published (though long since projected), and which occupies our present attention.

It will be our endeavour to point out the more prominent of his views concerning the mental operations; and then to show to what extent, if any, our comprehension of the mechanism of these operations is rendered clearer by the theory which has obtained his unqualified support.

We must at starting bear in mind the object of the work. It professes to be simply a "natural system," not a philosophical analysis of the "human mind." And this distinction must not be lost sight of, although it may not be always possible to find the sharp line of demarcation. But such directly psychological matter as the work introduces may be considered as fairly amenable to criticism.

The work opens with some observations upon the "elementary ideas" acquired through those great primary inlets of knowledge—the senses. There is not much of novelty here to arrest attention. Indeed, the chapter is elementary enough, as may be seen from the following extract from the subject of "Ear Sensations, or *Ousaisthenics*."—"The mind does not derive so many ideas through the medium of the ear as it does from the eye. The ear, however, is of great importance, and it is particularly noticed that the deaf man is liable to accidental injury. He is often injured by vehicles and horses, the noise of which he does not hear, and therefore does not sufficiently quickly avoid." Or again,—"The importance of vision and hearing to the mind of man is so great, that when unfortunately born without both he is not competent to transact any business."

The heading of the following chapter—"Ideas originating in the Mind itself"—tempts one to inquire whether it is meant that ideas arise independently of sensational stimulation; and, unless we mistake, it will presently be apparent that such is, in reality, the author's view. If so, it would seem like a "survival" of the all-but-forgotten doctrine of "innate ideas."

But we pass for the moment to the subject of "Consciousness," and cannot regard its treatment as at all satisfactory. "*All other operations of the mind* [the italics are ours] can be traced to physical causes dependent on material organisation, but this one idea of personal consciousness baffles our understanding." And no wonder! To decipher the mechanism of consciousness would be to wrest the common secret from life and mind. Still, if there be a fundamental mental operation or state, consciousness, surely, is that state. Its very atmosphere is mental. It is, as Sir W. Hamilton observes, the immediate recognition by the *ego* of its acts and affections. And upon this point nearly all psychologists are of accord. The only possible dispute among them is as to the exact reaching of its testimony: whether that testimony may not be, at times, mistaken in affirming certain notions to be intuitive which may really have been acquired—in fact, just the difference between the Intuitional and Experiential schools of Philosophy.

Yet it does appear singular, considering the author's views as to the cause of *all the other mental operations*—considering his hold on mere sensational consciousness—and, lastly, considering the encouragement given by current physiological and physical science,—that he did not attempt some kind of physical explanation of the phenomenon. But to have made such an attempt with any chance of success a deeper search was needed—one co-extensive with that primordial, pre-conscious stage, when the vital, nervous, and physical forces, together with ancestral bequeathments, formed, as it were, a nucleus from which the actual consciousness of our life was gradually and naturally evolved.

It is in the seventh chapter, however, that the proposition is formally enunciated, that Mind originates in the brain. There can be no mistake as to meaning, for later on it is again presumed "that Mind, being one of the functions of the body, is of varying power in different individuals." The proposition stands out in its simple nakedness. No attempt is made in any part of the chapter either to demonstrate or to defend it. There are, certainly, a few cursory remarks about Evolution and Darwin, but only such as would lead to the belief that, with the author's perchance too scanty leisure, he has been unable to bestow sufficient attention either upon the "First Principles," or upon the "Origin of Species." It would have been better, and assuredly far safer, to have made the affirmation simply of the mental manifestations. For we must take heed not to confound causes with conditions. There is, probably, less of truth in the assertion that mind-force originates in the brain, than that it originates in the primordial germ-cell. It exists, though unconscious here, gradually to unfold with the development of the organism, and to manifest its wondrous powers with the perfecting of the brain. Even to hint at Mind being a function of the body, reads very like thorough-going Materialism. But such an implication (at least, in its coarser sense) is by no means intended, as the general tenor of the work superabundantly proves. It would be difficult, however, to know how to class the author, holding, as he does, peculiar views—perhaps, to some extent, with the followers of Locke and Priestley.

In defence of his theory, the interdependence of organ and function might be rigidly insisted on. For, as is the growth and healthy nutrition of the one, so is the increasing capacity and normal manifestations of the other. As disease or injury of the one, so the perverted working or abeyance of the other; as the final decay of the one, so the concomitant failure of the other. When, moreover, we consider the immense complexity of the nervous centres; the almost illimitable extent of nerve-fibres permitting the widest current-diffusion; the existence of used tracks, possibly permitting the fixation of the mental element in the nuclei; the probability of the formation of new ones for fresh acquisition of knowledge; the assimilation of hereditary acquirements; furthermore, the fact that every—even the most evanescent—thought is probably attended with an equivalent change, isomeric or other, of the molecular structure of the ganglionic cells and fibres. Lastly, considering the facts stated in the "Descent of Man," and the recent experiments of Ferrier, all form, it must be admitted, strong arguments for the advocates of a modified or guarded materialistic theory; one, perhaps, gradually gaining the support of scientific men. Still, a far wider generalisation must be made before a law of equivalence is reached, and the great realities, Thought and Feeling, translated in terms either of matter or of motion.

The connexion between matter and mind is thus, confessedly, a very intimate one. At the same time, we do not at all know the exact nature of the connexion. We cannot even say that it is a *necessary* one, though, as we are at present constituted, it is essential that, for the manifestation of the one, the other should be co-operant. Although within the limits of human experience we have no knowledge of conscious finite mind apart from nervous mechanism, we may not assert that the disintegration of the latter involves the annihilation of the force that the former revealed. All that we are really cognisant of is the fact that it eludes all further scrutiny here, and he who would search for it further is stopped at the frontier of the "*real*" and the "*knowable*."

But there is another point of view from which to regard this question. Our conceptions as to the intimate nature of matter have of late undergone such change at the hands of physical science, that we almost think of matter in terms of spirit, and conversely of spirit in terms of matter. Both may be regarded as the two-sided phenomenal face of an ultimate Reality, Force, "*Wille*" of Schopenhauer, which would seem indestructible. The laws of "Continuity" and of the "Persistence of Force" favour such a supposition. A new physical argument for an ultra-mundane existence, based on the immutability of these laws, has been brought forward by the authors of the recent able work, "The Unseen Universe." They first attempt to show the possibility of both life and what we term matter emerging from the invisible into the visible universe. They, moreover, adopt a modified theory of "Individualism," and postulate the possibility of a spiritual framework interpenetrating the physical organism, and capable of receiving knowledge by means of the nervous molecular motions communicated to it. "Now, each

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thought that we think is accompanied by certain molecular motions and displacements in the brain, and part of these, let us allow, are in some way stored up in that organ so as to produce what may be termed our natural or physical memory. Other parts of these motions are, however, communicated to the spiritual or invisible body, and are there stored up, forming a memory which may be made use of when that body is free to exercise its functions."

We are thus forcibly reminded of the doctrine of the pre-Socratic and early part of the post-Socratic schools of philosophy; also of that of some of the early fathers of the Church, mingling with the teaching of Augustine, not exhausted even in Swedenborg, till it again wells up strongly in modern Spiritualism.

Plausible as such a view may appear, and backed as it seems to be by apostolic authority, it is, scientifically speaking, still a speculation. The spiritual framework is an indispensable condition, and even the old difficulty is not quite removed as to the nature of that motion by which the grosser fabric can deliver over to the invisible and spiritual any portion of its acquired knowledge.

"Words and Language" form the longest chapter, far too long to attempt to analyse. Indeed, this would be unnecessary, as it adds but little to the philosophy of language, and much of it might with propriety have been transferred to other chapters.

The relative value of the parts of speech is more or less fully treated, though after a somewhat peculiar fashion. Language generally is depreciated as an instrument of thought, words being considered the common vehicle of error, and so, occasionally, no doubt they are. Preference, accordingly, is given in thinking to the "pure and natural process of the mind." Doubtless the mind has this power of forming judgments and notions of relations, but the mental judgments must eventually be expressed in words, and it behoves us to make as sure as we can that our words "are the counters of wise men." By words, moreover, we may be said to arrive at a science of the laws of thought. A French philosopher has even maintained, "*La science est une langue bien faite.*"

But words are not always univocal, nor the "natural process of the mind" at all times quite clear in its perception of relations. What, for example, is to be understood by the following passage from "Evidence and Testimony"? "In every case the intervention of the jury is necessary to assign a word to express that which the witness describes, because it would be impossible to obtain witnesses who shall be enabled to declare the particular nervous fibres which were excited when the event occurred."

How far our logical wits may be sharpened by the "relational and differential machines" devised by the author, we must leave to the judgment of those who have gained the requisite facility in their management.

It is affirmed that "we are enabled to obtain from their use the bearing of any facts, or to arrive at any conclusion to which the mind, by itself, is competent," and they are strongly recommended to our "judges" to aid them in delivering correct judicial judgments! The recommendation ought to have extended to the preachers at St. Paul's.

The commoner logical fallacies are fused under the vernacular epithet "quibbling." It is satisfactory to find that a glance has been given at the laughable chapter on Fallacies in the late Professor de Morgan's "Formal Logic," and it is matter of regret that much more was not borrowed from this admirable work. But the strictly logical portion should have been incorporated with "Fallacies of the Human Mind," which would amply bear the augment, wanting relief as it does from the perplexing names with which it is loaded.

"The Relation of the Mind to God" and to "Religious Thought" occupy the tenth and eleventh chapters. We would but lightly touch upon the important matters therein discussed. The omnipotence and benevolence of the Creator are proclaimed throughout. But we may gather from them that the author is strongly of opinion that there is much very indifferent theology afloat. For aught that we know to the contrary, he may be quite correct. It seems, however, that he would make *Reason*, not *Faith*, the sole basis of *Religion;* would rather subscribe to the "understand, that thou may'st believe" of Abelard, than to the "believe, that thou may'st understand" of Anselm. The scientific study of the Cosmos should furnish the reason for the "faith that is in us." These, however, are matters that we would prefer leaving him to discuss with theologians.

The succeeding chapter deals with the "Relation of Mind to Moral Philosophy." Nothing can be either grander or purer in morals than the declaration that "every action of man towards another human being should stand the test of being in exact accordance with that action which the law applicable to all mankind under similar circumstances would dictate." It is, in fact, the "Categorical Imperative" of Kant; "a law, universal and binding on every rational will." The importance of undeviating regard to the virtue "truthfulness" is enforced, and *Truth* itself defined as "the idea of the accordance of all the images implanted in our minds, with a new idea presented to the mind." The effect of falsehood stands in striking antithesis, and a dread penalty pointed out as occasionally exacted for its indulgence. "The effect of falsity upon the mind when it discords with all known knowledge is sometimes so great, that persons uttering a lie have been known to drop dead on the spot." How desirable that all young persons, and even those of older growth, who have contracted the bad habit of story-telling, should ponder well over such a statement! The doctrine of the "infinite and immutable character of the moral law," and of our required obedience to it, is insisted on throughout the chapter. This is followed by "Influence of Faith on the Mind." Under this heading, various forms of Faith, with special names, are comprised and illustrated. The chapter is suggestive enough, though the term is used in a somewhat wide sense. It would seem as though our ordinary beliefs, derived from experience, were at times confused with what is usually designated as "religious faith,"—"*pneuma-noemic ideas.*"

The fifteenth chapter ought to be one of importance, inasmuch as it contains the facts from which the "Natural Theory of Mental Philosophy" has been derived.

Experiments are first detailed to prove that the mechanism of sensation is voltaic; next, that the general structure of men and animals is that of a double series of voltaic batteries. Experiment 4: "I introduced a needle into a rabbit's nose, and another into the subcutaneous tissues. On stimulating the nose with a strong odour, deflection occurred. I have repeated these experiments on cats and rabbits," but, as the experimenter remarks with great *naïveté*, "the animals have a great repugnance to it." To this statement we yield unhesitating credence.

From the diagrams formed, it will be seen "how it is supposed that we induce the properties of matter, and refer its creation to an infinite cause."

Further on we read, "according to the electro-voltaic doctrine, we induce certain principles of the human mind."

The sub-section "Principles of the Human Mind" (it may be from our dulness) is sufficiently puzzling at times to comprehend; to say nothing of the questionable nature of some of the canons laid down. "An idea is represented from the excitement of one or all of the nervous fibrils of an organ of sensation indiscriminately. This idea is infinite, inasmuch as it is indivisible, incapable of addition, and represents totality." We have doubtless an idea of the "Infinite," or at least of what is symbolised, but to speak of an infinite idea sounds somewhat strangely. Look, again, at the restrictive definition of Consciousness—"The power to distinguish between a thought and a reality is called 'consciousness.'" We can only add to what has been already written concerning this state, that every thought, every emotion, is a phenomenon of consciousness. The mere presence of either the one or the other does not necessarily imply anything apart from the mental state; to go further some higher mental process must intervene.

We venture on one last extract—"Several ideas must necessarily co-exist, giving rise to compound ideas always existing in the brain. Thus, personality and infinity give us the idea of the soul; pleasure and infinity, of good; pain and infinity, of evil; cause and infinity, of God; time and infinity, of eternity; infinity, pleasure, and time, of heaven; infinity, pain, and time, of hell. These intuitive ideas are not produced by the immediate action of external influences, but have their origin in the construction of the brain or organ of thought."

Towards the close of the chapter a decided break in the continuity of thought seems to occur, and we are again confronted with the favourite theory of the author, and introduced to two maps to illustrate the probable construction of the nervous system, but so filled with nervo-voltaism and a

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menacing terminology that we desist for the moment in sheer alarm.

Mr. Smee, perhaps naturally enough, looks at the living organism with an electrician's eye, and sees in the nervous structures an arrangement bearing an analogy to that of a double voltaic battery. There may be much in the apparent construction of these structures suggestive of such a notion; and much in the fact that electro-chemical changes occur in the body. But even these admissions hardly warrant the inference so boldly drawn, that "man acts by electricity." There is nothing, however, peculiar in the view; it is by no means new, and the early doubt is not lessened as to whether it be true. It has been observed that a correlation exists between vital, nerve, and mind forces; a further correlation may possibly exist between ordinary physico-chemical and the vital forces, for we live amid an environment of physical forces, and, while allowing electricity to be a secondary agent, we deny that it is the proximate correlate, or that voltaic and mind force are interchangeable values. In fine, the voltaic theory is *à fond* totally inadequate to the explanation of the higher mental processes.

The chapter on the "Voltaic Mechanism of the Nervous System" (leaving aside the mechanism) is among the clearest and the best. It incorporates excellent engravings, principally from Stricker, to illustrate histological tissue, and some from Ferrier, to illustrate his experiments on the functions of the brain.

We have thus far essayed to furnish the reader with an outline of the contents of this remarkable volume; but would recommend its perusal lest we might unintentionally have done any injustice to its author. It is essentially a popular one, both as regards its style and teaching; and is dedicated, if not exactly to the "million," at least "to the thousands of readers at home and abroad who have consulted my published works."

By this large class it will doubtless be received with favour, for there is enough in it to interest them, and much that is well meant. But the scientist of to-day, who might have expected, in a work which had "much consideration, and the bestowal of intense and concentrated thought over a long period" (five-and-thirty years), to find a sterling addition to the science of the "Mind of Man," or an analytic of the fundamental groundwork—compendious, yet as searching as even a "Natural System of Mental Philosophy" demands—will, we fear, own, like ourselves, to a feeling of disappointment.

Report of the Sanitary State of the Hackney District for the Year 1874. By John W. Tripe, M.D., L.R.C.P.E., etc., Medical Officer of Health for the District.

Report of the Sanitary Condition of the Whitechapel District for the Quarter ending July 3, 1875. By John Liddle, M.R.C.S., Medical Officer of Health.

Report of the Medical Officer of Health on the Sanitary Condition of the Borough of Salford for the Year 1874. By John F. W. Tatham, M.D., L.R.C.P.E.

A Paper on the Working of the Sanitary Acts, read at the Lincolnshire Poor-law Conference held at Boston on Thursday, April 1, 1875. By Alfred Ashby, M.B., Medical Officer of Health of the Grantham, Newark, and Sleaford Combined Sanitary District.

First Annual Report on the Sanitary Condition of the Goole Rural Sanitary District during 1874. Presented to the Goole Rural Sanitary Authority by H. Franklin Parsons, M.D. Lond., Medical Officer of Health to the Goole and Selby Rural and Selby Urban Sanitary Authorities.

The above reports, drawn up by the different medical officers of health specified, have been forwarded to us for perusal. In each case we can bear testimony to the thoroughness with which the work entrusted to them appears to have been done. The reports are exhaustive in their nature, and in each case, whilst setting forth what has already been effected, point out how much yet remains to be carried out before the improvements contemplated by the Public Health Act can be brought into general operation. It is also satisfactory to find that, although the scale of remuneration accorded to medical officers of health is not excessive (to judge by the pamphlets under notice), a most conscientious amount of work has been got through by the gentlemen who have undertaken the duties entrusted to them.

The Border-Lands of Insanity; and other allied papers. By Andrew Wynter, M.D., M.R.C.P.L., author of "Curiosities of Civilisation," etc. London: R. Hardwicke. 1875.

Dr. Wynter has chosen a very happy title for this work, which is, we think, likely to do good service in instructing people on the great importance of the early recognition and treatment of insanity. We are quite in accordance with him when he says, "If such a mystery were not made of mental disease, it would be deprived of half its terrors, and of half its evil consequences at the same time"; but we fear we cannot go so far as he does in the statement that "insanity, when not clearly hereditary, if taken in its earliest stages, is more easily cured than many diseases which a man passes through without any great fear; for instance, we question if pneumonia is not less curable than a first attack of insanity." It would be difficult, however, to point out too earnestly and forcibly the importance of early treatment, and the deplorable consequences of delay, and of the non-recognition of the earliest warnings of impending mental derangement. There is sadly too much ignorance or want of practical instruction in these subjects, even in the profession at large, and still more, of course, outside the profession. The movement lately made by lecturers on psychology, for increasing the facilities for clinical instruction in mental disorder, will help forward the fuller training of the profession; and books like Dr. Wynter's may be very useful in instructing the public. He does well to point out that "it is the sustained departure from the normal condition of mind and mode of life which should suggest a grave suspicion of impending insanity," and should induce people to resort to skilled medical advice, instead of waiting till the occurrence of flagrant acts of insanity, or for some deplorable disaster. Dr. Wynter is an earnest advocate of non-restraint, in the fullest and widest sense, in the management of the insane, and especially insists that, instead of keeping "patients together in an atmosphere sodden with insanity," the true principle of cure for the curable, and of support for the incurable, is an association with healthy minds; and he enforces his teachings by describing the marked success that has been obtained at Gheel, in Belgium, and by the management of the Insane colony at Kennoway, in Scotland. The several chapters of the book are on "The Border-lands of Insanity," on "Non-Restraint in the Insane," on "The Training of Imbecile Children," "The Eccentricities of the Mentally Afflicted," on "Brain Enigmas, Hallucinations, and Dreams," and on "The Suicidal Act." Here and there we have noticed some awkwardness of style and imperfections, arising, perhaps, from the fact that some of the papers had been previously published anonymously; but these blemishes may be easily removed in a second edition.

Sex in Industry: a Plea for the Working Girl. By Azel Ames, jun., M.D., Member of the Massachusetts Medical Society, etc. Boston, U.S.: James R. Osgood and Co. London: Trübner and Co., 57 and 59, Ludgate-hill. 1875.

The author of this little book has chosen a theme which he himself admits is full of difficulties. The chief aim of the work he states to be the amelioration of the conditions of female labour as at present existing. No doubt on both sides the Atlantic there is a great want of care and consideration in the method of utilising the exertions of the other sex employed in all kinds of industry; but, with all due deference to Dr. Ames, we fear that the present is scarcely the time to advocate radical reforms, when the introduction of female workers into so many new spheres is yet so recent. Of late—at least in this country—great efforts have been made to introduce female workers into positions which, heretofore, have been exclusively held by men, and those philanthropic individuals who have been most persistent in their efforts to attain this object will hear with dismay that, according to Dr. Ames, in most of the occupations in which women have supplanted men, the task is too exacting for the strength of the former. Dr. Ames' suggestions for an improved order of things are no doubt the correct ones. He would prohibit the employment of too youthful workers, abridge the length of the present working hours, and introduce measures to insure a correct sanitary condition of operatives during their hours of labour. The first and last of these suggestions it might be possible to bring about, but the competition of the present day, in our opinion, presents an almost insuperable obstacle to any prospect of reform. Dr. Ames' book is well and earnestly written, and appeals with much force to the social reformers of these times.

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An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M.D. Lond., F.R.C.P. Lond., Physician to Charing-cross Hospital, and Lecturer on Pathology and Morbid Anatomy at Charing-cross Hospital Medical School, etc. Third edition, revised and enlarged, and illustrated by 111 engravings on wood. London: H. Renshaw, Strand. 1875.

In noticing this work now we have very little to say beyond congratulating the author on the gratifying fact that a third edition has been so soon called for. But we observe that the whole has been carefully revised, that a considerable addition has been made to the illustrations, and that much new matter has been added. We have not space for noting each of the additions that have been made, and it is quite unnecessary to attempt this for a work which has already gained a deservedly solid reputation. It is enough to say that it has been brought up thoroughly to the knowledge of the present day; and that the student can have no better and safer guide to pathology and morbid anatomy than Dr. Green's book.

Sir Charles Bell and Sir James Simpson: A Biographical Study. By Sampson Gamgee, F.R.S.E., Surgeon to the Queen's Hospital, Birmingham. Birmingham: White and Pike, Moor-street Printing Works.

The foregoing study, which has been reprinted from the *Birmingham Medical Review*, gives a short history of the two great surgeons who have passed away. Whilst admitting the undoubted talent of both, Mr. Gamgee expresses an opinion that it was from the want of a power of concentration that Sir Charles Bell and Sir James Simpson failed to make that lasting mark upon the world's history which men inferior to either of them in talent have succeeded in achieving. In proof of this assertion he shows that Bell, in his discoveries on the nervous system, stopped short at what he designated the respiratory system of nerves, and, not apprehending the larger generalisation to which his facts almost obviously led, left to Marshall Hall the completion of the discovery of the excito-motory system. Mr. Gamgee's pamphlet, which gauges the characters of both these celebrities, will repay the short time spent in its perusal.

Introductory Lecture delivered at the Opening of the Fifth Session of the Ceylon Medical School. By J. L. Vanderstraaten, M.D., F.C.S., Lecturer on Materia Medica and Forensic Medicine. July 1, 1875.

This lecture, which has been reprinted from the literary supplement to the *Examiner*, contains a complete retrospect of the medical events of the Island of Ceylon during a period of ten years, and will be found interesting on account of the description of several epidemics, etc., which have occurred during that period. The lecturer explains that all the hospitals in Ceylon are supported by Government, with the exception of one large one at Jaffna, in the north of the island; but he makes an eloquent appeal in his address for aid from the public of the island towards the support of the hospitals, on the voluntary principle which exists in England.

Chloral in Tetanus.—During a discussion on the employment of chloral, Prof. Verneuil observed that to be of use in tetanus it must be given in large doses, and continued during a long period—the dose being sufficient to plunge the patient into a persistent condition of somnolence. He has rarely given less than ten grammes, and has given sixteen grammes per diem; and he has had the good fortune to meet with six recoveries.—*Gaz. Hebd.*, September 3.

Professor Bouillaud.—This famous clinical professor, whom most of us must recollect from our earliest professional life as one of the celebrities of the French school, has only now, at the age of nearly eighty, applied for his pension. It is true that the duties of his chair have been performed by a deputy for the last ten years. He has taught in the Faculty for forty years, and has published about a dozen works of importance, while if his various academical and other discourses were collected, they would fill at least twenty volumes. His powers, vigour, vivacity, and eloquence have shown wonderful endurance, for even now he is one of the most attractive and effective speakers at the academies, and those who have heard him in quite recent debates have found him as brilliant as ever.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

Philadelphia.

Annual Meeting of the American Medical Association.

The American Medical Association held its annual session this year at Louisville, a city famous for its hospitality as well as for its honourable record in the walks of medicine and surgery. This national body accomplished its usual amount of labour in a good cause, gratefully accepted and enjoyed a superabundance of social entertainment, and then adjourned to meet in Philadelphia during the next (centennial) year. It is arranged that the Pennsylvania State Medical Society may also hold its session here, while efforts are already on foot to have an International Medical Congress in this city in September, 1876; so that Philadelphia will have her hand of welcome freely open to the profession of the whole world in those interesting days.

One of the earliest items of business before the Association was the extension of international courtesies to Canadian representatives of the profession, a feature which is annually assuming an importance which must sooner or later culminate in the mutual good of medical men in both countries.

Dr. W. K. Bowling, of Nashville, Tennessee, President of the Association, then delivered his annual address on "The Relation of the American Medical Association to Medical Education in the Past, and its Duty to that End in the Future." When the Association was first organised, now nearly a third of a century since, its objects were stated to be those usual to such bodies, such as the elevation of the profession, the encouragement of friendly intercourse among medical men, etc. Whatever may be said of the success which has attended these annual gatherings in the furtherance of the general objects thus stated, one of its primary purposes—the elevation of the standard of medical education—seems no nearer accomplishment now than then. The President explained that this failure of one of the salient features of the Association was due to the rivalry between the various medical schools and colleges, and their jealousy of any interference with their rights on the part of the Association.

A letter being presented from the Canada Medical Association, announcing that their body would meet at Halifax, Nova Scotia, in August, and extending an invitation to their American *confrères* to be present, the following resolution was adopted:—"That, in consideration of the best interests of medical science, it is desirable that a medical conference should take place between the American and Canada Medical Associations, at some central point to be determined upon; and that the American Medical Association be advised as to the desirability of thus becoming more intimately acquainted, and affording an opportunity for the discussion of medical and surgical subjects on a common basis." The motion was carried unanimously. As an additional evidence on our own part of a desire to increase the facilities for international professional intercourse, a communication was read from Dr. E. Seguin, of New York, urging upon the American Medical Association the propriety of appointing delegates to confer with the European medical associations upon the subject of uniformity in weights and measures, clinical observations, and instruments, etc.

Professor Samuel D. Gross next read a paper on "One of the Lost Arts," which proved to be an able address on Bloodletting, considered as a therapeutic agent, in which he contrasted its almost universal abandonment at the present day with its prominence as a remedy in his younger days. He alluded to the causes of this extraordinary change in sentiment and practice, which are mainly four:—First, the influence or tyranny of authority, soon passing into more or less extensive fashion; secondly, the indiscriminate employment of the lancet in the days of what has been termed, not inappropriately, the Sangrado practice; thirdly, a more accurate knowledge of the nature and seat of diseases; and, lastly, the use of certain remedies unknown a third of a century ago, but now of general, if not universal, resort in the treatment of inflammatory affections. He then detailed the various modes of abstracting blood, the classes of disease to which it is more especially applicable, the period at which it should be performed to yield the greatest amount of good, and, lastly, its mode of action. Among other points he mentioned that stricture of the urethra would

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be much less frequent if young men labouring under severe gonorrhœa were freely bled at the beginning of the attack. In traumatic affections of the joints, unattended with loss of blood or severe shock, the abstraction of blood would often prevent anchylosis, so common under the present system of treatment. The spasm which is so often present in recent fractures, especially in those of the leg and thigh, is more readily controlled by venesection, followed by a hypodermic injection of morphia, than by any other agent he had ever tried.

In chronic inflammation, Professor Gross considers that blood-letting is often an indispensable remedy—for instance, in chronic pneumonia and pleurisy, especially when associated with severe pain and obstructed respiration,—and he is in favour of copious general bleeding at the beginning of an acute disease, or during its earlier and gravescent stages. He thinks that bleeding will again come into fashion, just as history constantly repeats itself, and knowledge runs in a circle. But it will not be indiscriminate bleeding, but bleeding performed for a reason, early, and, if need be, freely, to save tissue and promote resolution—in the robust and plethoric, in the young and middle-aged; not in the weak, the anæmic, the intemperate, the broken-down, and the decrepit. Professor Gross then referred to the various other conditions, most of them non-inflammatory, in which blood-letting might be indicated, such as puerperal convulsions, apoplexy, asthenia, certain forms of phthisis, and of protracted labour, hysteria, and epileptic convulsions, and even in the convulsions of infants, hay-fever, uræmic coma, and after severe reaction in concussion of the brain. He concluded by saying that the fate of blood-letting shows how sadly we are influenced by authority and fashion in a matter pertaining to the dearest interests of society.

The committee appointed last year to memorialise Congress on the subject of army medical rank, reported through Dr. J. M. Toner, its chairman, that they had prepared a Bill and presented it to that body, which did not propose to alter the number of medical officers now allowed by law, but merely provided that after thirteen years' service medical officers should have the rank of major, after twenty-three years' service the rank of lieutenant-colonel, and after thirty years the rank of colonel. But Congress adjourned without taking any action on the subject, and a committee was again appointed by the Association. It is to be hoped that the national Legislature will, as a result of such continuous application, enact such a Bill as will secure to the medical department of the army that share of rank and promotion to which they are entitled, and which should be at least fully equal to that enjoyed by any other staff corps, or by the medical corps of the navy.

Professor Austin Flint, of New York, chairman of the Section on Practical Medicine, then read an interesting paper on the Medical Discoveries of the Past Year. The subject-matter of the essay referred to alcoholism, motor centres, new remedial agents, transfusion of blood, and the natural history of crime. With regard to this latter subject, Dr. Flint discussed the question whether there is not a possible connexion of individual tendencies to the commission of crime with corresponding diseased conditions of the organisation. And at the close of his ingenious and elaborate argument he mooted the possibility of medical treatment for such conditions, under specific classifications, as in the case of real diseases. This, of course, implied a discussion of the responsibility for criminal acts, which should, however, offer no hindrance to enlightened investigation.

The report of the Committee on the International Medical Association, appointed last year, was then read. It stated that although an organisation of a permanent International Medical Association is highly desirable for the purpose of considering from an international standpoint such questions as the preparation of an international pharmacopœia, a common nomenclature of disease, a uniform system of registration, and formula for collecting vital statistics, quarantine, and all measures that affect public health, etc., yet, after a conference and correspondence with prominent members of the profession at home and abroad, it is not thought best to submit a definite plan at the present time. They would recommend, however, that this Association send delegates to the proposed International Congress at Brussels, in September, 1875, such delegates to report to this Association at a future meeting how far, in their opinion, the plan of this Congress, that has from time to time been assembled in Europe, is likely to meet the wants felt by the medical profession of the United States.

Dr. J. Marion Sims, N.Y., read the report of the Committee on the McDowell Memorial Fund, with resolutions appended, to the effect that it is universally acknowledged that the late Ephraim McDowell, of Kentucky, was the originator of the operation of ovariotomy; and that proper measures should be instituted to commemorate this great achievement, and to do appropriate honour to its author; that this Association, therefore, recommend to each of its members, and to the profession generally, to contribute annually such sums as they may think proper, until the amount of $10,000 shall be accumulated, which shall be known as the McDowell Memorial Fund, the interest of which shall be devoted to the payment of prizes for the best essays relating to the diseases and surgery of the ovaries. Professor Gross stated that in 1852, in conjunction with a number of physicians at Kentucky, he had investigated the claims of Dr. McDowell to the origin of the operation, and had thoroughly satisfied himself that the honour clearly and indisputably belonged to him.

Professor Gross, President of the Centennial Medical Commission of Philadelphia, then read a circular relating to the holding of an International Medical Congress in Philadelphia in September, 1876. The Philadelphia County Medical Society, early in 1874, took the initiatory steps for the formation of an International Medical Congress, by the appointment of a committee of fifteen of its members, with full power to organise a scheme for the consummation of its wishes. The other medical societies of that city were invited to unite with them, so that the welcome might be extended to all visitors by the whole body of the profession. A prominent feature in the Congress will be the delivery of addresses illustrative of the advances in medicine made in the United States in the last hundred years. In addition to these, papers will be read and discussed on all subjects connected with medicine and its collateral sciences. The Congress will consist of delegates, native and foreign, the former representing the American Medical Association and the medical societies of the different states and territories of the Union. No vote will be taken during the sittings of the Congress upon any topic discussed or address delivered. In order to impart to the Congress a strictly international character, invitations will be extended to all the prominent medical societies throughout the world, and also to numerous medical gentlemen noted for their high scientific and social position. The object will be to make the meeting one of a truly representative character of the profession, both in its native and foreign elements.

Dr. H. M. Moore, of Rochester, N.Y., an excellent surgical authority, then read an essay on "Transfusion of Blood," in which he considered the subject in the light of recent researches, and described the various instruments which have been suggested for performing the operation.

Dr. Byford, of Illinois, then read a valuable paper on "Uterine Fibroids."

Dr. Bowditch, chairman of the Section on Hygiene, then presented the address on that subject, confining himself chiefly to the propriety of the organisation of a National Council of Health. Such a consummation could only be had by the union of sentiment and labour between State medical societies and the National Medical Association. It would be folly to expect much aid from Congress at this time, or until physicians themselves and the public at large were educated up to an appreciation of the desirability of such a council. The speaker said that he had sent circular letters of inquiry to the secretaries of associations in reference to what had been done in regard to the public health, and, out of thirty-six States, twenty-two had returned a definite answer. Of these thirty-six States, only eight have as yet State Medical Boards of Health. The speaker thought that State Medical Boards of Health should be organised, to be composed of both professional and lay members, as was the case in the State of Massachusetts. He thought there should be a department of hygiene created by the Government, which should be represented in the Presidential Cabinet. This would embrace the oversight of hospitals, insane asylums, forts, camps, barracks, medical storehouses, etc., to say nothing of the general supervision of that department over its ramified interests throughout the land, in which would be embraced the study and observation of health, diseases, epidemics, climatology, meteorology, etc. In addition, the speaker suggested that this Association should have the right to select, every five years, four men as counsellors at large, for the nation, to be chosen from four divisions of the country, each man to serve five years. And, finally, the National Government should be represented in the Council by

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the Health Secretary, Surgeon-General, and Signal Officer. The following resolutions appended to the paper were read by the speaker:—"Resolved—That each year, until otherwise ordered, the President-elect and the Permanent Secretary be directed to appeal, in the name of this Association, to the authorities of each State where no State Board of Health exists, urging them to establish such Boards." "Resolved—That the Permanent Secretary is hereby directed annually to report the names of the States where Boards of Health exist, and also of those which decline to establish them; said report to form a part of the annual proceedings of the Association." The chief of the United States Signal Service was requested, if it is within his power, to note in his daily weather reports the quantity of ozone in the atmosphere in different sections of the country.

As an evidence of the truly fraternal nature of this national gathering of medical men, and an indication that the animosities enkindled during our late civil war are being gradually eradicated, we may briefly allude to some of the concluding speeches and exercises of the Association. Dr. Bowditch, of Massachussets, said that he had heard of the hospitality of Kentucky, but was not prepared to realise the overwhelming nature of the term as understood in the State itself. He came with the desire of meeting his professional brethren from the South, and wanted to assure them that, however much they had suffered, we also had suffered, and to offer them the right hand of fellowship. He thought the record of the Association would prove one of the strongest bonds in the future preservation of the Union. Dr. Baldwin, of Alabama, said that as a Southern man he reciprocated the greeting extended by his Northern brethren. He complimented them on the ingenuous manner in which they had offered the hand of friendship, which the acerbities of war had not paralysed. It was an interesting feature that the gentleman from Alabama and the one from Massachusetts had each lost a son in the late war for the Union. Other speeches followed, and were received with the most cordial applause. After the usual complimentary remarks incident to the closing exercises of the Association, that body adjourned, to meet at Philadelphia on the first Tuesday in June, 1876. In my next letter I purpose mentioning the nature of the work accomplished in the various sections of the Association.

GENERAL CORRESPONDENCE.

REPLY TO SURGEON-MAJOR NICHOLSON BY THE AUTHOR OF "LETTERS FROM MADRAS."

[To the Editor of the Medical Times and Gazette.]

Sir,—I am very glad that the errors in my "Letters from Madras" have drawn forth a correction from the pen of Surgeon-Major Nicholson, and only wish that he would favour your readers with his own observations of men and things in India. For my own part, I can only give you what I see and hear; but as for the recondite origins of things, cannot pretend to go below the surface.

I had heard that the Vaishnava marks on the forehead represented two feet and a phallus, but certainly I never heard it from a Hindu, and cannot state my authority; but I was told by a Vaishnava that the serpent emblems are worshipped by women who desire offspring, and that his own wife being childless, worshipped, and received the desired boon. Out of gratitude, the little girl who was born in due time was named *Naga*—that is, Serpent.

I hope in the course of a week or two to lay a few more remarks before your readers, and shall be delighted if they are criticised by my medical brethren in the Indian Service.

I am, &c., R. D.

Convenient Mode of Examining the Brain in Infants.—The scalp is divided in the usual manner, and instead of taking off the calvaria, Dr. Curtin divides the sagittal, fronto-parietal, and lambdoidal sutures, and in this manner is able to separate the parietal and occipital bones sufficiently to allow of the brain being removed. When the brain is replaced, the bones spring back to their normal position. The benefit of this method is its convenience and the absence of disfigurement of the head by the mobility of the separated calvaria.—*American Journal of Obstetrics*, August.

NEW INVENTIONS AND IMPROVEMENTS.

DISINFECTING PAPER.

Messrs. Perry and Co., of Cheapside and Red Lion-square, have sent us a packet of disinfecting paper made with some strongly carbolated cerate or unguent. It certainly acts effectively, and as undoubtedly is very convenient and handy. It requires no kind of preparation before using, may be left about freely with perfect safety, and, it is said, does not spoil by keeping. The form of the disinfectant makes it very convenient and safe also for carriage. It may be employed in the dry state, being hung up or otherwise exposed to the air; may be placed in night-chairs, bed-pans, etc.; or used to make a liquid disinfectant by placing the paper in hot water.

"PEPSIN ESSENZ."

We have received from Messrs. Corbyn and Co., High Holborn, a sample of the "Pepsin Essenz" of Dr. Oscar Liebreich. It is an elegant-looking, clear, pale straw-coloured fluid, somewhat like very pale sherry, and is said to be an especially reliable preparation, largely used in Germany. The proportion of alcohol present is reported to be "so small, that no appreciable retarding influence is exerted on the solvent powers of the pepsine"; and the name of Liebreich is certainly enough to give confidence in its composition and preparation. It is pleasant to the palate, and, so far as we have had opportunity of trying it, effective as an aid to digestion. The dose for an adult is one to three teaspoonfuls directly after meals.

ICELAND MOSS AND FUCUS POULTICES.

A French chemist named Lelievre has introduced a new substance, extracted from the *Fucus crispus*, to take the place of linseed, and be used instead of ordinary poultices. It can be had dry in sheets, like paper. When required, a piece of the necessary size is cut off and put in water, boiling, lukewarm, or cold, till it becomes swollen or soft; it is then applied to the part affected, and covered with oil-silk, guttapercha tissue, or waxed linen. It is said to be very cleanly, and that the same piece may be used many times; and that it will take and retain on its surface most medicinal substances. M. Jules Lefort has reported very favourably on it to the Academy of Medicine, and at the sitting of the Academy at which the report was adopted, MM. Gosselin, Larrey, and Demarquay spoke in terms of high praise of the serviceable qualities of the new invention.

We extract the following particulars with regard to gout from Dr. W. Dickson's interesting "Report on the Health of the London Customs Officers":—"Gout is almost exclusively limited to the London division of Customs officers, in which it is far from uncommon. No fewer than thirty-nine cases occurred in the year, not all, however, to different individuals, in nineteen instances being recurrent attacks, and some persons having been several times disabled in the period. In the class of watermen the disease seems to be most obstinate and prone to recur, but it is pretty fairly distributed in the force, twelve out-door officers, six watermen, and three messengers having been affected. The attacks seem to be irrespective of age, temperament, or personal habits, often most severe in abstemious men, but in the majority the malady is of hereditary origin and is very remarkably influenced by weather. The year 1874 afforded some notable illustrations of this. In the three months of the year in which the temperature was relatively considerably above the mean—viz., January, April, and July—eighteen cases were admitted; while in the three months which showed a deficiency of temperature—May, August, and December—there were only five cases. Warmth and damp, occurring in a generally dry season, seem to be especially favourable to its development. On some such days, three, four, or even five cases of well-marked gout have simultaneously presented themselves. Being young or middle-aged men, recovery is generally speedy and satisfactory, but with so obvious a predisposition ulterior complications are to be dreaded with advancing years, and a considerable proportion of premature superannuation is, in most years, derived from such cases."

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OBITUARY.

ALEXANDER FLEMING, M.D.,

Was born in Edinburgh in 1824. He graduated in medicine at the University there, with the highest honours, in 1844; a gold medal being awarded for his inaugural thesis. After taking his degree he visited the hospitals of Paris, Vienna, and Prague, and spent a considerable time while on the Continent in investigating the pretensions of homœopathy, hydropathy, etc. On his return to Edinburgh, he edited for some years the *Edinburgh Monthly Journal of the Medical Sciences*, in conjunction with Dr. W. J. Gairdner and Dr. Day. On leaving Edinburgh, he accepted the appointment of Professor of Materia Medica in the Queen's College, Cork; and he was also one of the examiners in the Queen's University in Ireland. In 1858 he went to Birmingham, and was appointed Professor of Materia Medica in the Queen's College, and Physician to the Queen's Hospital. This appointment Dr. Fleming continued to hold until 1873, when ill-health compelled him to resign, and he was appointed Consulting Physician. In 1859 he was elected Fellow of the Royal College of Physicians, London. He was also Consulting Physician to the Women's Hospital, and to the Ear and Throat Infirmary. Dr. Fleming took an early and active interest in the amalgamation of the two Birmingham medical schools; and, after it was accomplished, did all he could, as a member of the Council of the Queen's College, to insure its success. He was one of the first promoters of the Nurses' Training Home, and took an active part in its management. When the British Medical Association met in Birmingham, in 1872, Dr. Fleming was selected to give the Address in Medicine, but symptoms of chronic renal disease had then appeared, and he was obliged to decline the request of the Council. His place was filled by Dr. Wilks. Dr. Fleming's researches on aconite have secured him a European reputation. His large consulting practice in Birmingham and the midland counties occupied his time so fully that he had but little to spare for writing. The most important of his papers are "A Treatise on Aconite," "The Classification of Medicines," "Medical Education, with especial reference to the Course for the Degree of M.D. in Queen's University, Ireland," "Clinical Notes in Therapeutics, taken in the hospitals of Vienna, Paris, and Prague," "Treatment of the Habit of Opium-Eating," "Lead-Poisoning and its Treatment," "On Constipation and Stoppage of the Bowels," etc.

Since Dr. Fleming's health gave way, in 1871, he chiefly resided on the Continent. He died at Brixton, August 21.

Dr. Duchenne, the celebrated author of the "Traité de l'Electrisation Localisée," who is almost as well known in this country as in his own, we regret to say is dangerously ill.

Paris and London in 1874.—The *Union Méd.*, Sept. 4, gives the following extracts from the summary for 1874 published in the Paris *Statistique Municipale*. The superficies of Paris is put down at 7802 hectares, with a population of 1,851,792; that of London, comprising the outer circle, corresponding to the Paris *banlieu*, being 180,764 hectares, with 4,124,319 inhabitants. This would give a density for Paris of 96·05 inhabitants per hectare, and for London only 22·82; but taking London only, properly so called, there is a population of 3,445,160, or 107·63 per hectare. During 1874 there were registered 53,786 births, or 29·05 per 1000 inhabitants; 18,827 marriages, or 10·17 per 1000; and 40,759 deaths, or 22·01 per 1000. In London there were 145,081 births, or 35·13 per 1000; 33,329 marriages, or 8·08 per 1000; and 89,205 deaths, or 21·63 per 1000. From these figures it results that the excess of births over deaths was 55,876 for London and 13,027 for Paris, giving a proportion of births to deaths of 1·63 for London and 1·32 for Paris. In Paris the number of births seems to be undergoing a diminution, for while there were but 53,786 in 1874, there were 55,905 in 1873, and 56,894 in 1872. Of the 53,786 births, 39,442 were legitimate, 11,118 natural children, and 3226 recognised,—there being 2·75 legitimate births to 1 natural. The London statistics furnish no information on this subject. There were 18,827 marriages in 1874, to 19,520 in 1873, and 21,373 in 1872. Of the 37,654 persons married in 1874, 388 men and 1368 women were unable to sign their names. Of the 40,759 deaths, 7474 were caused by phthisis and 2925 by pneumonia. The suicides amounted to 659.

MEDICAL NEWS.

University of London.—The following is a list of gentlemen who recently passed the First B.Sc. and Preliminary Scientific (M.B.) Examination (for Honours), viz.:—

CHEMISTRY.

First Class.—Hewitt, William (First B.Sc. and Prel. Sci.—disqualified by age for the Exhibition), Royal School of Mines; Humpidge, Thomas Samuel (First B.Sc. and Prel. Sci.—Exhibition), Royal School of Mines, and Willis, Ambrose Robinson (First B.Sc. and Prel. Sci.—disqualified by age for Exhibition), Royal School of Mines—equal; Jones, William Wansbrough (First B.Sc. and Prel. Sci.), Magdalen College, Oxford.

Second Class.—McDonald, Greville Matheson (Prel. Sci.), King's College; Fenton, Herbert Alfred Hill, (Prel. Sci.), University College; Cantin, Louis Alfred (Prel. Sci.), St. Bartholomew's Hospital; Spratling, William Joseph (First B.Sc.), private study and Royal School of Chemistry.

Third Class.—Jackson, Alfred Henrick (First B.Sc.), Owens College, and McAlpine, Archibald (First B.Sc. and Prel. Sci.), Royal College of Science, Dublin—equal; Harries, Arthur John (Prel. Sci.), University College; Ráy, Nanda Kumár (Prel. Sci.), University of Edinburgh; Bredin, Richard (First B.Sc. and Prel. Sci.), Liverpool Royal Infirmary School of Medicine and private study; Hinton, William Bartlett (Prel. Sci.), Guy's Hospital.

ZOOLOGY.

First Class.—Money, Angel (Prel. Sci.—Exhibition), University College; Willis, Ambrose Robinson (First B.Sc. and Prel. Sci.), Royal School of Mines.

Second Class.—Chuckerbutty, William Goodeve (Prel. Sci.), University College; Clark, Charles Alfred Dagnall (Prel. Sci.), St. Bartholomew's Hospital; Penny, Edward (Prel. Sci.), Guy's Hospital.

Third Class.—Best, John Henry (First B.Sc. and Prel. Sci.), University College; Russell, George Hannah (Prel. Sci.), Guy's Hospital; White, William Hale (Prel. Sci.), Guy's Hospital; Greenwood, Major (Prel. Sci.), London Hospital; McDonald, Greville Matheson (Prel. Sci.), King's College; Hayle, Thomas Hahnemann (Prel. Sci.), Owens College.

EXPERIMENTAL PHYSICS.

First Class.—Wooldridge, Leonard Charles (Prel. Sci.—Arnott Exhibition and Medal), Guy's Hospital; Brown, George (First B.Sc. and Prel Sci.), Owens College, and Hewitt, William (First B.Sc. and Prel. Sci., Royal School of Mines—equal; Tunzelmann, George William von (First B.Sc.), University College.

Second Class.—Colborne, William Wriothesley (Prel. Sci.), University College; Harrison, Cecil Reeves (First B.Sc. and Prel. Sci.) University College.

Third Class.—Tovey, Albert Edward (First B.Sc.), private study; Willis, Ambrose Robinson (First B.Sc. and Prel. Sci.), Royal School of Mines.

BOTANY.

First Class.—Bredin, Richard (First B.Sc. and Prel. Sci.), Liverpool Royal Infirmary School of Medicine and private study.

Second Class.—McAlpine, Archibald (First B.Sc. and Prel. Sci.), Royal College of Science, Dublin; Trafford, William Carey (First B.Sc.), University College; Dismorr, Alfred (Prel. Sci.), St. Bartholomew's Hospital, and Robertson, David, LL.B. (First B.Sc.), private study—equal; Wooldridge, Leonard Charles (Prel. Sci.), Guy's Hospital; Russell, George Hannah (Prel. Sci.), Guy's Hospital; Pearce, Walter (First B.Sc. and Prel. Sci.), St. Mary's Hospital; Ráy, Nanda Kumár (Prel. Sci.), University of Edinburgh; Turner, Alfred Moxon (Prel. Sci.), Guy's Hospital; Lichtenstein, Maurice (Prel. Sci.), private study.

Third Class.—Hooker, Charles Paget (Prel. Sci.), St. Bartholomew's Hospital; Ponsford, Leicester Cuthbertson (Prel. Sci.) University College, and Quelch, John Joseph (First B.Sc. and Prel. Sci.), New College, Eastbourne—equal.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 2:—

Angove, William Thomas, Mount Pleasant, Camborne.
Grimwood, Harry Charles, Stowmarket, Suffolk.
London, Edwin Harding, Maidstone, Kent.
Whitmore, William Sickle, West London Hospital.
Wickham, Henry, Tetbury, Gloucestershire.

The following gentlemen also on the same day passed their primary professional examination:—

Boodle, George Adolphus, St. Bartholomew's Hospital.
Boswell, Alexander, St. Bartholomew's Hospital.
Nundy, Edward, University College.
Pane, Reginald, Middlesex Hospital.
Webster, John, University College.

NAVAL APPOINTMENTS.

War Office—Medical Department.—Surgeon Frederick Robert Wilcox, M.B., to be Surgeon-Major, *vice* Arthur Edwin Temple Longhurst, M.D., retired upon temporary half-pay. To be Surgeons—Henry Charlesworth, gent., John Cotter Dorman, M.B., George Herbert Le Mottée, gent., William Litchfield Chester, M.B., Edward Arthur Mapleton, M.B., Edward William Kelsall, gent., Daniel O'Sullivan, gent., and Charles Edward Sharpe, gent.

Brevet.—Apothecary Henry Godbier, Madras Medical Service, to have the honorary and local rank of Surgeon.

India Office.—Her Majesty has been pleased to approve the following list of names for admission to her Majesty's Indian Medical Service:—Bengal: To be Surgeons—George Spiers Alexander Ranking, Robert Davidson Murray, Dennis Wood Deane Comins, Patrick Fénélon O'Connor, James Moran, William Beatson, William Allason Simmonds, George Arthur Warburton, Roderick Macrae, Thomas Elwood Lindesay Bate, and Shibram Borah. Madras: To be Surgeons—Henry Hammond

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Smith, George Tucker Thomas, Arthur James Sturmer, Benjamin Harvey Williams, and Archibald Adams. Bombay: To be Surgeons—Arthur Henry Cole Dane, John Philip Greany, M.D., John Edward Ferguson, George Edward Elton Burroughs, and James M'Cloghry.

Admiralty.—James Trimble, Staff Surgeon to the *Iron Duke*, in lieu of a Surgeon; John Dridley, Surgeon to the *Active*, for disposal; M. Reed, Surgeon to the *Aurora*; Robert H. More, M.D., Surgeon to the *Duncan*; John Dudley, Surgeon to the *Active*, for disposal.

BIRTHS.

Atkinson.—On September 2, at Bampton, Oxon, the wife of J. P. Atkinson, M.D., of a son.

Bryant.—On September 10, at 23a, Sussex-square, Hyde-park, the wife of J. H. Bryant, L.R.C.P., M.R.C.S., of a son.

Spencer.—On September 6, at Aboyne, Aberdeenshire, the wife of Dr. L. D. Spencer, Bengal Medical Staff, of a son.

MARRIAGES.

Barrow—Macdonald.—On July 27, at All Saints Church, Coonoor, Neilgherries, Henry John W. Barrow, Surgeon 43rd Light Infantry, son of T. W. Barrow, Inspector-General of Hospitals, to Florence Ellie, second daughter of Lieut.-Colonel J. C. Macdonald, Madras Staff Corps.

Black—Fleming.—On September 9, at Fawley Church, Southampton, James black, M.R.C.S., of Caius College, Cambridge, and of 21, Burghley-road, Highgate-road, London, N., youngest son of the late Thomas Black, of The Grove, Highgate, to Clara Anne, second daughter of the late James Fleming, Esq., of Sheepwash and Ronde, Isle of Wight.

Booker—Bell.—On August 26, at Christ Church, Leeson-park, Dublin, John Booker, Esq., of Rockbrook, Castlepollard, co. Westmeath, to Maria, daughter of Thomas Bell, M.D., late of Cheltenham and Demerara.

Canton—Farmer.—On September 7, at Holy Trinity Church, Penge, Frederic Canton, M.R.C.S., of Great Marlborough-street, London, to Edith Mary, second daughter of William F. Farmer, Esq., solicitor, of Beverley-road, South Penge.

Chapman—Birch.—On September 8, at All Souls, Langham-place, Herbert Chapman, Esq., of Madras, to Catherine Lucy, eldest daughter of S. B. Birch, M.D., of 61, Harley-street, London, W.

Cotterill—Alcock.—On September 7, at Sandon, Alfred Cotterill, M.R.C.S., of Newcastle-under-Lyme, to Alice, daughter of J. Alcock, Esq., of Port Hill, Staffordshire.

Davies—Weston.—On September 2, at Hove Church, W. St. George Davies, M.D., to Emma, second daughter of Henry Weston, Esq., formerly of the Boro' Bank.

Epstein—Sutro.—On September 8, Siegmund, second son of Hermann Epstein, Esq., of Frankfurt-on-the-Maine, to Bessie, eldest daughter of Sigismund Sutro, M.D., of 37a, Finsbury-square, London.

Fasson—Robertson.—On September 7, at St. Peter's, Edinburgh, Charles Hamilton Fasson, Esq., Deputy Surgeon-General, to Maggie Sarah, daughter of Robert Robertson, Esq., Strowan Lodge, Morningside.

Forster—Allen.—On September 7, at the parish church, Chudleigh, Devon, the Rev. Charles Foster, M.A., Incumbent of Holy Trinity, Bridlington Quay, Yorkshire, to Jane, third surviving daughter of the late Matthew Allen, M.D.

Golding-Bird—Baber.—On September 2, at St. Mary-Abbott's, Kensington, C. H. Golding-Bird, B.A., M.B., F.R.C.S. Eng., L.R.C.P. Lond., Assistant-Surgeon to Guy's Hospital, son of the late Golding-Bird, M.D., F.R.S., to Florence Marion, eldest daughter of John Baber, M.D., of Thurloe-square, South Kensington.

Hardwicke—Tonkins.—On September 4, at Holy Trinity, Paddington, Arden Hardwicke, C.E., of Longton, Staffordshire, younger son of W. Hardwicke, M.R.C.S. Eng., L.S.A., Coroner for Central Middlesex, to Frances Harriet, only daughter of Mr. S. W. Tonkins, of Fulham-place, Maida-hill.

Hogarth—Reith.—On September 9, at St. Mary's, Sheffield, Edward Lucas Hogarth, M.A., of Brasenose College, Oxford, to Mary, only daughter of the late Archibald Reith, Esq., surgeon, Aberdeen.

Kelham—Robinson.—On September 9, at St. Giles's, Camberwell, Herbert, third surviving son of the late Charles Bird Kelham, Esq., of The Grove, Camberwell, to Sarah Elizabeth (Lilly), eldest daughter of the late James Robinson, Esq., surgeon, Ripon.

Lambe—Price.—On September 8, at Neufchatel, Switzerland, Captain George Vautier Lambe, late Royal Fusiliers, to Fanny Emiline, youngest daughter of the late James Price, M.D., of Brixton, Surrey.

Langford—Rogers.—On September 2, at Martley, Worcestershire, Henry Edward Langford, M.D., of Kidderminster, to Frances Ann, eldest daughter of John Rogers, Esq., of Martley.

Middleton—Tabor.—On September 8, James W. Middleton, of 21, St. Helen's-place, London, only son of J. Middleton, M.R.C.P., of Mill Cottage, Woodford, Essex, to Lucy, youngest daughter of Edward Tabor, Esq., of Sutton Hall.

Munro—Taylor.—On September 8, at London-road, Kilmarnock, Robert Munro, M.A., M.D., Kilmarnock, to Anna Black, youngest daughter of W. Taylor, Esq.

Pantin—Sutton.—On September 7, at St. Michael's Church, Finsbury, Henry, eldest son of William Pantin, Esq., of Charlbury House, Blackheath, to Susannah Louisa, eldest daughter of Henry Gawen Sutton, M.D., of 9, Finsbury-square, London.

Simpson—Johnson.—On September 2, at St. John's, Ellel, near Lancaster, Richard Simpson, of Clougha Cottage, Quernmore, near Lancaster, and 13, Portland-place, Lower Clapton, London, to Margaretta, daughter of J. Johnson, M.D., of Hampson-in-Ellel, and Fell End, Quernmore.

Smith—Place.—On September 8, at Milverton Church, Warwickshire, by the father of the bridegroom (the Rev. J. H. Smith), Eustace Smith, M.D., F.R.C.P., to Katie Isabella Place, only surviving daughter of the late F. Place, Esq.

Stokes—Law.—On September 6, at St. James's Church, Paddington, George Baret Stokes, Captain H.M. 108th Regiment, eldest surviving son of George Day Stokes, Esq., of Mount Hawk, Tralee, co. Kerry, to Isabella Barbara, second and only surviving child of the late Robert Law, M.D., 25, Upper Merrion-street, Dublin.

DEATHS.

Chawner, the Rev. Darwin Frank, M.A., son of the late Darwin Chawner, M.D., of Lincoln, suddenly, at Clifton, Bristol, on September 7.

Crane, Edward Joseph, Surgeon-Major Royal Artillery, eldest son of J. W. Crane, M.D., at Leicester, on September 6, aged 41.

Dempsey, Joseph Meldon, M.D., at 27, Charterhouse-square, on September 14, aged 53.

Harrington, Nicholas, M.R.C.S., at his residence, Fisher-street Swansea, on August 30, aged 44.

Headland, Frederick William, M.D., F.R.C.P. Lond., late Senior Physician to Charing-cross Hospital, at St. Leonard's-on-Sea, on September 4, in the forty-sixth year of his age.

Hunter, Charlotte, widow of the late Dr. John Charles Hunter, suddenly, at her residence, 30, Wilton-place, Belgrave-square, London, on August 5, in her 74th year.

Joy, Anita Mary, wife of J. H. Joy, M.D., of Tamworth, Staffordshire, at Glenfintaig House, Inverness-shire, the residence of her father, J. Mackay, Esq., on August 26, aged 28.

Morris, Ellen, the beloved wife of Trevor Morris, M.D., at De Montalt Cottage, Combe Down, Bath, on September, 7, aged 62.

Pooley, Julia, wife of Charles Pooley, Esq., and daughter of the late Frederick Lewis, M.R.C.S., on September 5, aged 31.

Rolfe, Elizabeth Margaret, widow of the late William Rolfe, M.D., of St. Lawrence House, Bocking, Essex, and eldest daughter of the late Rev. Newman John Stubbin, of Higham, Suffolk, aged 73.

Stevenson, Elizabeth, widow of the late Robert Stevenson, Esq., surgeon, at her residence, Ravensdowne, Berwick-on-Tweed, on September 12, in her 96th year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Bristol General Hospital.—House-Surgeon. Candidates must be M.R.C.S. and L.S.A., and be registered. Applications, with testimonials, to the Secretary, on or before September 23.

Bristol Hospital for Sick Children.—House-Surgeon. Applications, with testimonials, to the Committee of the Hospital, Royal Fort, St. Michael's Hill, Bristol, on or before October 7.

Chester General Infirmary.—Visiting Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Board of Management, on or before September 27.

Essex and Colchester Hospital.—House-Surgeon and Apothecary. Candidates must be duly qualified, and unmarried. Applications, with testimonials, to the Secretary, on or before October 7.

Liverpool Dispensaries.—Assistant Resident House-Surgeon. Candidates must be duly qualified, and unmarried. Applications, with testimonials, to the Secretary, on or before September 29.

London Hospital, Whitechapel-road, E.—Assistant Obstetric Physician. Applications, with testimonials, to the House Committee, on or before September 27.

Middlesex Hospital Medical College.—Professor of Chemistry. Applications, with testimonials, to the Dean of the Medical College.

Queen's College, Cork.—Professor of Materia Medica. Applications, with testimonials, to the Under-Secretary, Dublin Castle, on or before September 20.

Royal Hants County Hospital, Winchester.—House-Surgeon and Secretary. Candidates must be duly qualified. Applications, with testimonials, to the Committee, under cover to the Secretary, before September 29.

Southport Infirmary.—House-Surgeon. Applications, with testimonials, to the Secretary, on or before September 23.

St. Mary's Hospital and Dispensary for Women and Children, Quay-street, Manchester.—Candidates must be duly qualified. Applications, with testimonials, to Mr. J. Barber, 41, John Dalton-street, Manchester, on or before October 1.

Worcester General Infirmary.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, Mr. A. P. Watkins, 50, Foregate-street, Worcester, on or before September 25.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Battle Union.—Mr. J. A. Simons has resigned the Ashburnham District; area 3500; population 867; salary £25 per annum.

Bodmin Union.—Mr. J. C. Blewett has resigned the Sixth District; area 13,630; population 3583; salary £39 per annum.

Caistor Union.—Mr. Richard Read, Medical Officer for the Tealby District, has resigned; area 14,044; population 1878; salary £30.

Haslingden Union.—The Accrington District is vacant; area 3425; population 21,788; salary £90 per annum.

Ongar Union.—Mr. Thomas Markby has resigned the first District; area 13,730; population 3105; salary £105 per annum.

APPOINTMENTS.

Aysgarth Union.—Mr. Alfred Barker, M.R.C.S. Eng., L.R.C.P. Edin., appointed Medical Officer for the Lower District.

Aysgarth Union.—Mr. Joseph Thompson, M.R.C.S. Eng., and L.R.C.P. Edin., appointed Medical Officer for the Higher District, in the room of Mr. Alfred Baker, resigned.

Faversham Union.—Mr. Frederick Abner Gange, M.D. St. Andrews, M.R.C.S. Lond., and L.S.A. Lond., to the Second District. Mr. William Nash Spong, M.R.C.S. Eng., L.S.A., to the Workhouse.

Leek Union.—Mr. Samuel Oldham, M.R.C.S. Eng., L.S.A. Lond., to the Norton District.

Northleach Union.—Mr. Daniel Iles, M.R.C.S. Eng., L.S.A. Lond., appointed Medical Officer for the Third or Bibury District, in the room of Dr. Bernard, resigned.

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Northleach Union.—Mr. Thomas Wise, M.R.C.S. Eng., L.S.A. Lond., L.R.C.P. Lond., appointed Medical Officer for the Second District, in the room of Mr. R. J. Swan, resigned.

Plomesgate Union.—Mr. K. M. O'Callaghan, L.F.P. & S. Glasg., L.S.A. Lond., to the Aldborough District.

Township of Manchester.—Mr. William Fitzwilliam O'Grady, L.R.C.S. Ire., L.A.H. Dub., Junior Assistant Medical Officer at the Workhouse Hospital.

Westbury and Worwellsdown Union.—Mr. Edward Peter Shorland, M.R.C.S. Lond., L.S.A. Lond., to the first District and the Workhouse.

York Union.—Mr. Alfred Kebbell. M.R.C.S. Eng., has been appointed Medical Officer for the Fourth District, in the room of Mr. Frederick Wright, resigned.

OUR attention has been called by the school authorities of Guy's and St. Thomas's Hospitals to the fact that in our list of entrance scholarships the modifications adopted by the Guy's authorities this year, and the institution of such scholarships at St. Thomas's, have been omitted. It will be found that they are perfectly correctly stated under each hospital, but the list as it stands was made from old returns, and in the hurry escaped complete revision.

THE salary of Dr. John F. W. Tatham, Medical Officer of Health for the Salford Urban Sanitary District, has been increased from £4 00 to £500 per annum.

HORSEHAIR SUTURES.—Dr. Greene, in a communication to the *Boston Journal* (August 5), states that he has advantageously used these for a great variety of wounds, and thinks they might supersede all other materials, except when great strength is required. The horsehairs being so fine, leave no scar, and allow of the sutures being introduced very near each other, while they are very easily tied and cause no irritation. He has applied them in almost every locality in both skin and mucous membrane, and has secured beautiful linear union. Where greater strength is required for the support of flaps, silk or silver wire may be used for that purpose, employing the horsehair for accurate coaptation of the edges. Dr. Greene takes the long hair from the tail of a young, healthy pony, and, having thoroughly rinsed it in warm water, boils it for half an hour in a solution of bicarbonate of soda (one ounce to two quarts), and then rinses it again in clean warm water. It becomes quite pliable and does not snarl or kink. Dr. Fayrer, in his "Clinical and Pathological Observations in India," states that horsehair sutures have been in use for many years in the Calcutta Medical Hospital. He speaks more warmly in their favour even than Dr. Greene, especially as applied in plastic operations. He says the hair derived from the tail of a white or grey horse is to be preferred.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN JULY, 1875.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	17·90	0·056	0·130	0·001	13·9	3·3
West Middlesex .	17·51	0·034	0·136	0·000	13·4	3·0
Southwark & Vauxhall . . .	17·36	0·051	0·132	0·001	13·4	3·0
Chelsea . . .	17·83	0·043	0·104	0·001	13·8	3·3
Lambeth . . .	18·07	0·057	0·141	0·001	13·9	3·3
Other Companies.						
Kent	28·07	0·004	0·340	0·000	20·9	5·8
New River . .	17·36	0·023	0·134	0·000	13·5	3·0
East London . .	17·33	0·040	0·136	0·001	13·6	3·3

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in those of the Grand Junction, and the Southwark and Vauxhall Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 121,381,916 gallons; and the number of houses supplied was 518,127. This is at the rate of 36·9 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 31·4 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

RIGHT- AND LEFT-HANDED.—M. Poncet, of Lyons, observes that it is sometimes of consequence to determine whether a victim of assassination or suicide has been right- or left-handed, and cites a case in point in which he and M. Ollier had been engaged, in which the decision much depended upon this point being made out. The best mode of determining it is to weigh the bones of the respective upper extremities. In eighteen instances in which he has done that in right-handed individuals, M. Poncet has found that the weight of the entire bones of the right limb has, on an average, exceeded that of the left by 17 grammes; while in two instances of left-handed individuals he found the balance in favour of the left side. It is towards the middle period of life that the difference is most marked, while in advanced life the weights tend to become alike on both sides.—*Gaz. Hebd.*, September 3.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Associate, K.C.—The daughters of baronets take precedence of the wives of the eldest sons of Knights of the Garter.

A. R. A. draws attention to the statement of a critic in a sharp medical contemporary on the last exhibition of the Royal Academy, finding fault with the artist for making the second toe longer than the great toe. The artist of course is quite correct.

Mr. Duncan.—There are three vacancies in the Court of Examiners of the College of Surgeons.

M.D., London.—We do not undertake to decide bets; but the following perhaps will answer the purpose of all parties:—Taking the Universities of the United Kingdom in the order of precedence, with the dates of their foundation, we have—Oxford, 886; Cambridge, 1110; St. Andrews, 1413; Glasgow, 1450; Aberdeen, 1494; Edinburgh, 1582; Dublin, 1593; London, 1836; Durham, 1837; and Queen's University in Ireland, 1850.

M.D., Stockwell.—"Botargo" was a relish made of mullets' roes, and highly seasoned, much in use among the Italians; old Massinger describes this incentive thus—

"I usher
Such an unexpected dainty bit for breakfast
As never yet I cooked; 'tis not *botargo*," etc.

H. F. S.—Give up smoking. Pope Urban VIII. prohibited the use of tobacco in any shape under the penalty of excommunication. James I. said, "It is a custome loathsome to the eye, hatefull to the nose, harmefull to the braine, dangerous to the lungs, and in the black stinking fume thereof neerest resembling the horrible Stygian smoake of the pit that is bottomlesse."

An Old Fellow.—Mr. Alfred Smee has addressed a letter on the subject to the Council of the College.

J. J. P.—The ancient and eastern nations entertained the idea that they were men of innate genius, and possessed of more than common attributes. They fancied that they were the first born, and the offspring of illicit love. Zoroaster, Confucius, Mahomet, Vishnu, were born of virgins; and Theseus, Hercules, Castor and Pollux, and Romulus were all illegitimate.

E. H., Cheltenham.—Contributions to the Prescott Hewett Testimonial Fund are not limited to the gentlemen educated at St. George's Hospital. All those who in their turn have benefited by his valuable contributions to surgery can subscribe. Write to Mr. James Rouse, F.R.C.S., the honorary secretary, 2, Wilton-street, S.W. Mr. Hewett was appointed Professor of Human Anatomy and Surgery to the College of Surgeons in 1854.

"Confidential."—Yes, your name appears in the return to the House of Commons of persons who have served in the British merchant service whose names do not appear on the Register; and amongst them are persons of questionable character, more than one of whom are "wanted" by the police. The name of the "ignoramus" trading on his deceased brother's diploma is amongst the number wanted in Scotland-yard at the suit of the College of Surgeons. Write to Mr. Stone.

Dr. Campbell.—The late Mr. Wm. Clift, F.R.S., was the first Conservator of the Hunterian Museum, and the only apprentice John Hunter had. Mr. Clift's only son, William Home Clift, the Assistant-Conservator, met with a sad accident, which terminated fatally on September 17, 1832, in the twenty-ninth year of his age. The only daughter of Mr. Clift married Professor Owen; she died a few years ago. Happily for science, Mr. Owen is alive and well.

A Collector.—The portrait of Sir Astley Cooper was painted by Sir Thomas Lawrence in 1814. Cooper was then about forty-five. He died February 12, 1842.

The Actuary.—The medium duration of life in Russia is about twenty-one years, in Prussia twenty-nine, in Switzerland thirty-four, in France thirty five, in Belgium thirty-six, and in England thirty-eight years.

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A. J. A.—Lord Mansfield's remark on identification was—"I have always considered likeness as an argument of a child's being the son of a parent. A man may survey ten thousand people before he sees two faces perfectly alike, and in an army of one hundred thousand men every one may be known from another. If there should be a likeness of feature, there may be a discriminancy of voice, a difference in the gestures, the smile, and various other things; whereas a family likeness runs generally through all these, for in everything there is a resemblance, as of features, size, attitude, and action."

Clavis.—St. John's House, Norfolk-street, Strand, now consists of twenty-five sisters. There are also under them 120 nurses and probationer nurses, fifty of whom are told off for private nursing work. The other seventy are engaged at Charing-cross and King's College Hospitals, and a few at the Galignani Hospital at Paris. This latter work will, however shortly be discontinued.

Late P. D.—The great English lexicographer, near the close of life, said, "My diseases are an asthma and dropsy, and, what is less curable, *seventy-five*."

Dr. Thompson and A Student.—You will both obtain the information in our Students' Number. No professional education will be recognised until after passing an examination in Arts, etc. You can send stamps for the amount to our publishers.

Mr. Simpson.—Professor Owen *is* a Fellow of the Royal Society; he succeeded Mr. Clift, whose only daughter he married, as Conservator of the Hunterian Museum, to which he was appointed assistant so long ago as 1827.

P. T.— "The reason firm, the temperate will,
Endurance, foresight, strength, and skill."—*Wordsworth.*

H. A.—"Vivisection," by Sir Thomas Watson, the *Contemporary Review*, May, 1875.

Cadmus.—The virtues of tar-water were first discovered by Bishop Berkeley, 1744.

Veritas.—Of French midwives, Mdlle. Daubié says: "The pupils who desired to become midwives were obliged to pass a long and severe novitiate to give proof of a good character, to study during several years a course of practical and theoretic anatomy, usually in connexion with lying-in hospitals for poor women. . . Sworn midwives, maintained at the public expense, examined these candidates, whose examination generally lasted three hours. On occasions of public ceremony these (examining) midwives held rank with doctors, and took their places with them at the corporation banquets, dressed in the robes of their order, and wearing the insignia of the city."

Joseph, Castle Green.—During the past academical year the University of Cambridge has conferred two degrees of Doctor of Medicine.

Sigismund.—Surgeons were exempted from serving on juries in 1513.

Vincent.—The next medical inspection of candidates for admission to the Royal Military Academy, Woolwich, will take place at the Academy on November 30 next.

Medicus.—1. August, 1868. 2. The remark was—"Depend upon it, the strength of any party lies in its being *true to its theory*. Consistency is the life of a movement."—Newman's "Apologia pro Vitâ suâ," p. 308.

Mr. F. E. Gabb, Belize.—Letter with enclosure received.

Q.—Mr. Hooker exhibited the results of his system of preserving milk at the Society of Arts, Adelphi, last week. Some medical gentlemen who were present expressed opinions strongly in favour of Mr. Hooker's process.

G. S.—The Museum of Mr. Brookes, of Blenheim-street, was sold in 1828. It consisted of upwards of 6000 preparations, and occupied twenty-five days. The College of Surgeons were extensive buyers.

A Reader.—The first London Pharmacopœia was published in 1618.

G., Waltham.—It was Sir Charles Napier who said, writing from Scinde, "It is strange, but as true as gospel, that at every new and full moon, down we all go with fever!"

J. H. L.—The mace of the Royal Society is the same which was in use time out of mind, in the House of Commons, and to which Cromwell, when he dissolved the long Parliament, alluded in the words—"Take away that bauble!" Shortly after, it was presented to the Royal Society by Charles II., being superseded at the House of Commons by the one then borne by Colonel Seymour, the Sergeant-at-Arms.

A. D.—Dr. Gall, the founder of the "craniological doctrine," as it was then called, was in 1805 ordered to discontinue teaching his doctrine, or to quit Vienna. He chose the latter alternative, and, with his associate, Dr. John Gasper Spurzheim, set out on a journey through Europe.

Martin H.—The hydropathic belt is made of stout calico shaped to the abdomen, with cross-pieces of tape on the inner side, which keep next to the skin a fold of cloth wrung out of cold water, and a piece of waterproof cloth or oiled silk to prevent evaporation.

Cid.—In the seventeenth century it was first called *influenza* in Italy, because it was attributed to the "influence" of the stars, and this term has passed into medical use.

Justus.—A medical quack is thus sketched by Hippocrates Ridens, on May 17, 1686—"His sagacity is remarkable, for he hath found out an art both to conceal his own ignorance and impose on that of other folks to his own advantage. His prime care is to get the names of diseases without book, and a bead-roll of rattling terms of art, which he uses to beguile the mobile—first of their senses, and next of their pence. He has an excellent talent in persuading well people they are sick, and by giving them his trash verifies the prediction, and is sure to make them so."

A Constant Reader.—The Queen visited the Hospital for Consumption at Brompton on March 14, 1865.

Octavius W.—Baths derived their origin from the remotest period. Pliny the younger, who speaks of the mode of exciting sweat previous to the time of Asclepiades, remarks that the baths which he established were luxurious, and received with the greatest avidity when they had become known. "Balucas avidissima hominum cupiditate instituit."

A Gloucestrian.—Jenner, in a letter to Dr. Chas. H. Parry "On the Influence of Artificial Eruptions in certain Diseases incidental to the Human Body," considered it as an axiom, as laid down by Dr. Parry, "That diseases of the skin are diversions in the animal economy for transferring diseased action from parts vital to parts not immediately vital."

Beta.—The history of forensic medicine as a science in England cannot be carried back further than the publication of Dr. Samuel Farr's "Elements of Medical Jurisprudence" in 1788. The science was first taught in lectures at the University of Edinburgh in 1801 by Dr. Duncan, senior, the first professorship having been conferred by Government on his son in 1803.

W. W.—The Postmaster-General has just laid down regulations in regard to the conveyance and delivery of such articles as are permitted to be sent by post by the 16th clause of the new Sale of Food and Drugs Act. The postage and registration fee on each packet must, of course, be prepaid.

Diogenes.—Dr. Copland delivered an Oration on the subject of Electric Excitation as connected with material agencies and animate phenomena, at the anniversary meeting of the London Medical Society on March 8, 1822.

Arcturus.—The first physic garden cultivated in England was by John Gerrard, a surgeon of London, 1567; that at Oxford was endowed by the Earl of Danby, 1652; that at Cambridge began 1763.

Curioso.—The epitaph is as follows:—

"If drugs and physic could but save
Us mortals from the dreary grave,
'Tis known that I took full enough
Of the apothecary's stuff
To have prolonged life's busy feast
To a full century at least;
But, spite of all the doctor's skill,
Of daily draught and nightly pill,
Reader, as sure as you're alive,
I was sent here at twenty-five!"

*** At the following tale we fear that some of our readers will say, like Bret Harte,—"Can such things be?" The *San Francisco News Letter* gives an account of a lady who was recently delivered of twins in a house in the street Van Nessavenue. The morning papers, it appeared, in mentioning the fact, made no allusion to a slight peculiarity about the children, nor to a little unpleasantness which might have resulted fatally but for the intervention of a special constable. The *News Letter*, however, declares that it has been furnished by the doctors with a long account of the children, which may be summed up in a few words. One was a little China boy, the other a little negro. The husband was engaged in his office in California-street, at two o'clock on Wednesday afternoon, when intelligence was brought him of the increase in his family. He extracted a naval revolver from his safe, and rushed home in an excited state. The door was opened by his negro coachman, and the infuriated husband, presenting his pistol, would have shot him on the spot, had not the special constable who had followed him from California-street interposed. The husband then made for the kitchen and endeavoured to strangle Sam Kee, the Chinese cook, but the constable was equal to the occasion, and rescued the celestial. Finally, the husband gave his word of honour as a stockbroker that he would use no further violence until the arrival of the doctors. At twenty minutes after three o'clock two doctors appeared. The first, after making a careful examination of the children, gave it as his opinion that it was a singular freak of nature. The second, although especially grieved to have to differ from his learned *confrère*, pronounced it, in *his* opinion, a plural freak of nature. The husband was perfectly satisfied with the lucid medical explanations afforded; and it is only just to say that subsequent inquiry elicited the fact that the mother had, previous to the event just mentioned, been reading Bayard Taylor's "Travels in China and Africa." Both doctors expressed a further opinion that books of this character are dangerous to place in the hands of a lady in such an interesting condition. One of the children is now at the Chinese Mission, the other is at the Coloured Orphan Asylum.

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Scrutator.—1. Yes. 2. We understand that a report by Surgeon-General Gordon, C.B., who, it will be remembered, accompanied the Commander-in-Chief in his recent tour through the Burmese Empire, will shortly be published upon that country, including its botany, zoology, etc.

Sanitary Science.—From experiments recently made by Major-General Gillmore, Lieutenant Wright, Mr. Edwin Chadwick, and others, it has been found that a common brick will absorb as much as a pint (1 lb.) of water.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Worcestershire Chronicle—Birmingham Daily Gazette—Brett's St. Leonard's and Hastings Gazette—Birmingham Weekly Post—Chester Courant—Birmingham Daily Post—Boston Journal of Chemistry—American Supplement to the Obstetrical Journal of Great Britain and Ireland—Indian Medical Gazette—O'Correio Medico—Rivista Sperimentale di Freniatria edi Medicina Legale, Fas. 4 and 5—New York Medical Journal—Students' Journal and Hospital Gazette.

BOOKS AND PAMPHLETS RECEIVED—

Transactions of the Medical Society of California—Annali Universali di Medicina e Chirurgia, vol. ccxxxiii.—Transactions of the College of Physicians of Philadelphia, vol. viii.—Seguin on Hysterical Symptoms in Organic Nervous Affections—Moore on the Influence of Temperature during Childbirth, and on the Right Management of the Puerperal State—Embolia dell Arteria Centrale della Retina, Circolazione Collaterale, Storia Clinica annotata dal Dott. Gottardi—Huntley on Thermo-Dynamical Phenomena, or the Origin and Physical Doctrine of Life—Wynter's Border-Lands of Insanity—Taaffe's Health Report of Brighton.

COMMUNICATIONS have been received from—

Mr. Wilks, Manchester; Mr. J. Evans, Rhyl; Mr. Coffin, Llandudno; Mr. F. E. Gabb, Belize; Mr. H. Herbert, Netherton; Mr. P. Stewart, Alton; Mr. E. E. Lloyd, Nellore; Mr. T. B. White, Worcester; Mr. J. Swinnerton, Newport; Mr. J. Chambers, Eastwood; Mr. S. Bennett, Northampton; Dr. Chapman, Paris; Mr. Lush, Fyfield; Dr. Sparks, Weymouth; Dr. Denton, Bridlington; Dr. Dobie, Chester; Mr. Fleming, Birmingham; The Registrar of the University of London; Mr. R. Smith, Winchester; Dr. Payne, London; Dr. Taylor, London; Mr. Whitfield, London; Dr. W. Dickson, London; Dr. G. Steel, Leeds; Surgeon-Major Parr, Uxbridge; Mr. A. Heath, St. Paul's Cray; Mr. W. Smith, jun., Whitley; Mr. R. E. Bradfield, North Elmham; Dr. R. B. Holland, Matlock; Dr. J. Hughlings-Jackson, London; Mr. J. Chatto, London; Dr. A. E. Sanson, London; Mr. G. Brown, London.

APPOINTMENTS FOR THE WEEK.

September 18. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

20. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

21. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

22. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

23. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

24. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Quekett Microscopical Club, 8 p.m. Mr. James Fullagar, "On the Development of *Actinophrys sol.*"

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 11.

BIRTHS.

Births of Boys, 1172; Girls, 1116; Total, 2288.
Average of 10 corresponding years 1865-74, 2055·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	794	698	1492
Average of the ten years 1865-74	669·8	652·7	1322·5
Average corrected to increased population	...	...	1415
Deaths of people aged 80 and upwards	...	...	35

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	2	16	2	8	..	2	...	23
North... ...	751729	...	4	12	2	13	...	2	2	42
Central ...	334369	...	1	7	...	11	...	3	1	13
East	639111	1	11	12	...	14	...	...	2	48
South... ...	967692	...	7	24	1	23	1	6	7	64
Total	3254260	2	25	71	5	69	1	13	12	190

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·913 in.
Mean temperature	60·8°
Highest point of thermometer	79·9°
Lowest point of thermometer	47·7°
Mean dew-point temperature	53·5°
General direction of wind	S.E.&N.E.
Whole amount of rain in the week	0·00 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 11, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Sept. 11.	Deaths Registered during the week ending Sept. 11.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2288	1492	79·9	47·7	60·8	16·01	0·00	0·00
Portsmouth ...	122632	27·3	81	48	...	...	...	...	...	...
Norwich	82842	11·1	47	39	80·0	50·0	60·4	15·78	0·23	0·58
Bristol	196186	44·1	142	101	76·9	42·9	58·2	14·55	0·36	0·91
Wolverhampton ...	71718	21·1	57	36	75·6	44·3	58·5	14·72	0·30	0·76
Birmingham ...	366325	43·6	274	170	...	...	...	...	...	...
Leicester	109830	34·3	79	61	78·0	42·0	59·2	15·11	0·06	0·15
Nottingham ...	92251	46·2	62	44	75·7	42·5	58·9	14·94	0·10	0·25
Liverpool	516063	99·1	411	326	73·0	49·5	58·8	14·89	0·80	2·03
Manchester ...	356626	83·1	289	202	73·0	46·0	59·6	15·34	1·00	2·54
Salford	135720	26·3	146	94	76·5	43·8	59·5	15·28	1·06	2·69
Oldham	87437	18·7	85	40	...	...	...	...	...	...
Bradford	168305	23·3	142	104	75·6	44·2	58·9	14·94	0·74	1·88
Leeds	285118	13·2	232	156	75·0	43·0	58·8	14·89	0·26	0·66
Sheffield	267881	13·6	234	121	74·0	42·7	58·8	14·89	0·08	0·20
Hull	133932	36·8	109	99	72·0	47·0	58·7	14·83	0·16	0·41
Sunderland ...	106342	32·2	114	48	79·0	49·0	62·8	17·17	0·32	0·81
Newcastle-on-Tyne	137665	25·6	117	78	70·0	51·0	58·2	14·55	1·13	2·87
Edinburgh	211626	50·5	143	92	...	...	...	...	...	...
Glasgow	534564	88·6	355	228	...	...	...	...	...	...
Dublin	314666	31·3	140	144	72·9	34·4	56·5	13·61	0·22	0·56
Total of 21 Towns in United Kingdm	7742889	37·0	5547	3723	80·0	34·4	59·2	15·11	0·43	1·09

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·91 in. The highest was 30·16 in. on Monday morning, and the lowest 29·58 in. on Wednesday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CLINICAL LECTURE ON EMPYEMA IN CHILDREN.

DELIVERED AT THE CHILDREN'S HOSPITAL, BIRMINGHAM.

By EDWARD MACKEY, M.D. Lond., M.R.C.P.,
Physician to the Hospital, and to the Queen's Hospital.

THERE are three special points to remember about empyema as it occurs in children, and as compared with the same malady in adults—(1) it is more common; (2) its treatment by paracentesis is more successful; (3) its physical signs may be peculiar in certain respects.

1. It is more common. Not that primary pleurisy itself is more common in children; on the contrary, under five years of age it is rare.(a) But we mean that whenever either primary or secondary pleurisy passes on to effusion, this becomes purulent in children more readily and more often than in adults. Especially is this the case in the delicate or strumous, who form so large a portion of our hospital patients, but it is true in a less degree of children amongst the better classes. It may be verified approximately from our own experience by the following figures:—During the last five years there have been admitted into this hospital forty-four cases of pleurisy, and of these, thirteen had empyema—equivalent to a ratio of more than 40 per cent. Now, during the same period there have been admitted into the Queen's Hospital seventy-four cases of pleurisy, and amongst them only four of empyema; and as one of these was a child, we may estimate the ratio for adult cases as less than 5 per cent.

2. Its operative treatment is more satisfactory. Whether it be that in adults the operation is oftener delayed, or less thoroughly done, or that, when performed, the adult thorax has less contractile power, less readily accommodates itself to altered conditions, or that the adult has less resisting power as regards pyæmic infection, certain it is that experience has shown a much larger percentage of good recoveries in children. Given a free opening, a large drainage-tube, and frequent syringing, and you may almost depend upon saving a child with empyema: you can never feel quite the same confidence as to adults.

3. Concerning the physical signs. There will be lessened chest-movement on the affected side, flat dulness, increased resistance, and probably bulging, often pitting on pressure, and tenderness; but displacement of liver or heart is not invariable, and the breath-sounds, not only at the apex, as you would expect in adults, but also over the area of effusion, may be tubular or bronchial, and not absent. You will be aware that this is not unusual in serous pleuritic effusions in children, but in the *majority* of cases, when the effusion has become *purulent*, breath-sounds will be, I believe, deficient. Case 3, however, is an instance of their remaining of bronchial character—a circumstance which *might* suggest to you pneumonia. About the level of the fluid, and especially near the axilla and in front, you will often find the percussion-note tympanitic, and the breath-sounds and the cough somewhat metallic, as in pneumothorax. The temperature in some of these cases is not so good a guide as might be thought: for instance, in Case 3, it was only 98·5° Fahr. in the evening before evacuation of a chest full of pus; and, on the other hand, we found in another case (A. J.), admitted in the fourth week of pleurisy, the evening temperature rose for several days to 103° Fahr., with morning remissions to 99° or 101°, and yet the aspirator found serum only. There was no phthisis or other complication.

In illustration of my remarks, I have selected three cases now or recently in the wards. The notes have been taken by Messrs. M. Messiter and J. Johnston, M.B., House-Surgeons.

Case 1.—This little child, John C., aged five years and a half, pallid as you see, and with red hair and strumous aspect, was admitted on May 24. His mother is said to be phthisical; has five other living children, and five have died in childhood. This one is said to have been well till six weeks ago, when he got vomiting, pains in limbs, chest, and head, and some delirium, so that he was said to have brain fever—a not uncommon mistake. Cough began a fortnight ago, but he was brought into the out-patient room without any definite complaint but of "falling away."

On inspection, the left chest is seen to bulge at the side; it measures ten inches and a quarter, being three-quarters of an inch more than the right, and moves less in respiration. Percussion over left side absolutely dull, except over an area about two inches square near the apex; at this place it is tympanitic and somewhat metallic. Palpation: Vocal fremitus absent over left base; side tender. Auscultation: Breath- and voice-sounds abolished over the greater part of area of left lung; but at apex over the resonant part is loud bronchial breathing somewhat metallic, occasional mucous râle, and creaking sounds. Heart beats between fifth and sixth ribs at their junction with the sternum. General condition: Child is very pale and weak; has red tongue, diarrhœa, and profuse sweating; is short of breath, and is somewhat drowsy. Pulse 120; temperature 100°.

May 25.—My colleague, Mr. Elkington, having agreed in diagnosis, aspirated for me below the left scapular angle, and as pus flowed, withdrew the needle, and made a free incision one to two inches long, and parallel with the rib. A pint of laudable pus having escaped, a large rubber drainage-tube was introduced. Child relieved. A little brandy required during operation.

26th.—Discharge somewhat fetid, and child restless; pleura should have been syringed out last night—to be done to-day with carbolic acid (one in forty); oakum dressing. Brandy ʒj. ter die.

27th.—Breathing continues easier, cough is less; breath-sounds heard better; temperature 98·8°; discharge free; there is some diarrhœa; syringe night and morning with iodine lotion (tincture—one in forty); to have two grains of calcium hyposulphite with tinct. cinchonæ and tinct. camph. co.

There has been steady convalescence, and now (June 29) you will observe only slight discharge from the tube; you will hear the breath-sounds fairly well, and, what is curious, no evidence of air within the pleura, though it passes readily out of the tube. There are adhesions round it, and some dulness on percussion; heart apex in normal position. You will see also the results on the thorax—the left side is retracted, the left shoulder depressed, and the spine curved towards the right side. This deformity, though, will probably recover itself, as it has done in this other lad.

Case 2.—Fred H., aged five years and a half, was admitted on February 25. Said to have been ill one month. His face is dusky, and general condition one of prostration. Respirations 30; temperature 100·2°. Chest measurement: Left, eleven inches; right, ten inches and a half. Chest inspection: Left side bulges, and in breathing moves but little. Percussion quite dull over left chest, except at upper part of axilla and front under clavicle, where there is a resonant metallic note. Cardiac dulness extends to right of sternum. Vocal fremitus almost absent. Auscultation: Breath- and voice-sounds are abolished over left lung, except at area of resonance, where respiratory sounds are bronchial and some what metallic.

February 26.—Mr. Elkington aspirated near angle of left scapula, and as pus flowed, enlarged the opening to the extent of two inches, and evacuated sixteen ounces. A paroxysm of cough occurred.

There was much relief for some days, and the temperature fell to 98° Fahr., but no drainage-tube had been introduced, and the pus did not flow freely.

On March 7 the temperature had risen to 102°, and on the following day nine ounces of rather fetid pus were removed, a drainage-tube inserted, and syringing used regularly, as in last case.

For some days there had been suspicion of pertussis, which was now clearly established, so that the boy's convalescence was retarded. Nevertheless, by April 9 it was complete. The syringing with carbolic acid lotion had been continued daily, or twice daily, until shortly before that date, when the tube had been removed, and the opening allowed to close gradually. The pertussis was, with much advantage, treated by carbolic acid vapour.

Empyema is sometimes a result of scarlatina, as in the following—

Case 3.—Mary J., aged three years and eight months, now also convalescent, was admitted on March 29, having been taken ill with scarlatina six weeks before. In the fourth week afterwards, and a fortnight before admission, she had shivering, increase of feverishness, cough, dyspnœa, and pain in the left side, which symptoms have continued.

(a) Dr. Eustace Smith has remarked that it is more common under two years of age than was formerly supposed (*Medical Times and Gazette*, June, 1873).

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On examination, the left side is seen to bulge, and to move less than the right; it gives no vocal fremitus, and is absolutely dull to percussion, except in supra-clavicular fossa. There is, however, bronchial breathing at the left base, and the voice-sounds may be heard, though faintly. The left side is tender. Heart displaced towards the right. The child is pallid, with livid lips; bathed in perspiration; cannot lie down. Evening temperature only 98·5°.

March 30.—Restless night. Temperature 100·4°. We were reluctant to operate, because the child was in a scarlatina ward; but, satisfied that it was necessary, Mr. Elkington aspirated for me, and removed half a pint of inodorous but green-tinged pus. The wound was closed in this instance, hoping that aspiration might avoid exposure of a wound to the fever atmosphere; but the child, though relieved for a time, relapsed, and on April 2 a free opening was made, a tube inserted, and syringing commenced. This was continued regularly until May 9, when the discharge was but little, and the tube was removed, the syringe being used every two or three days only. At this date it is noted—"There is tympanitic resonance round the aperture; some dulness ('wooden') at front apex. The breath-sounds are audible over whole of left lung. There is some bronchophony, and occasionally there are crepitant râles. Left side measures nine inches and a quarter; right nine inches. The spine curves to the right, but can be readily straightened. The general health is fair. Temperature in the morning 98·5°, evening 100°." It is probable that the lung had expanded, but unequally. There was false membrane in parts, and possibly some fluid. However, on May 23 the wound had closed, and the discharge ceased. The percussion-sound was clear, but not quite so in front. The breath-sounds were heard, bronchial in some places. Temperature normal. Child discharged.

[On August 16 this child was readmitted with the left chest again full of pus. The temperature on admission was 100° Fahr.; but the day before aspiration the evening temperature was only 98·5°, and the next morning under 99°. The treatment has been conducted as before, and the child is doing well. At no time has the temperature exceeded 99° Fahr.]

It may fairly be considered that paracentesis has saved the lives of these three children under circumstances of some gravity. The first child was intensely strumous; the second got severe pertussis; the third lived amidst scarlet fever.

I attribute the good result to a free opening and frequent syringing. You will observe that only *one* opening was made. The earlier operators always made two, and passed the tube *through;* and the respective plans are still open to comparison. The latter one is more difficult than you would think, and more painful; and pain is an element to be considered, because, in cases with chest effusion, anæsthetics are more dangerous than usual. Nevertheless, from what I have seen, I have reason to prefer the double opening in adult cases; in children, on the other hand, I am well satisfied with a single one; and the operation for this purpose, as described in the account of the cases, is a short and simple one. Keep before you always this main point: that in evacuating pus you must have a *free discharge*, and obtain it by the simplest means. But you may say, What will happen if I do not operate at all?

Here is an instance of one mode of termination. This boy (J. D.) is now fifteen, and able to work a little, but is delicate, and often laid up—his left side is retracted, it is one inch less than the right; all over it there is dulness, except near the spine and near the sternum above; there is diminished expansion, fremitus, and voice-resonance; you can hear large coarse râles, and you can see that the boy expectorates pus; he has much cough and dyspnœa. The heart-beat is in the left axilla. Now, the mother tells us that he had scarlatina at about three years of age; that afterwards a lump came at this point, where there is still a red mark, between the fourth and fifth ribs; it did not "break," but shortly afterwards the child brought up a quantity of matter, and has continued to do so ever since. It is evident that an empyema burst into a bronchus; adhesions seem to have formed round the opening, for there is no evidence of air now in the pleura, but the larger bronchial tubes are probably dilated in parts, and their lining membrane continues to secrete purulent material; the boy is a confirmed invalid.

It is true that sometimes nature works a better cure than this by a similar mode; at other times the collection has burst into the peritoneal cavity with a quickly fatal result; at others, again, externally, and generally in front, and then the child *may* recover, or may linger for a time with thoracic fistula and rib caries.

It is not to be forgotten, however, that in all cases of chest effusion there is danger of sudden death—you will find some striking cases in the classic work of Dr. West;—and considering this, and considering the uncertainties of nature's modes of cure, I conclude with very strongly recommending you paracentesis as I have described it.

ON THE DIAGNOSIS AND TREATMENT OF NEURALGIA,

ESPECIALLY BY HYPODERMIC INJECTION OF MORPHIA; FOUNDED ON PERSONAL EXPERIENCE.

By HOFRATH PROFESSOR VON PITHA.

Under the above title the celebrated Surgical Professor of the Vienna Military School communicated a series of papers at the beginning of the present year to the *Allgemeine Wiener Medicinische Zeitung*, and of these the following is a slightly abbreviated translation:—

"Who was it that discovered hypodermic injections of morphia? Has a monument ever been erected in honour of this man? It is the blackest ingratitude if his services to suffering mankind have not been recognised. But for this heavenly remedy, I, at least, should long since have shot myself." Such were the words with which an Austrian officer introduced himself, who had received a gunshot wound at Königgrätz, which, after slow healing, was succeeded by an obstinate neuralgia that resisted every means of treatment. The morphia injections alone rendered life supportable to this unfortunate young man. Such sufferers, unfortunately, exist in large numbers; and the frequency of neuralgia in recent times has greatly surprised me. But I am unable to decide whether the affection was really more rare formerly, or whether I have accidentally met with more cases of late. Neuralgia is a disease so easily recognised, and one that makes itself known so loudly and peremptorily, that it is scarcely to be supposed that it was formerly less known, or overlooked, or confounded with other affections. The very remarkable frequency of neuroses in our times seems chiefly referable to the increased excitability of the nervous system. The increase of the number of cases of neuralgia in my own practice is the more remarkable as for the last thirty years I have been almost exclusively engaged with surgery, and therefore have had little occasion to meet with cases of a medical character. Communications with my colleagues have convinced me that they too have observed this greater frequency of neuroses. Attached to a military hospital, I have had much more to do with men in the prime of life; but in private practice I have had cases occurring in children above ten years of age, in women, and (although much more rarely) in aged persons. In almost all these cases there have been observable an excessive sensibility and an unmistakably excitable temperament, which may be regarded as an habitual "*nervositat*,"—an expression that has become fashionable. This, as a general rule, is plainly indicated externally by a delicate, transparent, pale skin (especially of the face, easily disposed to change colour); by delicate features; by a languid, moist, and easily weeping eye; by great sensibility to all impressions, and especially to cold and wind; and by a proneness to mental excitement, chiefly seen in women, but also in hysterical men. These characteristic peculiarities are usually hereditary, and similar in all the members of the same family. Whether congenital or brought out by education or surrounding circumstances, they sometimes are induced in the strongest constitutions through moral disturbances, misfortunes, or long illnesses attended with pain and loss of rest. Prominent amongst mischievous influences are prolonged mental exertion and employments, which, by their long duration at night time, destroy sleep and appetite, and generate the artificial state of "*nervositat*," with its train of manifold neuralgiæ. As occasional causes of definite local neuralgiæ may be mentioned excessive bodily fatigue (as that endured by soldiers in the field); severe cold; wounds of all kinds, and especially gunshot wounds, poisoned wounds, and wounds attended with the penetration of foreign bodies; and fractures, luxations, or sprains, which long after their cure may be followed by neuralgiæ. This is often the case with certain insignificant contusions, which, scarcely observed at

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the time, are followed by most obstinate neuralgiæ, without our being able to offer any explanatory reason.

The unfortunate subjects of this affection are often suspected of simulation, because no anatomical point can be made out that gives a probability to their allegations. This is especially the case in respect to soldiers wishing to avoid military duties, and members of the working classes seeking an asylum in the hospital; and experience unfortunately too often confirms the justice of such suspicions. Yet in such cases we cannot be too much on our guard against committing an injustice. I will give an example of this that concerns myself. Mounting a dark staircase one night in 1850, I missed a step, and, in order not to fall, threw all my weight on one leg, thereby rupturing the external popliteal nerve, the sheath of which immediately became filled with blood, causing a tumour the size of an egg, which at first resembled an aneurism. After six weeks' confinement, every trace of an acute inflammation of the knee which followed had disappeared, so that no sign of the occurrence remained; yet, for a full year afterwards, a fixed pain remained at a point over the internal condyle, which so tormented me that I could not walk, and only with difficulty could ascend into a carriage. Since that time I have mentally asked pardon of many of my patients who, under analogous circumstances, I had inexorably dismissed from the hospital. Also with regard to several patients suffering from pure neuralgia, and who were constantly complaining of their severe pains in the fingers, heel, etc., which parts always exhibited on careful examination an entirely normal appearance. For these, too, I have not exhibited the amount of sympathy they deserved. They appeared to me to exaggerate their sufferings, and I rebuked their excessive sensibility. Only since I have myself been the subject of the most violent neuralgia have I become sensible of the great injustice I did to these fellow-sufferers. It were to be desired that every practitioner should suffer once in his life, for the shortest possible time, in his own person these subjective tortures, which manifest themselves by no external sign; only then would he be in a position to form a just estimate of the sufferings of others.

The diagnosis of neuralgia presents no difficulties. There are only pains—and truly severe pains—occupying a limited region of the nervous system; paroxysmal, suddenly appearing, and as suddenly disappearing, without any visible, palpable, or otherwise discernible material substratum explanatory of the pain,—pains that make their appearance in apparently healthy and normally sensitive parts of the body, conferring on these during the paroxysm excessive sensibility, which is, after that is over, followed by a return to the normal condition, or by anæsthesia. The sudden appearance of the pains, their violence during a certain, if usually a short period, and their as sudden cessation—the sudden, immense, and temporary change in the sensibility of the parts affected, and their complete return to the normal condition during the intermissions, are wonderful; but if, in the present state of our knowledge, they are inexplicable, they are at all events characteristic signs of what may be termed true or nervous neuralgia, as distinguished from non-essential neuralgiæ, such as neuralgia carcinomatosa, dyscrasica, etc. In an etiological point of view, we may let such expressions as neuralgia rheumatica, arthritica, specifica, traumatica, etc., pass muster, recognising the causal disease in question as the rational substratum indicative of its nature.

Fortunately, neuralgia occurs only in paroxysms, with intervals of complete ease, thus preventing the strength becoming exhausted, and imparting to the despairing patient the courage to live. Hence alone arises the rarity of suicide amongst sufferers from neuralgia, the impulse towards it—so powerful during the attack—subsiding in the interval, supposing the intellect remains unimpaired, which fortunately is usually the case. Experience shows that the unfortunate subjects of this disease do not become broken up by their prolonged habitual sufferings; and indeed, through habit, they may come to bear their sufferings with surprising energy, so that the severest attacks are not betrayed by any signs when in society, and are even masked by jocularity.

Highly characteristic is the change in sensibility in the affected regions. Prior to the paroxysm, entirely normal in this respect, or even anæsthetic, these parts during the attack suddenly become excessively sensitive to the slightest touch. But while the patient instinctively shrinks from the gentlest contact, a firmer and quickly applied pressure often proves painless, and may diminish or remove the pain that exists. Shortly after the paroxysm the normal sensibility or anæsthesia is gradually restored. For an indefinite time after there remains a dull sensation in the parts—a kind of anxiety as to whether the pain had really gone, and a fear of having the limb moved or touched. This feeling also gradually disappears. A pleasant sense of security then ensues under the conviction that the paroxysm has passed away, and the part that was so excessively sensitive can now be readily handled. The paroxysms vary much with respect to duration and intensity. During the paroxysm itself the pains shoot confusedly through the spot, raging for seconds or minutes, and followed by slight intermissions, so that there is a constant increase and decrease until the entire paroxysm has passed away, often at the end of some minutes, but sometimes only after hours. The more violent the pains and the longer the duration of the paroxysms, the oftener are the purely subjective pains accompanied by more or less distinctly objective symptoms. Thus in prosopalgia there are distortions, twitchings, and tremors of the muscles of the face, disfigurement of the features, tears in the eyes, stammering or complete speechlessness, etc. In very prolonged and severe attacks the strength may be so exhausted that syncope ensues. In other cases the seat of the pain is indicated by yet plainer external marks, as papulæ, vesicles, or large round red spots. In my own case, after severe neuralgia had existed in the knee for two days with slight intermissions, two large, round, sharply defined scarlet patches, with a somewhat raised surface, appeared, and remained unchanged during several days; they then gradually paled, and were succeeded by violet-coloured points and streaks, which lasted for weeks before they disappeared. These patches were hot to the touch, resembled erysipelas in appearance, and were so sensitive that the application of glycerine by means of a soft hair-pencil could not be borne. Another objective symptom found in certain cases of neuralgia is a local cold sweating at the seat of pain. I met with this symptom very strongly marked in a case of neuralgia of the median nerve, occurring as a sequel to a gunshot wound in the person of a young officer, whose own father believed him to be simulating. But I verified the occurrence during each paroxysm of cold sweating in the palm of the hand, extending upwards along the course of the median. In some cases I have found neuralgia accompanied by clonic or tonic convulsions. These were especially violent in the case of an officer who, with neuralgia of the peroneal nerve, had the most violent contractions of the tibialis anticus; and in that of an old lady, who in the same neuralgia suffered at night from most violent cramps in the calf. The muscles were as hard as wood, and highly sensitive to the slightest contact, or even to the supposition of this. As the result of long-continued neuralgia there may be more or less considerable atrophy of the muscles, or even of an entire limb. Where the neuralgia spreads over a considerable portion of the nervous system, it may lead (as I have unfortunately experienced in my own person) to a general emaciation of the body, to which the disturbed rest and disordered digestion greatly contribute.

On careful consideration of these various points, we become impressed with the magnitude of this affection. The fearful character of the suffering endured may be best judged of by the fact that patients will immediately and cheerfully submit to the most painful operations, in spite of whatever may be said of the tortures and dangers to be encountered. And even when painful operations of this kind (for example, those on the jaws) have only succeeded in affording temporary relief, their repetition is urgently demanded. Cases of this kind I have often met with, and Nussbaum reports harrowing instances of such. The fearful character of the disease is farther seen in paroxysms which are so violent as to induce syncope, and in the great emaciation attending the loss of rest caused by neuralgia that has lasted for months. Even the local muscular atrophy induced by neuralgia when confined to a limited region sufficiently testifies to the magnitude of the affection.

In many cases the diagnosis of neuralgia is assisted by the presence of foreign bodies that have penetrated, such as bullets, pins, etc.; the imprisonment of nerves by cicatrices, or the pressure excited by an ill-formed callus, or by tumours of various kinds. But in most cases the diagnosis is unfortunately solely dependent upon the statement of the patient and his description of his subjective sensations; and these sufferings vary according to individual differences, the degree of sensibility and mental activity, differences in employment,

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education, and social position, and even the faculty of expressing their endless modifications.

The imagination plays an extraordinarily important part in our sensations, and deceives us in an almost incredible manner. As exemplifying this, I may speak of myself; for as a practitioner cannot better learn to know a disease than by being the subject of it himself, some account of my own case may not be without its value. I had been, as a consequence of poisoning by pus during an operation, suffering during two years from the most excruciating eccentric neuralgia, which, with the exception of the head, neck, and back, affected in turn every part of the body. In the early acute stage the two shoulder-joints were successively attacked by the most violent boring pains, which after lasting four hours suddenly and completely disappeared. Hence the pain darted off to the pelvic region, affecting the bladder, especially its neck, and then the entire urethra—producing the exact sensation of a heated wire being passed along it into the bladder. At a later period the pain was confined to the neck of the bladder, simulating perfectly all the symptoms of stone. I felt with the utmost distinctness the spicula at the surface of the calculus being forced during the paroxysm into the orifice of the bladder. I pictured to myself the exact form, size, and weight of the stone. Gradually I lost this sensation completely, and it only accidentally appeared again in a milder degree at the end of two years. While jumping over a ditch I suddenly experienced the sensation of a stone in the bladder striking against the symphysis. So plainly did the existence of the stone seem on various occasions that all the preparations were made for lithotripsy; but, to my great astonishment, the most careful exploration of the bladder, repeated five times, failed to discover the calculus, and I became convinced at last that it did not exist. An imaginary picture of this kind can only be drawn by a surgeon?; and of this I can furnish a still more striking example. The most severe neuralgia which I at present suffer from affects the heel; and the pain at its greatest severity takes on exactly the form as if the periosteum were being separated from the os calcis. The pains are so intense, and the deception so complete, that I am under the conviction that if the sub-periosteal excision of the os calcis were being executed, the pains would only resemble in nature and severity those which I suffer during the acute paroxysm. A modification of sensation of this kind is only possible to an operating surgeon; and the same thing happens with most of the neuralgiæ affecting other parts from which I suffer. I connect most of these subjectively with surgical instruments, as needles and lancets which penetrate the skin, elevators for separating the periosteum from the tibia, etc. One deception may generate another which adapts itself to the condition of the patient. Thus, in the time of my illusory sensations of stone, these were accompanied by a sciatica, attended with violent pain over the fibula, which was particularly distressing to me, as it prevented my walking. This I at once ascribed to the imaginary calculus, having witnessed many examples in others in which nervous pains, and especially sciatic pains extending along the whole limb to the sole of the foot, were present in calculus, and which immediately disappeared on the removal of the stone. One of the most interesting examples of this occurred in the person of a colleague, Dr. Reisich, of Prague, who, in 1857, was freed from a large stone by lithotripsy. He was an extremely sensitive person, and always expressed his sensations with very great distinctness. He indicated, as one of the most precise symptoms of the calculus, a sensation as if he were standing with his left foot on a red-hot plate. With each successive diminution of the size of the stone by means of the operation, the circumference of this burning plate seemed to diminish, and at last only a small edge of the sole remained the seat of this reflected pain. This remnant, however, continued obstinate after I had, as I believed, removed all the detritus, and when exploration failed to detect anything within the bladder. In spite of my denial, the patient insisted determinedly that, according to his sensations, some small fragments still existed at the left side of the fundus of the bladder. I examined him again, and at the end of several weeks found, at the spot which he had indicated, a small fragment concealed in a fold of the mucous membrane. When this was removed, all pain in the sole disappeared, and the patient, for the first time, expressed himself satisfied. Bearing well in my mind the experience thus derived from my colleague, I imagined that my neuralgic symptoms were referable to a similar cause, and hoped to be freed from them by an operation for stone. So firm was my conviction of the presence of this stone, that I put no trust in the repeated explorations which were made by myself and others with only negative results. When at last I could not resist the conviction that the bladder was free, I found myself in the paradoxical position of not knowing whether I ought to feel glad or sorry at this negative result. At first I rejoiced at it, but soon afterwards I reflected that I had lost all hope of getting rid of these distressing neuralgias by an operation; and the illusory explanation of their reflex nature had to be abandoned for the sad conviction that they were of centric origin. Under these circumstances, I could only submit to the unavoidable, and seek for the means of mitigating my sufferings. My fate, indeed, seemed a hard one, for torments which I had scarcely witnessed in twenty patients suffering from different forms of neuralgia concentrated themselves in my person. Omalgia, cystodynia, proctalgia, and neuralgia intercostalis, ulnaris, ischiadica, peronea, cruralis, and digitorum manus et pedis, tortured me one after another, and often several simultaneously, sometimes only for a short time, and at others for days together, producing an amount of suffering that was difficult to endure. I can truly confirm the exclamation of the officer which I have alluded to, that without morphia injections such a condition would be insupportable.

(To be continued.)

ORIGINAL COMMUNICATIONS.

CLINICAL REMARKS ON CASES OF INTUSSUSCEPTION

TO THE STUDENTS OF THE ROYAL HANTS COUNTY HOSPITAL.

By WILLIAM ROBERT SMITH,
Resident Surgeon.

I PROPOSE this afternoon to direct your attention to the important subject of intussusception. I will first of all read you the notes of two fatal cases we have had recently in the wards.

J. C., aged forty-two, a labourer, was admitted October 6, 1874, with violent sickness and obstinate constipation. His wife stated that three days previously he complained of severe abdominal pain, with retching and sickness, the bowels also being confined. Castor-oil and aperient pills were given, but as the symptoms increased in severity, and the patient's general condition became alarming, she was induced to apply to the hospital for advice. The patient had an anxious, careworn expression, with pinched features; skin cold and clammy; pulse small, 110; tongue moist, furred; vomited incessantly, of a slightly stercoraceous character; bowels confined. A careful examination of the abdomen was made for hernia, but not any was detected; the belly was distended and tympanitic, borborygmus slightly present; great tenderness to the left of the umbilicus; a pint and a half of high-coloured urine was drawn off. 3 p.m.: Patient much worse; prostration very great; pulse hardly perceptible; vomiting more decidedly stercoraceous. From this time the patient gradually got worse, and died at 7 p.m.

Fomentations were applied to the abdomen, brandy was freely administered by the rectum, and in small quantities at frequent intervals by the mouth.

Autopsy, twelve hours after Death.—The stomach contained a small quantity of yellowish fluid of a very fæcal odour; ileum slightly congested, but no bands of adhesion were detected, nor any part of the intestines found invaginated. The other viscera all normal, with the exception of the spleen, which was rather enlarged.

The other case is that of a girl, C. B., aged sixteen years, who was admitted on the evening of April 16. She had been in good health up to four days before, when she complained of pain in the belly; this she attributed to constipation, as the bowels had not been moved that day. Shortly after, vomiting ensued, and she at once consulted Mr. Langdon, who has kindly given me this early account of her case. Upon examining the abdomen he found a swelling above and to the right of the pubes, which was very tender and painful; the belly was but slightly distended, and the temperature normal. As the sickness and constipation continued, and the patient's general condition became more serious, she was advised to come into the hospital.

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On admission she complained of abdominal pain, and was violently sick; countenance pinched and anxious; pulse feeble, 120; tongue moist, and covered with creamy fur; abdomen distended, tympanitic, and generally tender. Brandy and iced soda-water were given at intervals, and fomentations applied to the abdomen.

April 17.—Patient much worse; is moaning and crying out with pain in the belly, and lies on her back with the legs drawn up. Slept badly; vomits continually a yellowish-looking fluid of a sour unpleasant odour, but not stercoraceous; countenance very anxious. Pulse small, 120; temperature 104°; abdomen more distended, tympanitic, and tender; bowels not moved; the urine, which was drawn off, slightly high-coloured. 9 p.m.: No change in the symptoms. Temperature 105°; pulse very small, about 130.

18th.—Slept fairly; looks rather better, the features not so pinched. Temperature 104°; pulse 120, somewhat better volume. Sickness still continues; bowels not moved; has passed water. 9 p.m.: Much worse; the prostration greater; vomited matter decidedly stercoraceous. Temperature 105°; pulse 130, very feeble.

19th.—Slept badly; prostration very great. Temperature 104·2°; pulse 110. Pupils dilated; vomiting still continues; abdomen hard and tense; bowels still confined. 9 p.m.: Is sinking fast; pulse hardly perceptible; skin cold and clammy.

20th.—Patient died very quietly this morning at six o'clock.

The treatment adopted in this case was the administration of opium in the form of extract, and belladonna by the mouth, the latter being discontinued when the pupils became dilated; frequent injections of hot water by means of the long tube, fomentations to the abdomen, and once or twice, when the pain was very great, the hypodermic injection of morphia. Champagne, ice, soda-water, brandy, beef-tea, etc., were given at short intervals, either by the mouth or rectum.

Autopsy, twelve hours after Death.—Body well nourished; rigor mortis present. On opening the abdomen the intestines were found distended, and more or less adherent by means of lymph. The peritoneum was injected; the liver, spleen, and kidneys were normal. The intestines were much inflamed, particularly the ileum, a portion of which was found tightly invaginated. A large patch of ulceration was present at the constricted part; above this the bowel contained more or less semi-solid fæculent matter.

These two cases are very fair examples of a class of diseases which are most distressing to witness, for the physician is from the first painfully conscious that the treatment he adopts is in the majority of cases hopeless.

Intussusception, or invagination, is the slipping or prolapsus of a portion of intestine into the cavity of the intestinal canal immediately below it, and with which it is directly continuous. You know that the mesentery is attached to the wall of the intestines; this must therefore be necessarily dragged down with the bowel into the pouch which it makes, and consequently is in a state of traction, and thus gives to the invaginated portion of bowel a curve corresponding to the line of the mesenteric attachment, so that the lower opening, instead of being in the axis of the containing bowel, turns round, and faces a part of its circumference. You will also readily understand that these several portions of bowel must be twisted or convoluted; this, however, is most marked in the middle part. At the post-mortem, the other day, you had a good opportunity of seeing this. A portion of the ileum was firmly invaginated, the ascending part of which was well marked with transverse convolutions. You will be able now to understand why it is that an obstruction exists to the passage onwards of the intestinal contents; and, secondly, why there is more or less hindrance to the return of blood from the invaginated portion of bowel, and consequently great danger of its death or gangrene. It will be obvious also that the inner portion of bowel must be tightly grasped, not only by the pressure of the external part, but also by the swelling which must necessarily supervene: it becomes black, blood is effused, then lymph, and at last it becomes gangrenous, and, if the patient survive, it is separated, as all other gangrenous parts are, by a process of ulceration at the seat of constriction, and then discharged per anum. The specimen before you shows this ulcerative process of nature taking place.

But, now, how is it that invagination occurs? Well, to understand this we must glance at the natural action of the intestines—peristaltic action, as it is called. The intestines, you know, besides the mucous internal coat lined with epithelium, has a muscular coat, the fibres of which are arranged in a longitudinal and a circular manner. Now, when the longitudinal fibres contract, which they do in a direction from above downwards, the bowel is not only shortened and dilated, but that portion of it below in which the muscular contraction is commencing, is drawn up towards that part in which the action is completed; again, directly following this is the contraction of the circular fibres, which not only narrows the canal but elongates the bowel. I think you will from this be able to see that in this dilatation and drawing upwards of the one part of the gut, and the contraction and elongation of the other immediately above it, conditions are present which would allow, under favourable circumstances, of the prolapse of the portion of bowel above into the dilated part below.

Intussusception may occur either in the small or large intestine, or in both. When the ileum is the site, the symptoms generally are more severe, probably owing to the smallness of the calibre here. In the case of the girl which we have been considering, and in which the invagination occurred here, the symptoms were most urgent. In such cases strangulation is more speedy, and sloughing with separation of the strangulated part more common. In children, ileo-cæcal invagination is the most frequent.

The symptoms of intussusception are those of an obstructed bowel with those of enteritis, which latter symptoms are accidental to, or in consequence of, the obstruction. A person may be in good health when he thinks it expedient to take some aperient medicine; it does not act, and he repeats it: this is likewise ineffectual. He now complains of pain in the abdomen, and seeks advice; or the symptoms may set in severely: there may be severe griping pains, with constipation and violent sickness, cold clammy skin, and feeble pulse. The symptoms which mark the progress of the disease will in some measure depend upon the degree to which the bowel is strangulated, and also upon its site. The pain increases; the vomiting becomes more incessant; the bowels obstinately confined; great exhaustion ensues, and the patient dies. Sometimes, as in the case of the girl, owing to inflammation of the bowel and peritoneum, more acute symptoms set in: the abdomen becomes excessively tender, hæmorrhage may occur from the bowels, the temperature goes up, and vomiting becomes incessant.

Let us notice briefly these symptoms more in detail.

The pain is a prominent feature. If it comes on suddenly and severely, in a healthy person, in all probability it is owing to intussusception. It may, however, be caused by a sudden blockage of the intestines through the impaction of a gall-stone. If it comes on slowly in an habitually costive person, it may be owing to impacted fæces.

The abdomen is distended, tense, hard, and tympanitic. The bowels may frequently be seen bulging here and there, and rolling about, with loud rumblings and gurglings. This is generally attended with paroxysms of severe twisting pains. An increased fulness may often be detected above the obstructed part; and percussion gently performed will reveal diminished resonance at the point of invagination.

Vomiting is always present; at first of mucus mingled with the contents of the stomach, but after a time of a pea-soup-like character, with a decidedly fæcal odour. Dr. Brinton has proved that this vomiting does not occur by what is known as reversed peristaltic motion, but by the violent action of the bowel trying to overcome the obstruction which exists. Part of this force is expended on the gut, causing it to stretch and dilate; and part on its contents, pushing them on until they arrive at the obstruction, when they return by a central reverse current, and thus find their way into the stomach. This, you will notice at once, resembles the movements of the food naturally in the stomach. If the obstruction be high up, the bowel above will the sooner become distended, and vomiting will occur early; if the obstruction be low down, the gut above will be longer becoming distended, and the central reverse stream will have a longer distance to travel; so, if fæcal vomiting occurs late in the disease, the obstruction is low down, probably in the large intestine. Dr. Brinton has also shown that tenesmus is a common symptom when the large intestine is affected, but is generally absent when the small bowel is invaginated; and that hæmorrhage from the bowel, caused by the congestion of the prolapsed portion of gut, is more severe in invagination of the small than the large intestine. The urine is likewise said to convey some idea as to the seat of obstruction: if it is suppressed it is because the impedi-

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ment is high up; but if abundant, then the blockage is low down.

The percentage of deaths from this disease is very high; the average length of the most severe cases is from three or four to eight days. Patients may recover either by the bowel becoming unblocked, or by Nature causing the strangulated part to be separated by a process of ulceration, which then is discharged per rectum. Remember that after death it is possible to find no invagination at all in a patient who may have died from all the symptoms of intussusception, as in the case of the man which I read to you. There is another similar case recorded by Dr. Thorowgood, in the last volume of the *Medical Society's Proceedings*.

Lastly, let me say a few words as to the treatment of these cases. The first thing you must do is to examine carefully, to see that no external rupture exists. This is a matter of great moment, as cases are on record where the symptoms of obstruction had been present some days before a hernia, which existed in the groin, had been detected; but often nothing will be found, and then comes the question, Shall I purge? In a great number of the cases that come under treatment, aperients have already been taken with no effect, for they are generally vomited as soon as they are taken; but besides being useless, if retained they would be positively mischievous, as they would produce peristaltic action of the bowel, and thus have a tendency to increase the size of the invaginated part. The plan of treatment which holds out most chance of success is to do as little as possible. Opium in the form of the extract is of service, as it not only relieves pain, but controls this violent action of the bowels, which is often the most distressing symptom. Enemas do good by relieving the lower bowel and by distending the intestine, thus tending to restore the invaginated portion; they should consist of large quantities of warm water, and should be slowly pumped into the bowel by means of the long tube, the lower part of the patient's body being raised. Fomentations should be applied to the abdomen, and extract of belladonna is recommended to be rubbed gently on the surface. Nourishment in the form of liquid must be given at frequent intervals. Brandy or champagne will be always required; if there is much sickness, this had better be administered by the rectum.

Two operations have been proposed for this desperate class of disease. The gut may be punctured above the seat of obstruction, and allowed to discharge its contents through what is called an artificial anus. The colon may be pierced from behind in the loin (this operation is called Amussat's); or it may be opened in the iliac region by what is known as Littré's operation. The second operation is to open the abdomen and then to disentangle or set free the twisted or invaginated bowel. These operations are both of a terrible nature. In the one case you have, if the patient recovers, a disgusting state of things remaining; whilst in the other it affords a last chance of escape from inevitable death. In such cases clearly place before the patient the whole of the facts, and leave it for him to decide. But this latter operation, to be successful, should be done early. In too many cases it is postponed until the chances of success are reduced to a minimum.

CHOLERAIC COLLAPSE: ITS ANALOGY TO STOKERS' COLLAPSE.

WITH REMARKS ON THE ETIOLOGY OF MALIGNANT CHOLERA, AND ON SOME OF THE THEORIES OF CHOLERAIC COLLAPSE, ETC.

By J. TEMPERLEY GRAY, L.R.C.P. Lond.

Some years ago, whilst a surgeon in the Peninsular and Oriental Company's service, I made about thirty voyages up or down the Red Sea, and had excellent opportunities of observing the effects of excessive heat both upon Europeans and natives of the East; especially as many of the voyages were made in one of the smallest and hottest—as to its stoke-hole—of any steamer in the fleet. The engineers and stokers on board steamships are necessarily exposed to great heat, though now, owing to the adoption of improved plans of ventilation, much less so than formerly. Still, even in comparatively well-ventilated steamers on tropical stations, the temperature in the stoke-hole commonly ranges from 120° to 140° Fahr., and under unfavourable conditions much higher temperatures than these have often been registered. As an effect of exposure to such high temperatures as those just mentioned, upon men who at the same time were working hard, I met with three cases of an affection which, by analogy, may perhaps help to elucidate one of the *quæstiones vexatæ* of the present day, viz., the cause of collapse in cholera. I hoped to have met with additional cases that I could more carefully observe before writing on the subject, but, as that is now improbable, I think it well to record what I already know, and to accept the risk of being accused of generalising on too small a basis, rather than not to generalise at all. An argument founded on one fact is at least as legitimate, if not as strong, as an argument founded on fifty facts.

The prominent symptoms of the cases referred to were cramps of the abdominal muscles and of the muscles of the extremities, together with oppressed breathing, cold skin, weak pulse, and other general symptoms of collapse. The attacks came on during or immediately after excessive perspiration—perspiration so profuse that the native stokers were frequently observed wringing it out of their clothes, which seemed as if they had been steeped in water. Cramps were the first thing complained of, and a man whilst in the act of shovelling the coals—they were all stokers or coal-trimmers who were affected—would be suddenly seized and fall down, retaining the shovel in his spasmodic grasp, as if it were the handle of a galvanic battery. In the worst case I observed the cramps were very severe, and the pulse for a time was imperceptible. When I first saw the patient I thought I had to deal with a case of cholera, for the symptoms bore a striking resemblance to the algide stage of that disease. On inquiry, however, I found that there had not been any preceding vomiting or purging, and I was informed by the chief engineer that similar cases every now and then occurred among the stokers when they were exposed continuously to more than usual heat. The men recovered on removal to the open air, and after full doses of ammonia and chloric ether, diluents, and friction of the extremities.

The symptoms of the cases did not resemble the known effects of heat *per se*; they had little in common with heat-apoplexy or heat-syncope; there was no insensibility. The phenomena were apparently primarily and mainly due to great heat, but its effects were no doubt enhanced by the great muscular exertion which their arduous occupation entailed upon the men affected. The links in the morbid chain appeared to be—first, profuse perspiration, the direct result of hard work at a high temperature; next, cramps; and finally, collapse. The theory of the cause of the latter which I have adopted is generally in accordance with that of Dr. Snow concerning the cause of the cramps and collapse of cholera. I shall, however, venture to add hereafter a subsidiary theory of the cause of the obstructed pulmonary circulation, which is a common concomitant, if not an essential feature, of collapse.

The coldness, cramps, and collapse of cholera were considered by Snow to be simply the results of the abstraction of water from the tissues by a rapid and excessive exudation of fluid from the mucous membrane of the alimentary canal. In the affection I have described, the same train of symptoms appeared to be induced by the excessive exudation of fluid through the skin, this exudation being excited by exposure to great heat, and, unlike that of cholera, without the operation of any specific morbid poison.

The coincidence of muscular pains and cramps, especially of the limbs, with profuse perspiration, must be part of the personal experience of many besides myself who have sweltered in a tropical climate. The connexion between the two, as cause and effect, however, never struck me till I met with the cases above referred to, and wherein I seemed to recognise these not unusual experiences, as it were magnified into a serious disorder. If cholera may from one point of view be looked upon as an inverted eruption, the "sweating sickness" of the middle ages may in some sort be looked upon as its correlative; for, though the latter affection was characterised by greater chronicity, it is curious to notice how with it were commonly associated cramps of the extremities, feeling of internal heat, pectoral oppression, great prostration, and other features of choleraic seizures; and, further, that sudden repression of the eruption was apt to be followed by violent vomiting and purging.

The broad points of analogy between the affection described and some of the most important features of cholera are—the occurrence in both cases of excessive exudation of fluid from the body, through from different parts, with a corresponding sequence of cramps and collapse. With reference to the exudations, it is to be noted that the fluid discharges of cholera

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are not by any means dissimilar in chemical composition from sweat itself. To speak of the discharges of cholera as consisting of *serum* is misleading, for they contain but little albumen, whilst coincidently the blood contains a great relative excess. This, the researches of Parkes and Schmidt have abundantly shown. If by "serum" is meant serum of the same density as that of the blood, it is necessary to bear well in mind that though the liquid stools of cholera may be said to contain it, they do not *consist* of it. This point has been strongly enforced by Dr. Parkes, but, judging from current expressions and the dicta of various text-books, it is very commonly overlooked. The mean of nine analyses, by Dr. Parkes, of cholera fæces passed in different stages of the disease, but exclusive of that of reaction, shows that 1000 parts consist of about twelve parts of organic matter and salts—less than one part being albumen—and 988 parts of water. On the other hand, 1000 parts of the serum of the blood consist of about eighty parts of albumen, twelve parts of salts, etc., and 908 of water. It is obvious from this comparison that cholera fæces are very diluted serum indeed, or rather a mere "serosity"—to use an old word—much more like sweat, which contains from five to fourteen parts of organic matter and salts in 1000, than the serum of the blood.

It has, I think, been very unfortunate that a few exceptional cases of cholera, or of supposed cholera, where there has been no vomiting or purging, have led many to look upon these generally prominent symptoms as unimportant features of the disease. Thus, Dr. Aitken,(a) after remarking that the "phenomena resulting from the changes in the blood are the proper and distinctive symptoms of the disease," says that "the algide symptoms essentially constitute the characteristic phenomena of this disease; . . . the vomiting, purging, and cramps are now considered as non-essential phenomena." But if the algide symptoms depend upon the changes in the blood, the appreciable changes in the blood are, as far as we know analytically, mainly the result of the evacuations. By them the blood has been deprived of much of its water, some of its salts, a little of its albumen, and a not-positively-determined amount of its fibrin. This deprivation has left it of diminished bulk, but highly albuminous and consequently sizy and viscid; any other changes than those producible by the discharges being, in the present state of our knowledge, occult or hypothetical. Though the increased viscidity of cholera-blood has been denied, and its degree very variously estimated, there can be no doubt that during life it is generally observable; and were it not, it is a condition that must exist in sequence to other observed phenomena, unless it can be proved that coincidently the albumen of the blood has lost one of its properties, or ceased to be albumen.(b) Dr. Parkes's exact post-mortem observations can hardly be gainsaid, and the spontaneous coagulability of the blood may possibly, in some cases, be decreased, though Dr. W. Robertson affirms the contrary as the result of his observations. At the same time, this property is not necessarily related to that of increased viscidity, and its apparent diminution may have been solely dependent upon post-mortem changes. This much is certain, that the blood is in a much less fluent state than normal before death in choleraic collapse, and it is with its ante-mortem condition that we are practically concerned. With Dr. Parkes I believe that in cholera it is to the state of the blood itself "that we are compelled to look for the cause of the arrest of the circulation"; but since in "stokers' collapse," if I may so call it, the circulation is impeded without the operation of any morbid poison, I do not entertain his conception of the way by which it is brought about.

The blood in cholera must *à priori* become more sizy in proportion to the smallness of the amount of albumen in the exuded fluid, rather than to its greatness. The more watery the exudation, the more viscid must the blood remaining in the body become, on account of the retention in the blood-vessels of a larger amount of sizy material. If the so-called serous exudation of cholera operated as a destructive drain, the deadliness of its effects would be in proportion to the amount of organic solids it contained. These we have seen are relatively small, with perhaps the exception of fibrin, which, however, seems to be a late appearance in the evacuations, and unassociated with the development of collapse. If the blood in cholera were seriously damaged or altered by the action of a morbid poison—as supposed by Dr. Parkes—we should not have the rapid recoveries which often occur, even after severe attacks; neither could they take place if the evacuations produced an effect at all resembling that caused by a great loss of blood. Under either of these conditions—altered blood, or loss of blood—convalescence would be protracted, and anæmia a marked result. It is true that convalescence after cholera is sometimes slow, but it is not specially characterised by anæmia, except in cases that have been subjected to barbarous treatment, which may, indeed, at once account for the slowness of the recovery and the anæmia. Niemeyer(c) writes:—"Some physicians who hold with me that the intestinal lesion is the primary one in cholera, consider, however, that the failure of the heart's action is chiefly due to the altered condition of the blood. But the rapid disappearance of the asphyxia so soon as the evacuations cease is against this view. It is unintelligible how the blood in so short a time can take up the deficient *serum*, and become of a normal consistency, as we not unfrequently see to be the case, when a person who has been cold and pulseless in a few hours has a hot skin and a full, well-developed pulse. On the other hand, this is easily explained if it is referred immediately to the depressing effect resulting from the *very great congestion with inflammation and partial destruction of the intestinal mucous membrane*. If the patient survive, and no secondary disease be set up, recovery is rapid." (The italics are mine.) And I submit that it is almost as improbable that "rapid recovery" should occur after such intestinal lesions as those described, as it is stated to be after alteration of the condition of the blood—whether it be of the kind indicated by Niemeyer, viz., serum-deprived blood, or the morbidly changed blood of Dr. Parkes. I believe the lesions mentioned are rare post-mortem appearances in cholera: though found in certain fatal cases, there is no foundation for supposing them to be present in their entirety in the great majority, any more than the altered condition of the blood of the destructive kind referred to; they are incompatible with rapid recovery, and, like their occasional effect, hæmorrhage from the bowels, they can only be considered an accident of the disease, or, at most, as a manifestation of an unusual extension of a local morbid process. If this be granted, it is only necessary to substitute *water* for the erroneous word "serum" in the paragraph just quoted, to make it perfectly intelligible how the blood in a short time may become of normal consistency, and how the recovery of the patient may be rapid. There is little else but water to be restored to the system; and the often-maintained analogy between the watery discharges of cholera, and loss of blood, or of liquor sanguinis, or of serum, is as unreal as would be an analogy between profuse sweating and loss of blood. On the other hand, the analogy between the watery diarrhœa of cholera and profuse sweating is remarkable. The composition of the two fluids is similar; the substitutionary occurrence of purging for sweating, and *vice versâ*, is often correlative, as in phthisis—sometimes even in cholera itself, but especially in ague, where a stage of diarrhœa often takes the place of an absent sweating stage; and further, in stokers' collapse we see that excessive sweating leads to a condition indistinguishable from the collapse of cholera, the common antecedent of this condition being large watery exudation. Moreover, if we consider the evacuations of cholera merely as a drain, analysis affords reasonable grounds for believing that in most cases they deprive the body of fewer of its solids than a small and inconsequential venesection. Dr. Parkes mentions, as an example of the enormous amount of fluid evacuated, that in one case of cholera eighty-eight ounces of fluid were passed in seven stools, which were all the patient had. Larger quantities than this are not infrequently passed;(d) but the solids contained in even a gallon (160 ounces) of cholera stools, taken at twelve parts in 1000, would only amount to the solids contained in about nine

(a) "Science and Practice of Medicine," 4th edition, vol. i., p. 636.

(b) Papillon asserts that the albumen of cholera-blood *is* altered in some of its characters, but not, as far as I can make out, in respect of its viscidity.

(c) "Symptomatic Treatment of Cholera," translated by Dr. P. W. Latham, p. 17.

(d) Dr. Goodeve says the intestinal discharges "amount frequently to 80, 100, or 150 ounces during the evacuative stages" ("Reynolds' System of Medicine," vol. i., p. 698); and Goldbaum mentions the discharge of the almost incredible quantity of *seven* gallons of evacuations! This latter amount, the weight of which is equal to half the weight of an average man, must have been passed during a considerable time, and probably included ingested fluids; but, if we take, the albumen in this quantity, as above, at one part in 1000—and in one of Dr. Parkes's analyses there was no more than 0·27 in 1000,—it only amounts to that contained in twenty-eight ounces of blood. In this connexion it is suggestive to reflect that the total quantity of blood in the human body is estimated to be from one-eighth to one-fifth of its weight, and that the abstraction of from five to eight pounds is commonly fatal.

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ounces of blood. The contrast is still more striking if we compare the albumen alone, for if that be estimated at one part in 1000 of cholera dejecta, the quantity in a gallon will be about equal to that in four ounces of blood. Blood contains forty times as much albumen as an equal quantity of average cholera fæces, and the total amount of solids it contains is seventeen times as much: from this it is obvious how inappropriate is the application of the somewhat figurative expression, a "serous hæmorrhage" (Copland), to the discharge of cholera. Much more true, if more paradoxical, would be the expression, a *watery* hæmorrhage! Dr. G. Johnson(e) appositely remarks on this point, that "it is probable that many patients, with some of the forms of Bright's disease of the kidney, pass as much albumen with the urine in the course of twelve hours as most patients in the collapse of cholera lose during the same period by the intestinal canal." More than this even is true, for some patients affected with Bright's disease pass more albumen in six hours than an average cholera patient does during an evacuative stage of thirty-six hours.(f) There are, however, those who, whilst stating correctly that the amount of albumen in the stools is very small, affirm that they contain so large an amount of saline matter that its withdrawal from the system in this way must be productive of serious results. That it is of some moment, if the rapidity of its discharge be considered, may not yet be denied; but saline theorists and therapeutists, in estimating its importance, have surely overlooked the fact that cholera stools contain, on an average, less than half the amount of fixed salts contained in an equal quantity of one of the constant excretions—namely, urine. To put it crucially: Since the average amount of salts (chlorides, phosphates, and sulphates of sodium and potassium) in cholera fæces is 7·6 parts in 1000 (Parkes), the total amount in the case before mentioned, where eighty-eight ounces of fluid were evacuated, would be 282·6 grains, or considerably less than the average amount of salts (352·5 grains) contained in one day's urine. Further, during an ordinary evacuative stage of thirty-six hours' duration, with the large passage of one gallon of fluid, about the same quantity of the same kind of salts would be discharged as might have been excreted by the kidneys in the same space of time. So far, therefore, are the salts from being much in excess of their normal excretion from the body, that the question may with justice be revived whether, or to what extent, their presence in the discharges from the alimentary canal is other than passively vicarious to their diminished or suppressed excretion by the kidneys, and therefore rather to be esteemed beneficial than injurious, as their retention in the blood would necessarily increase its density, and so favour stasis.(g) Howsoever this may be, Dr. Parkes's analyses afford a good basis for the opinion that the discharge of cholera may fairly, without much straining the metaphor, be designated an intestinal sweat; and, at the same time, it seems just to infer that it is because they are of this nature—watery, like sweat,—and are not highly albuminous, that the blood-condition of choleraic collapse is produced.

Though algidity is commonly looked upon as almost pathognomonic of cholera, it is probable that too much importance has been attached to it. The careful observations of Gueterböck, Weber, and others, have shown that the temperature is not invariably low during collapse, but sometimes above and sometimes below the normal standard. In the majority of cases, moreover, whilst the temperature of the axilla has been below, that of the rectum and vagina has been much above the standard of health—the mean of the two temperatures corresponding very closely with that standard. In the cold stage of ague similar conditions prevail, the recent investigations of Hirtz proving that there is a real and not merely a sensational coldness of the surface in this stage of the disease, whilst the internal temperature is elevated. The analogy between cholera and ague in respect of algidity has often been remarked, though perhaps by no one more forcibly than by Dr. Goodeve,(h) who writes that he has seen people under the influence of malarious poison lie for hours "as cold and pulseless, and as embarrassed in the breathing as in cholera." Surely if algidity *per se* were the essentially dangerous feature of choleraic collapse, since it is equalled by that of the cold stage of ague, the mortality from ague ought to be much greater than it is. The phenomena of algidity in both diseases appear to be chiefly external, and it is rather the unequal distribution of caloric, so to say, than the actual deprivation of it, which gives rise to their manifestation. Except, however, in this feature of algidity, cholera and ague are sufficiently different. If cholera were a sort of acute intermittent, as some have alleged, then the slighter the attack the more it ought to resemble one of ague—which is not the case. There is no real resemblance between the blood status of the two diseases; for, though the blood in ague is said to be sometimes thick and tarry, this condition follows the failure of the circulation, whilst in cholera it precedes it. In cholera, too, the fluency of the blood is altered by the abstraction of water, whilst in ague it is not; and, though in both cases during external algidity the circulation may appear to be feeble, it is feeble from different causes. In the one case (cholera) it is weak from the abnormal state of the circulating fluid, which prevents it from flowing; in the other (ague) it is weak from the depressed action of the heart itself: or, in other words, in the one case it is the circulating fluid that is primarily and mainly at fault, in the other it is the circulator of the fluid. This applies to the early algidity of cholera, for doubtless the heart in cholera may become weak secondarily or ultimately. Of this I shall speak further on. The facts that algidity in cholera—a disease characterised by malignity—is generally solely a surface phenomenon, or, at any rate, inconstant, and that it is equally great in ague—a disease characterised by non-malignity,—are fatal to the conclusion that it is the one essential feature of the former disease. Moreover, a case may be one of cholera without ever reaching the stage of collapse, just as a lung may be inflamed, and never reach the stage of gangrene. To call algidity an *essential* feature of cholera is as absurd as it would be to call gangrene an essential feature of pneumonia; as an external phenomenon it is pathognomonic of collapse, from whatever cause arising—as fetor is of gangrene.

If it be granted that, in a small number of cases of cholera asphyxique, the temperature of certain of the natural cavities is slightly diminished (from 0·5° to 1° C. in six cases out of forty-five—Gueterböck) the fall may be theoretically accounted for in accordance with Snow's theory as explained by Dr. B. W. Richardson, and attributed to the removal by the watery discharges of the latent heat of the tissues. As, however, the temperature in cholera appears to increase the further we proceed from the surface of the body, and as the temperature of the deepest parts has never been ascertained, it is possible that neither this provisional theory, nor any that have been propounded to account for an absolute loss of heat, may be needed. Regarding the loss of surface-heat I shall have more to say by-and-by, but I may add here that Dr Richardson's opinion—legitimately founded on the ordinarily received algide data—concerning the mischievousness of cold drinks in cholera, and the danger of "cooling down a cooling body," is opposed by much trustworthy experience; for ice-cold drinks—and, according to Niemeyer, even ice-cold wet sheets applied externally—are generally most grateful to cholera patients, the former relieving in some measure the intolerable thirst and burning epigastric *heat* of which they so much complain. It may be difficult to explain the alleged utility of the cold sheets; but if the internal temperature be sometimes as high as 108·6° Fahr. (42° C.—Gueterböck), although peripherally the body may be colder than natural, we can easily understand why there should be such a craving for cold drinks, and also in part why they should be as beneficial as, according to my experience, they really are.

(To be continued.)

(e) "Epidem. Diarrhœa and Cholera," p. 188.
(f) See "Roberts' Urinary and Renal Diseases," second edition, pp. 372, 401.
(g) I make no allusion to urea in this connexion. It is probably not formed to any great extent during collapse. During reaction, should the renal secretion remain suspended, uræmia frequently occurs, the intestines not "eliminating" urea in cholera any more than in enteric fever.
(h) *Loc. cit.*, p. 712.

HEALTH OF BRIGHTON.—We have received a copy of the report of Dr. R. P. B. Taaffe, Medical Officer of Health for Brighton, for the quarter ending June 30, 1875. The statistics, which are carefully compiled, present no feature of special interest. In the house-to-house inspections which took place during the quarter under notice, in 211 of the better and best class of houses the interiors were found to be connected with the drains and sewers; further, of the 1869 houses inspected during the period, 952 had no regular or proper water-supply for the closets.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

NOTTINGHAM AND MIDLAND EYE INFIRMARY.

CASES UNDER THE CARE OF DR. C. BELL TAYLOR.

Case 1.—*Distension of the Frontal Sinus.*

Sarah S., aged fifty, applied at the Eye Infirmary on May 30, 1875, on account of a tumour, occupying the inner and upper side of the left orbit, which projected the eye outwards and downwards, and gave her a very unsightly appearance. She first noticed the swelling, to the best of her recollection, five years ago, and states that it used to "come and go." It gradually increased, however, and at present is causing her considerable alarm and discomfort. She suffers from double vision, on account of the displacement of the eyeball, but the sight of each eye, taken singly, is good. She states that she accidentally struck her head against the mantelpiece eight years ago, and was sick for some days after, but does not suppose that the injury had occasioned the swelling. The patient having been placed under the influence of ether, Dr. Taylor made an incision about an inch and a half in extent, parallel to the fold of the upper lid; and having opened the tumour and evacuated its contents, passed the little finger of the right hand into the sinus, while the finger of the left hand was inserted into the nostril. Having ascertained the spot where the lamina of bony tissue separating the two fingers was most attenuated, this was freely divided with a Stilling's knife, and an indiarubber drainage-tube, perforated at intervals, inserted by means of a long hair-pin.

Remarks.—Distension of the frontal sinus may be acute or chronic; both are rare, but the chronic cases most frequently come under the notice of the ophthalmic surgeon. This disease is almost invariably of traumatic origin, although many years may elapse between the receipt of the injury and the displacement of the eyeball caused by the advancing tumour. The only treatment is by the operation just described, and the object of it is to establish and maintain a free communication between the cavity of the sinus and the nostril, so that there shall be no further accumulation. If this be done, and the cavity daily washed out with antiseptic and astringent lotions, experience has shown that it will, in the course of a few months, contract and gradually heal, leaving the patient but little worse for the accident and operation. A full description of this disease will be found in Mr. Lawson's excellent work on Diseases and Injuries of the Eye. The woodcut shows the position of the tube, which must be maintained (with occasional replacement) *in situ* until a cure is effected.

Cases of Intra-ocular Tumour—Cancer of the Eyeball.

James K., aged fifty, a spare, strong, healthy-looking labouring man, applied at the Infirmary on May 16, 1875, with all the symptoms of an attack of acute glaucoma. The pupil was ovoid, fixed, and dilated; the eyeball of stony hardness; and it was impossible to illuminate the fundus. He stated that sight had been "dimmish" with this eye for some time, but the attack had come on quite suddenly, and was accompanied with considerable pain. Dr. Taylor immediately removed a large portion of iris downwards and outwards, with complete relief to the pain; but sight was not benefited, and the patient returned in six weeks with a recurrence of the symptoms. As all hope of sight was abolished, and there seemed to be some risk of injury by sympathy to the other eye, extirpation was proposed. The patient, however, would not consent to this, and, in the hope of affording relief, the lens was extracted. All went well; the symptoms again satisfactorily abated, and the patient returned home. He was, however, warned that the disease was probably of a malignant character, and urged to return and submit to extirpation should there be any return of his symptoms. This he did on August 15, when the eye was extirpated under ether. There was considerable bleeding; and as there was a suspicious appearance of adventitious deposit in the segment of optic nerve where cut across, the divided end was felt for, seized with forceps, and another half-inch removed. On cutting the eyeball across, a small tumour, evidently melanotic in character, came into view, just above the optic disc, between the choroid and retina. It had perforated the sclerotic, and a portion about the size of a pea bulged into the cellular tissue of the orbit.

The last segment of optic nerve removed also presented a suspicious spot, which, on being scraped and placed under the microscope, revealed nucleated cells loaded with pigment, exactly like those of the tumour itself. It would have been impossible to remove any more of the nerve, and it was therefore deemed advisable, two days later, to place the patient again under ether, and stuff the orbit with chloride of zinc paste spread on lint. This last operation was well borne. The pain on recovery from the anæsthetic sleep was not excessive; the lids were protected from the destructive action of the chloride by temporarily stitching the conjunctiva over the strips of lint, and the patient has now returned home.

Remarks.—Intra-ocular tumours occasionally manifest themselves by an outburst of glaucomatous symptoms. In their initial stages the retina frequently becomes detached, but this only occasions blindness in a certain portion of the field of vision; and it is a well-known fact that blindness, partial or even complete, when affecting one eye only, is often overlooked by the patient. At first the tumour has space enough in which to grow, and consequently occasions but little discomfort. Hence it sometimes happens that we are not consulted until glaucoma is manifest and the humours of the eye so opaque that it is impossible to illuminate the fundus, and really see the *fons et origo mali*. There is only one course then open to the surgeon, and that is to treat the glaucoma *secundem artem*, and wait for events. If the symptoms continue or increase in spite of all we can do, it is evident that the cause is persistent, and we may well suspect the existence of a tumour, and advise the patient to submit to extirpation. In performing this operation it is desirable to cut the nerve as far back as possible; to open the eye as soon as removed, and, if either glioma of the retina or sarcoma of the choroid be manifest, to fish up the divided end of the optic nerve, and cut it as far back as possible. It is of the greatest importance to excise the eye before the tumour has burst through the external coats, otherwise the neighbouring tissues will become infected; and, wherever there is any suspicion of this, to destroy the whole contents of the orbit with the chloride of zinc paste.

Upwards of three years ago a gentleman consulted me on account of failing vision affecting the left eye. At first I could only detect comparative anæmia of the optic disc of that side, which was beneficially treated by the hypodermic injection of strychnine; after a time, however, he became considerably worse, and the anæmic condition progressed until it was evident that the nerve was atrophied. There was no appearance of tumour, however, and as the patient derived no benefit from my treatment he ceased to attend. About eight months later he again consulted me, suffering from all the symptoms of an attack of acute glaucoma too advanced to permit of illumination of the fundus. Suspecting now that he was the subject of an intra-ocular tumour, I advised extirpation, but did not feel warranted in urging this very strongly in opposition to his great objection to the procedure. I therefore iridectomised the affected eye with complete relief to all the symptoms for about six weeks. At the end of this time he was as bad as ever, and I removed the eyeball, finding, as I suspected, a melanotic growth. This tumour had either burst through the sclerotic and freely invaded the tissues of the orbit, or was of extra-ocular origin, embracing the trunk of the optic nerve; so that it was necessary to destroy the whole contents with the chloride of zinc paste. As not unfrequently happens, there was considerable exfoliation of the bones of the orbit, but the patient made an excellent recovery, and is now, and has been for upwards of two years, quite well.

The prognosis of intra-ocular tumours is decidedly unfavourable, and where we have to deal with glioma of the retina, a disease occurring almost exclusively in infant life, specially so. The value of early and complete extirpation, and

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employment of the chloride of zinc, is, however, indisputable, and may always be used with a fair chance of saving a percentage of cases. Stitching the conjunctiva over the orbital plug which contains the chloride is an important precaution, and is necessary to save the lids from destruction. In the first case the family history was good; in the latter, other members had suffered from cancer.

LEEDS FEVER HOSPITAL.

CASE OF SEVERE ENTERIC FEVER TREATED BY LARGE DOSES OF QUININE.

(Under the care of Dr. EDDISON.)
[Reported by Dr. GRAHAM STEELL.]

W. C., AGED sixteen, admitted into the Leeds Fever Hospital June 22, 1875. Patient was too ill to give a satisfactory account of his illness, but stated that he had been ill for a fortnight. Shivering, abdominal pain, sickness, and vomiting were among the symptoms, but diarrhœa was only transiently present after laxative medicine.

The following notes were made shortly after admission:—"Decubitus dorsal; face anxious, and bearing the expression of extreme illness; a circumscribed flush on both cheeks; skin generally pale; a few rose spots scattered over the trunk. There is no distension of the abdomen, but the right iliac region is somewhat tender on pressure. Tongue thickly furred, red at tip and margin. First sound of the heart shortened, but no sign of valvular lesion. Pulse 120; respirations quickened and laboured. On auscultation of the lungs, loud rhonchus obscures every trace of vesicular murmur, the expiratory sounds being greatly prolonged. Lungs everywhere resonant." Ordered turpentine (℥x. 4a q. q. H.) and a stupe to chest. In the afternoon the temperature was 105°, and at 6.55 p.m. he was placed in a tepid bath (94° Fahr.), the water being gradually cooled down (to 72°) during his immersion. Remained in bath forty-five minutes. Temperature when taken out 97·2°; pulse 108. At 9 p.m. the temperature was 98·8°, but at 10 p.m. it had again risen to 105°. The patient was now intensely ill, delirious, and groaning incessantly. At 10.55 p.m. placed in an empty bath, wrapped up in a sheet wrung out of tepid water. He was then freely sponged with cold water, while cold water was also allowed to enter the bath slowly until he was immersed. Taken out at 11.15 p.m. Fifteen minutes after removal to bed, temperature was 97·7°.

June 23.—Temperature at 3 a.m., 103·2°; 8.30, 103·6°; 10, 104°. Tongue dry and brown; bowels loose, stools green. Urine albuminous, but the chlorides tolerably abundant. Pulse 120; respirations 36 per minute. At 11.30 a.m. placed in an empty bath, sponged, and finally immersed in cold water as yesterday; kept in for thirty minutes. Pulse, when taken out, 108; temperature, forty-five minutes after bath, 98·8°; at 2 p.m., 102·4°; at 3.20 p.m., 104°; pulse 132. At 3.45 p.m. again placed in bath as before; kept in for thirty minutes. At 6 p.m., temperature 101°, pulse 120; at 7 p.m., temperature 105°. Fifteen minutes after, once more placed in bath; remained in for forty minutes. While in this bath he complained of abdominal pain. Turpentine stopped, and a half-scruple dose of sulphate of quinine given immediately after bath, and to be continued every three hours.

24th.—Temperature at 3 a.m., 103·6°; at 6 a.m., 102·6°; 9.30 a.m., 101·3°; tongue still dry and brown in centre; bowels loose, the stools light in colour; pulse 108. At 1 p.m., temperature 100·8°; 3 p.m., 99·2°; 4.25 p.m., pulse 100; 6 p.m., temperature 99·2°. Delirious in the evening; respirations 40 per minute. Ordered Battley's solution (℥vijss.) and ipecacuanha wine (℥v.), to be repeated every hour if necessary. Required three doses. Eighty grains of quinine given in twenty-four hours.

25th.—Temperature at 10 a.m., 100·8°; pulse 100; respirations 32. Rather drowsy, and pupils somewhat contracted; respirations 36 per minute. At 1 p.m., temperature 101°; 2 p.m., 101·4°; 3.30 p.m., 102·2°; 5 p.m., 102·3°; 7.30 p.m., 102·6°; pulse 116; bowels not moved. Eighty grains of quinine in twenty-four hours.

26th.—Temperature at 6 a.m., 101·2°; 8 a.m., 100·2°; pulse 108; respirations 36. Bronchitis continues. In the evening, temperature 102·6°; pulse 108; respirations 44; bowels relaxed, the stools light in colour. Sleeping draught as yesterday. Eighty grains of quinine in twenty-four hours.

27th.—Morning temperature 102·6°, noon 101·4°, evening 101·8°; pulse 104 to 108; respirations 36; tongue dry and brown; bowels once. Eighty grains quinine in twenty-four hours.

28th.—Morning temperature 102·8°; pulse 120. Extra five-grain dose of quinine. Urine contains no albumen, but the chlorides are greatly diminished. Temperature in the evening 101·4°; pulse 106; tongue red and raw. Eighty-five grains of quinine in twenty-four hours.

29th.—Morning temperature 100·8°, pulse 104; evening 99·6°, pulse 80; bowels relaxed. Eighty grains quinine to-day. Patient stated to-day that he felt better.

30th.—Morning temperature 100·8°, evening 100·8°; pulse 104 and 96. Appetite returning. Bronchitic signs diminishing. Troublesome cough persists, for which he is to have chlorodyne. *Quinine stopped this evening.* Seventy grains quinine in twenty-four hours.

July 1.—Temperature 103°; pulse 116. Patient manifestly worse in every way. Quinine to be resumed immediately (about 11 a.m.). An erythematous rash has appeared over the trunk. No sore throat. Tongue dry and harsh. At 3 p.m., temperature 101°; 5 p.m., 100·2°; 6 p.m., 99·6. In the evening he was much better, and the bronchitic signs less than they had ever been since admission. Quinine given every four hours to-day.

2nd.—The rash observed yesterday persists. On the extremities there is also a rash; but while the trunk rash consists in a nearly uniform red blush, the rash of the former is in round spots, some slightly elevated, and all disappearing on pressure. The trunk rash differs altogether from a scarlatinal rash, but that on the extremities somewhat resembles the early typhus rash. Patient is quite sensible. Temperature 102·2°; pulse 120 (morning). To have an extra five-grain dose of quinine. Evening temperature 99°; pulse 98. Bowels open twice. Quinine every three hours to-day; eighty-five grains in twenty-four hours.

3rd.—Rash continues. Temperature, morning 99·4°, evening 98·2°; pulse 104 and 84; bowels twice. Eighty grains of quinine to-day.

4th.—Temperature, morning 98·8°, evening 99·4°; pulse 84 and 92; bowels not moved; tongue harsh and furred. Eighty grains of quinine in twenty-four hours.

5th.—Temperature, morning 98°, evening 100·4°; pulse 84 and 100; bowels twice. Bronchitic signs have disappeared. Eighty grains of quinine in twenty-four hours; stopped to-night.

6th.—Temperature, morning 98·2°, evening 98·6°; pulse 96. Rash gone, and skin desquamating freely. No quinine to-day.

7th.—Temperature, morning 98·6°; pulse 96; respirations 20; tongue harsh, with tendency to glazing. Temperature in the evening 100°; pulse 100. To have half a scruple of quinine at 8 p.m. At midnight, temperature 100·4°; pulse 96. Bowels somewhat relaxed, but stools darker.

8th.—Temperature at 2 a.m., 101·2°; 4 a.m., 102·2°; 6 a.m., 102·8°; pulse 114. Quinine to be taken every three hours (half-scruple doses).

9th.—Rash has again appeared, and exists along with desquamation. Temperature, morning 98·3°, evening 98°; pulse 80 and 84. Quinine stopped after 8 p.m. Tongue cleaning. Patient has never been so deaf as in many cases of enteric fever treated without quinine. Except slight headache, he has never complained of any of the physiological actions of quinine.

10th.—Temperature, morning 97·9°, evening 98·4°; pulse 78 and 84; tongue clean and moist, also less red; bowels once.

11th.—Temperature, morning 98·4°, evening 100°; pulse 80 and 90. Half a scruple of quinine in the evening.

12th.—Temperature, morning 98·2°, evening 101·4°; pulse 92. At 8.30 p.m., ℈ss. of quinine. Temperature at 11.30 p.m., 99·8°. No albumen in urine; chlorides abundant. Bowels once; still present enteric characteristics.

13th.—Temperature, morning 97·8°; pulse 92. Patient in morning appeared much better, and was reading in bed; but in the evening his temperature rose to 103°, the pulse to 116. At 2 p.m., temperature 100°, to have ℈ss. of quinine; 4 p.m., 101·2°; 5 p.m., ℈ss. of quinine; 6 p.m., temperature 102·4°; 11 p.m., 101·4°, ℈ss. of quinine, and every three hours afterwards.

14th.—Temperature at 3 a.m., 99·4°; 6 a.m., 98°. In the morning, pulse 100, temperature 98·9°; 5 p.m., temperature 99·4°; 11 p.m., 100°. Bowels not moved.

15th.—Temperature at 3 a.m., 98·6°; 6 a.m., 99°; 10 a.m.,

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98·6°; pulse 88. In the evening the temperature was 100·4°, the pulse 98. One drachm of castor oil, as bowels had not moved.

16th.—Temperature, morning and evening, 100°; pulse 98 and 88. Bowels moved twice. Quinine stopped to-night.

17th.—Temperature in the morning 99°, evening 99·4°; pulse 86 and 92. Tongue slightly furred, but losing its unnatural redness. Bowels moved once.

18th.—Temperature, morning 99·4°, evening 99°; pulse 96 and 84.

19th.—Temperature, morning 98°, evening 97·8°; pulse 78 and 84.

20th.—Temperature, morning (taken three times) 96°, evening 98·6°; pulse 80 and 64.

21st.—Temperature, morning 98°, evening 98·8°; pulse 64 and 72.

Temperature and pulse recorded morning and evening till August 2, but remained perfectly normal.

Milk diet till July 23. Brandy during the first fortnight of his illness, but never more than four ounces per diem.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, SEPTEMBER 25, 1875.

THE GRAND NEW HOSPITAL FOR THROATS AND EARS.

The proceedings last week in connexion with the laying of the foundation-stone of a building in the Gray's-inn-road, which is to be designated the Central London Throat and Ear Hospital, are, in themselves, almost too beautiful to be noticed in these workaday columns; but as the event has given occasion for several wonderful specimens of descriptive writing in the leading representatives of the daily press, we must not altogether allow it to pass in silence.

We will not stop to inquire how or by what means it happens that the laying of the foundation-stone of such a building as this will be is thought of sufficient importance to command a column in the *Times*, and a leading article in another daily journal, whilst building operations of far greater magnitude in connexion with general hospitals either remain unnoticed, or, at most, are dismissed in a dozen lines; but the fact is sufficiently curious to merit passing notice. Neither shall we remark upon the delightful notices of the unselfish working of the prime mover in this great work in certain of our contemporaries—how he has again and again given up, and doubtless will again sacrifice, the hour of evening devoted by less robust champions of sore-throat relief to dinner and relaxation! But verily these things be vanity!

Although, alas! those interested in the financial success of special hospitals usually manifest great anxiety to secure the presence of the representatives of the lay press at their *fêtes* and festivals, their welcome is seldom extended to those of the medical press. The present formed no exception to this sad rule, and we are therefore unable to state from personal observation what actually occurred at the "ceremony"; but from newspaper reports we learn that it was a delicious mixture of psalm and song; singing, cheering, praying, humorous speech-making, benedictions, congratulations, and eating and drinking. Here were to be seen operatic celebrities, church dignitaries, cathedral choristers, and theatrical artists. The stone was laid by Madame Adelina Patti, and the chief part of the religious service was conducted by Canon Lightfoot, who evidently felt that he was placed in a somewhat anomalous position, being neither a great singer nor yet a throat doctor. "But," said he, "a hospital for the special treatment of diseases of the throat and ear has unusually strong claims on the sympathies of the audience, because it is by the organs of hearing and speech that man obtains the progressive development which distinguishes him from the rest of creation."

The getting together of such an assemblage as met at the laying of the foundation-stone of the Central London Throat and Ear Hospital, and the carrying out of the programme of the day's proceedings, speak volumes for the diplomacy and acumen of those engaged in working the new "special," and we cannot suppress a slight feeling of admiration at the originality of their tactics, or rather, as the *Daily Telegraph* puts it, their "delicate and judicious strategy." At the same time, we should hesitate to follow their example, lest some should unkindly insinuate that we had joined the class whose prayers always assume the following form:—

> "Assist us to accomplish all our ends,
> And sanctify whatever means we use
> To gain them."

Whether in the present instance the means have been sanctified or not, we cannot say; certain it is they have been blessed, and the promoters are in a fair way to accomplish their ends.

In the *Times* the report of the proceedings in connexion with the laying of the foundation-stone are followed by some remarks intended to justify the existence of such institutions as the Central London Throat and Ear Hospital. They are evidently of professional origin, and therefore worthy a moment's attention. On the question of the necessity for, and value of, special hospitals, the writer says—"Practically the question is put to the test of experience; and the result is, that the skill, the care, the instruments, and the appliances which are needed in some diseases—as, for instance, those of the eye, the spine, and the foot—are provided most economically and efficiently in special institutions." This assertion is not, and, we believe, cannot be, substantiated—indeed, in our opinion, there is no special institution in which diseases of the eye, spine, or foot are treated either as efficiently or as economically as they are in our large general hospitals, such as St. Bartholomew's, Guy's, or St. Thomas's; but that, to a large-minded benefactor, is nothing. With respect to throat hospitals, the writer attempts to justify their existence on the ground that they are necessary in order that those who wish to study diseases of the throat may have better opportunities of acquiring skill in the use of the laryngoscope, and of comparing notes,

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and thus gaining experience. The argument is very speciously put by the writer; but on this point we may say that it would be a sad thing for physic, and most calamitous for the public, were there no other opportunities of acquiring skill in the use of the laryngoscope, or of comparing notes and gaining experience in the treatment of diseases of the throat, than are to be obtained in the existing hospitals for diseases of the throat which adorn the metropolis. We have no wish to unduly depreciate the merits and worth of these valuable special institutions; but we may be permitted to record the opinion that neither the profession nor the public would suffer loss were the doors of both of them to be closed at once, and for ever.

So much on this point. But we put these vain things aside, and come to the closing proceedings of the grand symposium which followed the dedication of this temple to the god of throats and ears—whoever the former may be. The health of Madame Patti was of course drunk with enthusiasm; and when the Marquis, her husband, rose to reply, the name of the proposer came promptly to his lips. But, alas! the prime mover of the whole affair, the indefatigable Mr. Brown, was only known to him as "the gentleman who has just sat down." *Sic transit gloria mundi!*

A LOST ART OF MEDICINE.

Under this title, Professor Gross, in addressing the American Medical Association, spoke of the practice of blood-letting, and then gave the indications for the use of this remedial agent with much perspicuity. To ordinary readers, and still more to the younger members of the profession, such expression may seem a voice from the tombs, not the outspoken utterances of a veteran member of our profession in the full possession of his faculties, which are of no common order. To many it may seem that to adopt venesection once more is to take a retrograde step towards the therapeutic darkness from which we are slowly emerging—to reverse the progress of the age. To remove any of that precious circulating fluid which we are so anxious to conserve, and which we take such pains to build up, will seem to some persons a piece of folly too patent to receive the support of men whose reasoning powers have any respectable standing-ground in the opinion of others. And yet, after all, has not a fair case been made out in favour of blood-letting?

The position taken up by the distinguished American professor is distinct enough; and, whether the reader agrees with him or not, it will not be because there is any ambiguity about his expressions. He first allows the effect of fashion in causing a reaction against blood-letting, which he regards as a very potent factor. He gives great prominence to the influence exercised by Todd in such change of opinion, and in the evolution of the hypothesis of the change of type in disease. The position assumed by Todd he thinks due chiefly to the class of patients found in King's College Hospital, who could not stand depletory measures, but in whom the tolerance of stimulants was equally marked. Professor Gross thinks that Todd was a very able clinical teacher and writer, but doubts if he were a profound thinker. That any such thing as a change of type has occurred is refuted, and the hypothesis held up to ridicule.

Then he gives the indiscriminate use of the lancet as the second factor in the production of the reaction. The mischievous lengths to which blood-letting was carried by some, and the indiscriminate and injudicious resort to it by others, had unquestionably much to do with the general abandonment of the practice. In any accident or emergency, it was once as much the custom, the invariable practice indeed, to bleed, as it is just now to give brandy; and, more than all, any neglect of such practice would have entailed much adverse comment, and possibly evoked some expressions of opinion from a coroner's jury, if the termination of the case was unfortunate.

Thirdly, we are now much better acquainted with the nature and treatment of disease, much better informed pathologically, than our predecessors even of the last generation. That fact is so patent as to need no evidence being called to support the statement. Patient observation of the natural progress of maladies and microscopic research have demonstrated the nature of many morbid processes, and placed beyond the possibility of doubt their growth as being without the reach of blood-letting. The abstraction of blood at intervals even could exercise no beneficial influence over the progress of a great portion of disease.

The fourth factor in the decay of venesection, and perhaps, of all, the most important one, is the adoption of other depressants than blood-letting. Of these agents many were but little known by our predecessors, while others, as chloral hydrate, were utterly unknown and undreamt of. Consequently they used or abused, as the case might be, the measures with which they were acquainted: their list comprised opium, tartar emetic, and calomel, and of these they often made vigorous use. They knew that blood-letting, followed by the administration of opium and tartar emetic, brought down the fever (so far as they could judge without the clinical thermometer), lowered the force of the pulse, eased pain and thirst, and relaxed the skin,—all points of importance in acute sthenic inflammation. But then they did not know anything about the relief of blood-pressure in diminishing the vascular tension in the inflamed part, and the cooling effects of perspiration in lowering the temperature. Had their physiological knowledge been better, they would have known the why and how of the good which resulted from blood-letting, and consequently the conditions under which resort to it was indicated, and also the conditions under which it was contra-indicated or positively forbidden. Our predecessors knew nothing of the vaso-motor centre, and scarcely of the existence, to say nothing of the functions, of the vaso-motor nerves. They were equally uninformed of the heat-producing internal area, and the heat-losing surface of Rosenthal. It was not given to them to know that by the use of aconite the circulation was depressed at its centre, while the vessels of the skin were dilated, and the sudoriparous glands set into action, so that the heat-loss of evaporation was added to the effects of a lowered circulation. Had they possessed such knowledge, there is every reason to believe that venesection would still have been a recognised practice. But without such guidance there is no wonder that the practice first became abused and then sank into abeyance.

Like most other practices—which are first adopted by the thoughtful, the intelligent, and the reflective; next followed as the correct thing to do; and then indiscriminately and recklessly resorted to by those who either cannot think or are disinclined to practise thought if avoidance of it is possible—bleeding was used and then abused. If we have advanced in knowledge upon the position of our predecessors, we have not improved one jot upon them in the use made of that knowledge; and stimulants are now given as thoughtlessly and as carelessly as the lancet was used of yore. Whatever is in vogue for the time is the measure adopted by the unreflective—and that means, it is to be feared, the bulk of the medical profession as well as of other sections of society. Consequently, the use of any measure, if at all successful, insures in time, sooner or later, the abuse of it. And so it has been with bleeding.

Professor Gross is not oblivious of all this, and in attesting his confident opinion that blood-letting will be once more adopted, he says, "but it will not be indiscriminate bleeding, but bleeding performed for a reason, early, and, if need be, freely, to save tissue and promote resolution; in the robust

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and plethoric, in the young and middle-aged, not in the weak, the anæmic, the intemperate, the broken-down, and the decrepit." Further, he gives the rules for blood-letting, which are as follows:—Firstly. In acute inflammatory conditions blood-letting must come early in the rise of the attack and in its gravescent stages. In pleurisy, bleeding often acts like a charm, allaying the pain and relieving the patient most effectually. In other inflammatory states it acts equally beneficially, as in acute inflammation of the eye, in traumatic injuries of joints, etc. Secondly. The amount to be taken must depend upon the impression produced; that is to be the guide, and not the marks on the blood-basin. When the face becomes pale, the pulse soft, and the pain and sense of distress are alleviated, enough has been drawn. But, in order to guard against wasteful bleeding, the position is not unimportant. The rule of Marshall Hall is advocated here—quite independently, apparently—namely, to bleed quickly from a large opening in a good-sized vein, and to avoid the recumbent posture. By attention to these two rules the maximum of good at the least cost is reached.

The good effects of venesection are given so:—"In the first place, the abstraction acts spoliatively, diminishing, as the name implies, the quantity of blood, both in the part and the system; secondly, it weakens the power of the heart, and thereby prevents it from sending the blood with the same force and velocity into the suffering structures; thirdly, it unlocks all the emunctories, and thus promotes secretion; fourthly, it disgorges the vessels at the seat of the disease, restores the circulation and places the absorbent vessels in a better condition for the removal of effused matter; and last, but not least, it favours the action of other remedies, as purgatives, diaphoretics, diuretics, and anodynes." This is a goodly list of good effects to setagainst well-recognised dangers and disadvantages.

That in venesection we possess a powerful means of lowering arterial tension, is well known. Bouchut has recently demonstrated that venesection has a ready and pronounced effect upon the body-temperature, lowering it two or three degrees (Fahr.), and that, too, in a little time. Consequently in rural practice, and where other depressants are not at hand, venesection recommends itself as sound practice in many cases. Under other circumstances it may be used with advantage as a commencement, to be followed by the administration of depressants, by which the reaction can be met and done away with. Professor Gross recommends, as the most effectual means of obviating reaction, ten grains of Dover's powder with a fourth of a grain of morphia, given immediately after the bleeding. "Respecting the repetition of the operation, every case must, so to speak, make its own rules."

There is no attempt made to blink the fact that bleeding is spoliative, and thus may produce debility at a critical time; but, argues the veteran Professor, "the enlightened practitioner bleeds to save tissue, and to prevent the morbid action from running riot. He repairs strength when the time for it arrives by making blood with nutritious food and drink, and thus speedily sets the machinery of life again into motion. The timid, hesitating practitioner, the opponent of bleeding, on the contrary, although he may employ the same restoratives, uses them inopportunely, and thus allows the debility caused by his treatment to linger for an indefinite time, provided the patient is so fortunate as to survive the onslaught of the disease." So used, and with these precautions kept well in focus in the mental vision, venesection is doubtless a valuable measure, and may again make its appearance in therapeutics, especially in the robust; and only those who have seen for themselves the good effects of venesection can believe in its efficacy and its value. Still, the plan of bleeding the patient into his own vessels by depressants, and specially aconite, will recommend itself to most practitioners, despite Professor Gross's declaration that depressants, though valuable, are not so beneficial as blood-letting in acute inflammation. In many cases, however, and under certain circumstances, blood-letting may doubtless be resorted to with advantage. That its use by reflective men will again entail its abuse by the unreflecting will be checked by our improved physiological knowledge,—at least, we can fairly hope so.

The address does not take up the question, advocated by Dr. B. W. Richardson, of venesection to relieve venous fulness—a practice on the rise amidst enlightened practitioners. Nevertheless, it is a remarkable utterance, worthy of the speaker, and deserving of the attention of all.

A RECENT SENSATIONAL INQUEST.

Under the heading of "Extraordinary Proceedings," the *Standard* of September 10 published an apparently full report of an inquest held at Yeovil, Somersetshire, on the previous day. Making all due allowances for possible inaccuracies of rendering, some of the evidence given on the occasion was so much at variance with the teachings of science that we feel called upon to take notice of it in the interests of the public and the profession.

If we leave out all extraneous matter it would seem that on Monday, August 16, a gentleman, aged fifty-one, of independent means, residing at an hotel in Yeovil, appeared to his friends so ill that it was thought proper that a medical practitioner should visit him. The doctor, calling between nine and ten in the evening, found the patient suffering from severe pain in the left leg and thigh, but so rude and unmanageable that the visit was brought to an abrupt termination. Soon, however, the doctor returned, this time in company with a friend of the patient. The pain was very severe, and accompanied by symptoms of delirium: the sufferer "hallooed and raved." He shouted for chloroform, and chloroform was sent for to quiet him. Thirty drops were poured upon a handkerchief, and the doctor was just commencing the administration when he noticed a whitish fluid dribbling from the mouth, and a "crystal" was vomited into the chamber-vessel. The doctor immediately left the patient in charge of his friend, and went to procure an emetic. During his absence another "crystal" was voided. These so-called crystals were proved to be cyanide of potassium, and were estimated to be of the weight of sixty grains or more; the shortest period which they could have remained in the mouth was said to be three or four minutes. Within ten minutes after the probable taking of this poison an emetic of sulphate of zinc was administered, and then a full dose of chloroform was given by inhalation. On the patient's waking (this was about 1 a.m.) a draught containing half a grain of "morphia" was attempted to be administered, but only about two-thirds of the draught were actually taken. The doctor now left, but did not remove the bottle of chloroform, and this was made an occasion of animadversion. He returned at 2 a.m., and remained till 4 a.m. The patient was still excited, and during this time more chloroform—three fluid drachms or more—was administered, and subsequently half a grain of "morphia." At 7 a.m. three to four drachms of chloroform were again given, and followed by a quarter of a grain of "morphia." At 3 p.m. a few drops of chloroform were administered by an unqualified person. At half-past six the catheter was introduced, just to "satisfy the patient," but for no practical purpose. At ten o'clock death took place, in the opinion of the medical attendant, of exhaustion arising from mania. A very incomplete post-mortem examination was made on the third day after death, but it disclosed nothing of importance. The contents of the stomach were, however, analysed by Dr. Bernays, and minute traces of cyanide of potassium discovered. The verdict of the jury was in accordance with the medical testimony.

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It is scarcely necessary to dwell on the fact that this was not a case of fatal poisoning by potassium cyanide. The length of time elapsing between the ingestion of the poison and death would be sufficient to veto such a suggestion. The general conduct of the case, however, calls for comment. It is, perhaps, easy to be wise after the event, but the immediate treatment of the poisoning would appear to be peculiar and scarcely defensible. Of course it is possible that the nature of the ejected crystalline substance was not clearly apparent. Even if this were unrecognised, it would seem unwise for the doctor to have left his patient in his peril, though only for a few minutes. At any rate, at the doctor's return, when the second crystal had been ejected, there should have been no doubt allowed to rest as to its nature. It is difficult to think that the administration of an emetic was then the best treatment. We believe that the freshly prepared oxide of iron, easily obtained by mixing a solution of persulphate of iron with the officinal solution of potash or ammonia, is the best antidote for the cyanides. This matter, however, is in this case but of minor importance. We will turn to another question —the propriety of the exhibition of chloroform and morphia.

Those who are accustomed to the administration of chloroform generally approach a noisy, excited, and especially a delirious patient with feelings of fear and caution. Delirium tremens, for example, is held to be a condition in which great care should be used, and some administrators even refuse altogether to use it in such cases. It would appear that the case we are considering was scarcely one in which repeated inhalations of full doses of chloroform would be greatly indicated. A further caution ought to be used when a preparation of morphia is administered *after* the inhalation. Claude Bernard showed, in his course of lectures delivered at the Collége de France in 1869, that if a frog were first narcotised by the subcutaneous injection of a solution of morphia, and then chloroform administered, a very little of the anæsthetic is necessary to keep up the state of insensibility. If, however, the conditions are reversed, and the morphia is administered after the chloroform, a deep and dangerous narcosis ensues; the animal seems for hours to be dead. Morphia appears to be capable of increasing the cardiac depression induced by chloroform. Now we come to some observations of the medical witness, which must not be allowed to go uncontradicted. He is asked, "Would two drachms of chloroform act as a heart-depressant?" His answer is, "Not a bit in the world." Again, "Is three or four drachms of chloroform sufficient to prove a heart-depressant?" Reply, "Not in a healthy subject." It appears to us that nothing is more clearly proved than the power of chloroform to enfeeble the heart's action. Brusque inhalations of a strong vapour can do this by influence upon the vagi (Brown-Séquard, Dogiel, Rutherford), or by directly acting upon the musculo-motor system of the heart. More protracted inhalations of a diminished dose will also, in a less pronounced degree, enfeeble the heart, as was shown by the experiments of the committee appointed by the Medical and Chirurgical Society to investigate the subject. It remains to inquire whether two drachms and three to four drachms respectively can give rise to an atmosphere sufficiently strong to induce any important cardiac depression. It was shown by Sansom (*Obstetrical Transactions*, vol. x., p. 136) that two drachms of chloroform poured upon lint could give rise to an atmosphere, at a temperature varying from 60° to 64° Fahr., containing from 14 to 35 per cent. of chloroform vapour, if air were drawn over it, as might be the case in forcible inspiration. Of course, a patient does not usually inhale the full proportion, currents of air entering by indirect channels; but it is possible for him to do so, and it can scarcely be doubted that he may easily obtain a dose which shall depress the heart. It is well known that, in a large number of deaths from the administration of chloroform, a quantity less than two drachms has been employed. In this case there can be no doubt that death was not directly due to the chloroform administered. It is possible, however, that the chloroform and morphia may have contributed to induce depression. No doubt the treatment adopted was the best in the judgment of the gentleman who had the conduct of the case; but we should be sorry if, under similar circumstances, the same methods should be adopted and the same opinions enunciated.

THE WEEK.

TOPICS OF THE DAY.

The International Congress of Physicians, held at Brussels, was opened by the King of the Belgians, in person, on Saturday last, with great ceremony. His Majesty on entering was warmly cheered by the assembly. Dr. Vleminckx was elected President, and Dr. Warlomont Secretary-General, both being Belgians. Out of compliment, however, to the different foreign medical celebrities present, several honorary presidents were also elected—viz., Mr. Bowman (England); Drs. Bouillaud, Jaccoud, Larrey, and Verneuil (France); Drs. Semmola and Palasciano (Italy); Drs. Langenbeck and Graefe (Germany); and Drs. Sigmund and Hebra (Austria).

We last week called attention to the distressing effects of the climate of the West Coast of Africa upon Europeans for months after exposure to its influence; and we now regret to have to record the death of Major Farquharson, V.C., of the 42nd Regiment, who served during the Ashantee campaign as Staff Officer to Colonel McLeod, commanding the advanced guard in the expedition against Coomassie. Major Farquharson was present at the battles of Borborassie, Amoaful, Bequah, Ordahsu, and the final capture of Coomassie, and was honourably mentioned in despatches. His death was accelerated by exposure and the deadly effects of the climate of the Gold Coast, from which he returned invalided, never recovering from the attack.

From some correspondence and remarks which have appeared in the *Times*, we gather that the distribution of the amount collected upon Hospital Sunday of this year will be made as soon as deputations from the committees of several special hospitals have attended at the Mansion-house to afford more detailed explanation in regard to their expenses of management. October 7 is the date fixed for the inquiry; and, as soon as possible after this, the report for the year 1875 will be submitted to the General Council; and after that the several awards will be paid in accordance with the rule made at the beginning of the year—viz., "That the Committee of Distribution shall present their report to the Council before the fund is finally distributed." The delay in paying over the money is stated to have arisen from the difficulty of getting people together in the holiday season. The fund, it appears, including interest, amounts to the sum of £26,703 7s., as against a total of £29,817 3s. 9d. received last year. It will thus be seen that, even with the increased organisation and co-operation of the present year, the sum collected falls £3000 short of the amount collected in 1874. Perhaps it will eventually be admitted that our remarks at the very outset of the movement, deprecating the introduction of this annual collection into the metropolis, were not dictated by any spirit of hostility to the movement itself or its promoters, but were actuated by a deep sense of the inapplicability of the system to the hospitals and charitable institutions of London.

The following diploma from a Chinese Court of Examiners may prove interesting to the medical profession in our own country. It must be premised that in Victoria, Melbourne,

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Chinese doctors practise amongst their own countrymen without interference from the medical authorities. But when these doctors compete with licensed practitioners they are interrogated as to their qualifications, which are never satisfactory to a European, though they profess to have studied in their own schools, and insist that their credentials should be accepted. One of them, Yee Quock Ping, who has successfully treated a number of cases amongst the European community, dissatisfied with the refusal of the Medical Board in Victoria to register him, applied to the Supreme Court for a *mandamus* to compel them to do so, but failed in his application, although he produced numerous certificates of his skill, and the following diploma from the College of Doctors in the district of Chung-how, in the Empire of China:—"At a meeting of the College. We, the Doctors of this College, hereby certify that we know you, Quong Hung San San Yong Ah Kan Oo, No. 42, Yee Quock Ping, and we hereby testify that we have correctly examined you, and find that you have studied for six years, and understood, the seven external and eight internal pulses, together with the liver, heart, lungs, kidney, stomach, and bladder, spleen, pericardium, big and small bowels, and their pulses; that you are thoroughly conversant with all the pulses in all the parts of the body; and that you have studied medicine for four years. We hereby certify that, having passed your examination satisfactorily, you are entitled to practise as a doctor in every district; and we hereby bear witness to your general and thorough knowledge of medicine and the pulses."

We have much pleasure in recording some large donations which have recently been bequeathed to various hospitals. By the will of the late Rev. Henry Charles Morgan, of Goodrich, Herefordshire, and of Oakfield, Berks, the Royal Berkshire Hospital, the North London Consumption Hospital, the North London (University College) Hospital, the Middlesex Hospital, the London Hospital, St. Mary's Hospital, St. George's Hospital, Queen Charlotte's Lying-in Hospital, the Lock Hospital, Westminster Hospital, King's College Hospital, the Royal London Ophthalmic Hospital, the Hereford Infirmary, the Society for the Relief of the Widows and Orphans of Medical Men, and the Ross Dispensary each take £1000; and the Metropolitan Free Hospital, Devonshire-square, Bishopsgate, £100—all free of legacy duty.——The late Mr. Richard Minter Mount, of Wringham House, Wringham, who for many years was a solicitor in extensive practice at Canterbury, has left, amongst other bequests, a legacy of £10,000 to the Kent County Ophthalmic Hospital at Maidstone, and, after making other minor bequests, he leaves the residue of his property to the Royal South London Ophthalmic Hospital.——Mr. Thomas Bliss Pugh, late of 168, Clapham-road, has also left by his will £3000 to the Royal Sea-bathing Infirmary at Margate; and £300 each to the London Fever Hospital and the Samaritan Society of St. Thomas's Hospital. The sum of £16,000 Consols is also left upon trust for his wife for her life, and at her death £10,000 thereof is given to the Medical Benevolent College at Epsom for the creation of pensioners to receive annuities without residence.

The magistrates at Sheffield last week inflicted a sentence of three months' imprisonment on a butcher named Askew, and on a labourer, for preparing diseased meat for sale. It was proved that a carcase of beef was removed by defendants from a farm at midnight, that it was placed in Askew's house, and that it was putrid, some of it being green.

An inquiry is now taking place at Old Ford regarding a case where a man died after a few hours' illness, and a medical man—Mr. H. Taynton, of the Commercial-road—gave a certificate to the effect that death resulted from brain disease of four days' duration, although he had not seen the deceased alive or dead. The coroner wished to bring the inquiry to a close on Tuesday, but the jury wisely insisted on an adjournment, in order that the body might be exhumed, and a post-mortem examination made. We shall refer to the case more fully after the inquiry has been concluded.

ALTERATIONS IN THE BRAIN IN TYPHOID AND TYPHUS FEVERS. Dr. Leo Popoff, of St. Petersburg, has lately examined microscopically the brains of twelve individuals who had died of typhoid fever, and in all he found changes of an acute inflammatory character, involving not only the walls of the bloodvessels, but also the neuroglia and the ganglion cells. There is proliferation of the elements which form the coats of the vessels, accompanied with a deposit of fat and pigment. The neuroglia is infiltrated with young cells, due to the repeated subdivision of its nuclei, and the ganglion cells are not only surrounded with wandering cells, which fill the so-called pericellular spaces, but are also penetrated by them. At the same time the nuclei of the ganglion cells undergo division, and the ganglia may become filled with smaller cells, which fall out in the course of microscopic preparation, leaving a number of perforations in the section. Wandering cells are found not only round the ganglion cells, but also along the course of the vessels and the nerve fibres, but they are most numerous close to the ganglia.

Alterations nearly similar to the above may be produced artificially in dogs and rabbits by traumatic and other inflammatory processes; but whereas in typhoid fever the appearance of wandering cells distinctly precedes any active changes in the nervous elements themselves, in other cases these changes are the predominant ones, and there is also a development of granulation corpuscles, which are entirely absent in typhoid fever. Dr. Popoff has, since the publication of these researches in *Virchow's Archiv* lxiii., supplemented them by the examination of the brains of three persons who died in Professor Botkin's Clinic at St. Petersburg of typhus fever, and he has given a summary of his results in *Centralblatt* (No. 36, p. 596).

The changes in and around the ganglion cells, and the infiltration of the neuroglia with young cells, are identical with those in typhoid fever, while proliferation of the elements of the walls of the bloodvessels is more marked and extensive than in the latter, and capillary hæmorrhages are sometimes present. The most interesting pathological alteration in typhus is the development of nodules, which, when seen with a low power, resemble miliary tubercles in shape and size. They occur in the cortical substance of the cerebrum and cerebellum, as well as in the corpus striatum and lenticular nucleus. They are very numerous near the bloodvessels, though they occur in smaller numbers elsewhere. With a high power (Hartnack iii. 7) they are found to consist chiefly of cells identical with lymph cells or white blood-corpuscles, and in certain regions—*e.g.*, the peripheral finely granular layer of the cortex cerebri—they consist exclusively of these. Elsewhere, however—*e.g.*, in the other layers of the cortex and in the corpus striatum—other elements closely resembling the nuclei of the ganglion cells are present, and also the remains of the fibro-granular tissue in which the nodules form.

The nodules do not undergo the central degeneration to which tubercles are liable, and no giant-cells, or any peculiar stroma could be detected in connexion with them. Dr. Popoff considers that they are analogous to certain nodules which Wagner has described in the liver and kidneys in typhoid fever. They only occurred in two out of the three cases of typhus examined—in young men, aged twenty and twenty-two years respectively. The patient in whom they were absent was thirty-seven years old. There were severe cerebral symptoms in the younger patients; delirium and convulsions followed by coma and depression. In the third case there

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was more excitement and only a very short period of stupor, and the capillaries of the brain were found in an extremely congested state, as if they had been injected.

THE FACTORY AND WORKSHOPS ACTS COMMISSION: THE "SWEATING SYSTEM" IN DUBLIN.

On Monday, September 20, and following days, the Right Hon. Sir James Fergusson, Bart. (chairman), Lord Frederick Cavendish, M.P., and The O'Conor Don, M.P. (with Sir George Young, Bart., secretary), the Commissioners for inquiring into the operation of the Factory and Workshops Acts, with the view of their consolidation and amendment, sat at the Shelbourne Hotel, Stephen's-green, Dublin, resuming their inquiry, which had been adjourned from Belfast.

On the first day some very startling evidence was given with regard to the "sweating system" as practised in Dublin. Here is an excerpt from the evidence as published in the *Daily Express*:—

"Mr. Michael MacMahon, Secretary of the Tailors' Trade Society, spoke in reference to the system of 'sweating' carried on by the tailors of the city, and of allowing the operatives to take the clothes home to be made up. He said he had been ordered by his Society, and requested by Mr. Astley, Inspector of Dublin, and Dr. Mapother, Consulting Sanitary Officer, to give a list of the places where this system was carried on. In making out the list he had visited some places where the most wretched accommodation was provided for the workers. Some of these places he found most filthy and dilapidated, and in one instance he found three women and a man working in a room not more than ten feet square, and totally destitute of furniture of any kind. The smell of the place was so offensive that he was laid up for three days after his visit. In another case he found a woman suffering from the worst form of small-pox, called 'black small-pox,' from which she died, lying in a wretched closet, off a room where the work of three employers was being executed. In Lemon-street, where the sweating system was extensively carried on, there were no basement storeys to the houses and no rear. The manure-heaps of the Duke-street houses were up against the walls under the windows. He brought the matter before the Public Health Committee, and on that Committee he saw gentlemen who were tailors, and it was very hard to get them to speak against their own interests. Witness mentioned an instance where small-pox had been conveyed to a member of his own family, and to a number of salesmen in the tailoring department of one establishment, through one of those places where the clothes were made up, the machinist having had the small-pox, and actually worked the machine with the pustules still on her hands, never having left off work during her illness.—The O'Conor Don: Did you mention that to the Lord Mayor? He would not listen to me.—Did you mention it to his foreman? The foreman knew all about it, because he was constantly in the house.—Is it the practice for respectable houses in Dublin to send out their goods in that way? Yes, all except seven, and only three of these are first-class employers.—Do these people who take out the work employ other persons besides their own families? Oh, yes.—Do they work long hours? They work, at least, for three days of the week, both day and night, as a rule.—Lord Frederick Cavendish: Women as well as men?—Yes. I have heard of some women earning 16s. a week, and others 6s.—Sir James Fergusson: I suppose one of the reasons why the men drew attention to this matter is, that the rate of wages is reduced by competition? No; but because it takes away the labour from the regular workshops to these rooms. Some of these people draw from £8 to £10 a week, and they do not pay away half of it. One man made seventy-six pairs of trousers during the O'Connell Centenary week. If I went to Trinity-place, I would find them there working at all hours of the night. The system of deception carried on by the tailors was very barefaced. In order to pretend to their customers that they made up the clothes on the premises, while in reality they were 'out' on the 'sweating' system, they made a show of sending a messenger to some other part of the establishment when a customer called to see if his clothes were ready, and the messenger, being in the secret, comes back in a few minutes, having stood behind the door in the meantime, to say that they are not yet quite finished. All he (witness) wished to see was reasonable hours kept, and the work done in a regular, legitimate manner, and be thus kept within the province of the Act. In a case that he reported to Mr. Boyle, Sanitary Inspector, two hours ago, all the children of the family were cripples, owing to the mothers having been kept constantly at work.—Sir James Fergusson said that Mr. Astley, in his report, had mentioned many of the matters to which the witness had referred. Mr. MacMahon, in support of his evidence, handed in a report of a lecture delivered by Dr. O'Leary, M.P., in 1872, in which the lecturer referred to the immorality and poverty attending what he called 'the accursed system of sweating.'"

A COUNTRY CORONER AND MEDICAL OFFICERS.

It would, we suppose, be expecting too much to hope that the laws of the country, as regards minor transactions, would be equally well administered in rural districts as in great towns and cities, but the records which occasionally reach us of the description of justice meted out in distant parishes and outlying country hamlets are somewhat startling to those who live within the radius presided over by well-ordered courts of inquiry. We have been compelled to indulge in these reflections by reading the particulars of a coroner's inquiry which recently took place at Speeton, in the East Riding of Yorkshire. A harvester, who had been engaged by a farmer in the neighbourhood, on coming to work was found to be in such a state of health that he was perfectly unable to attend to his duties. Eventually the farmer, on being apprised of the man's state, sent brandy and other restoratives to him, and ordered his groom to go to Hunmanly, about six miles distant, to fetch Mr. Dawson, a surgeon. Arriving at midnight, he found Mr. Dawson in attendance upon a labour case, which prevented his returning to Speeton; he, however, suggested an application to another medical man, and entrusted the groom with a bottle of medicine to be administered meanwhile. The groom returned to Speeton, but the man was by this time so much worse that his master despatched him to Bridlington for Dr. Hutchinson. This gentleman was from home, and the messenger was referred to his partner, Dr. Denton; but Dr. Denton, who himself had been in the saddle all day, and who was completely prostrated with his day's work, so much so that a deputy was then attending one of his own patients, expressed his inability to proceed to Speeton. The groom, who appears to have made no effort to procure the services of any other medical man, although there were several in the town, then returned home, which he reached about two in the morning, shortly after which the man died. On the inquest it was shown that the man was suffering from rheumatic fever, which had left him in a very weak state, and that his heart was in a diseased condition. The jury returned a verdict in accordance with these facts, but they appended to their verdict a censure on the conduct of the two medical officers before mentioned. Now, it appears that neither of these two gentlemen was summoned to attend the inquest, and they were not even aware that an inquest was to be held; yet the coroner received the verdict without, so far as we can ascertain, the slightest remark upon the fact of the two medical men implicated not being present, and without exercising his authority to postpone the inquiry until they could have been called upon to attend and afford such explanation as it might be in their power to offer. These are the facts of the case so far as they have reached us; and, whilst abstaining from any comment upon the evidence adduced, we cannot but think that Drs. Denton and Dawson were censured by the jury without having been afforded the opportunity, which the law affords to every accused person, of explaining their conduct. In the face of such a proposed reprimand, the coroner should properly have adjourned the case, and requested these gentlemen to attend before him for the purpose of further inquiry, before allowing the verdict of the jury to be made public.

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THE MODE OF ACTION OF CHLORAL ON THE ORGANISM.

Dr. Otto Liebreich's theory, that chloral hydrate acts by breaking up in the living body into chloroform, has received a severe blow from a recent essay in *Pflüger's Archiv* (ix. 35). Apart from their intrinsic interest, the experiments on which the essay is founded are worthy of note as having been made by a lady (Fr. A. Tomaszewicz) in Professor Ludwig Hermann's laboratory at Zürich. In the first place, the author points out that the rapidity with which chloral acts is opposed to the idea of its preliminary conversion into chloroform; and supposing this conversion to occur as Liebreich assumes, very gradually, we should expect that those who take it would pass through a previous stage of excitement, just as they do after large doses of alcohol or opium. Secondly, after a dose of chloral, chloroform has never been detected in the body. It cannot be found in the blood, nor in the expired air. Fr. Tomaszewicz gave four grammes (equal to one drachm) in one dose to a rabbit, without a trace of chloroform being detected in the breath. She made use of a most delicate test for its presence—namely, the characteristic odour of a body (isocyanphenil), which is formed when a liquid containing chloroform is treated with aniline and an alcoholic solution of caustic soda.

The same test, when applied to the urine of lunatics who had taken from four to six grammes of chloral, again gave negative results. It was further proved that if one drop of chloroform was added to 200 cubic centimetres of urine, isonitril was evolved, whether the reaction were acid or alkaline; whereas, urine containing traces of chloral only gave it off when the reaction was alkaline. And, similarly, when the urine of chloralised patients was distilled, isonitril was evolved if the reaction was alkaline, but not if it was acid. It thus appears that chloral is—at any rate, in part—eliminated as such by the kidneys. Fr. Tomaszewicz assumes that the peculiar way in which its soporific properties are displayed depends, first, on the rapidity with which it is absorbed into the system, so that there is no time for a stage of excitement to be produced; and, secondly, on the slowness with which it is eliminated, so that the resulting sopor is a protracted one.

CLERKENWELL AGAIN!

Last week another illustration transpired of the scandals that are allowed to exist in consequence of the failure of the sanitary authorities of Clerkenwell to recognise their duty to the public. An old woman, aged seventy-five, died somewhat suddenly, at Northampton-road, Clerkenwell, whilst acting in the capacity of nurse to another old woman named Gibbons, eighty-seven years of age, and totally blind, who occupied a small room at the above address. Instead of the body being removed, it was allowed to remain for three days and three nights in the same room with Mrs. Gibbons. When the coroner's jury came to view the body they found it in a dreadful state, decomposition, in consequence of the heat of the weather, being far advanced. There was no difficulty in arriving at a verdict in the case, but the jury spent some time in discussing the neglect of the parish authorities in not providing a public mortuary, to which the bodies of persons who die in crowded dwellings may be removed, and ultimately they agreed to the following opinion and protest:—"The jury empanelled on the body of Sarah Ann Smith desire to express their astonishment that the Vestry of Clerkenwell have hitherto disregarded the sanitary requirements of the poorer classes entrusted to their care. They now wish to draw attention to the fact of their finding a body in a room but ten feet square, which had been there some three days, where another aged person had also been living and sleeping, and the body being in a very offensive condition, there being no place provided to which it could be removed. They beg also to remark that several instances have occurred of a similar character, and yet the sanitary authorities have taken no steps whatever to abate such dangerous nuisances. The jury, therefore, have determined to bring the subject again before the Vestry of Clerkenwell." The Coroner (Dr. Hardwicke) promised to forward the protest to the Vestry, and several of the jurors expressed great anxiety that, if the body could not be removed, the aged woman, Mrs. Gibbons, should be at once removed from the room in which the corpse lay, or there would be an inquest held upon her.

After such an emphatic protest as the above we may hope that the Vestry of Clerkenwell will bestir themselves, and put an end to a state of things which is a disgrace to a civilised community.

FEMALE LABOUR IN SHOPS.

It would appear that a very benevolent and charitable scheme has been set on foot in Weston-super-Mare, having for its object the amelioration of the conditions of labour imposed upon females employed in shops in that locality. The promoters very reasonably point out that the rules generally adopted in shops of making delicate females *stand* behind the counters from the time of opening in the morning till the hour of closing at night, with the exception of the short intervals allowed for meals, are unnecessarily severe, and they seek to obtain the co-operation of employers, by which means seats or recesses may be provided in shops where females are employed, so that when not actively engaged they may be able occasionally to rest themselves by sitting down. We think that, so far as the public is concerned, no opposition need be contemplated to such a considerate arrangement. Ladies themselves must be perfectly aware of the long and fatiguing duties undertaken by their humbler sisters, who are compelled to earn their daily bread by seeking employment of this kind; and we imagine that to enlist the sympathy of purchasers it is hardly necessary to point out, from a medical point of view, the long train of evils to which female *employées* are subjected by the mere effort of standing for so many hours consecutively and continuously. We shall be glad to hear that the efforts of the philanthropic individuals at Weston-super-Mare have been crowned with the success they deserve.

THE LATE DR. TOLER MAUNSELL, OF DUBLIN.

We would direct the attention of our readers to a letter from Dr. A. O. Speedy, which appears in another column, and in which he mentions the proposal to raise a memorial fund as a recognition of the many public services rendered to the profession by the late Dr. Maunsell. For many years Dr. Maunsell laboured to advance the cause of the public and of the profession in all parts of the United Kingdom, by suggesting reforms in the Poor-law Medical Service of the country; and a kindly letter, written by Dr. Rogers, ex-President of the English Poor-law Medical Officers' Association, shows how strong are the claims of Dr. Maunsell's family—a widow and six children—on the generosity and sympathy of all his brethren, and of the public at large. We wish the movement every success.

ASSOCIATION OF HEALTH OFFICERS.

An "Association of Medical Officers of Health of Yorkshire" has been formed, and the following officers appointed, viz.:—*President:* Samuel William North, M.R.C.S. Eng. and L.M., L.S.A. Lond. *Secretary and Treasurer:* John Sebastian Wesley, M.B. Univ. Lond., M.R.C.S. Eng., L.S.A. Lond. *Committee:* William Swift Wade, L.R.C.P. Edin., L.F.P.S. Glasg. and L.M., L.S.A. Lond.; George Goldie, L.R.C.P. Edin., M.R.C.S. Eng.; Titus Deville, M.D., M.R.C.P. Edin., M.R.C.S. Eng.; Thomas Britton, M.D. Univ. St. And., M.R.C.S. Eng., L.S.A. Lond.; Edward Buller Hicks, L.R.C.P. Lond., M.R.C.S. Eng.; and Henry Franklin Parsons, M.D. Univ. Lond., M.R.C.S. Eng., L.S.A. Lond. The next meeting is to be held at Wakefield on October 27.

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TREATMENT OF ACUTE STHENIC PNEUMONIA WITH VERATRUM.

THE course of pneumonia appears to be as little influenced by veratrum as by other drugs. In sixty cases treated partly with tincture of veratrum album, and partly with that of veratrum viride, in Prof. Duchek's wards at Vienna (*Deutsch. Archiv für Klin. Med.*, 1874, and *Centralblatt*, March 20, 1875), Dr. Th. Sidlo has arrived at the following results:— 1. In the majority of the cases there was either a temporary or a permanent reduction of the temperature, and of the frequency of the pulse, but in the remainder the veratrum had not the slightest appreciable influence. 2. The effect on the fever, whatever its degree, was not attended by any corresponding reduction of the normal duration of the febrile process, nor was the typical character of primary lobar pneumonia obliterated by the treatment; on the contrary, it became more clearly pronounced during it. 3. Minor variations in the febrile symptoms were proved to depend not on the action of the veratrum, but on the character and amount of the inflammatory process in the lungs. Over the latter the drug exerted no action whatever; it increased, diminished, and terminated, to all appearance just as if nothing had been given. 4. It was found that vomiting, collapse, and other unpleasant effects more often followed the use of veratrum album than of veratrum viride, but in neither case did they appear to modify either the fever or the physical condition of the inflamed lungs.

THE HUNTERIAN SOCIETY.

As the time of the year is at hand when the meetings of the medical societies are to be resumed, we would direct the attention of our readers to the usefulness of the Hunterian Society, whose meetings are held on the second and fourth Wednesdays of the month, at the London Institution, Finsbury-circus. The Society was originally established some fifty-seven years ago for the purpose of encouraging kindly feeling, friendly discussion, and integrity of purpose amongst its members. These objects have been steadily fulfilled during the Society's career, and it has always maintained a sound financial position. The place of meeting, the London Institution, now forms the central point where no less than nine suburban railways converge at only three minutes' walking distance. The Society possesses the most complete accommodation for both small and large meetings; it has a permanent medical library of nearly 4000 volumes; and it has established a circulating library by subscription to Lewis, by which each member can obtain all the latest works on application to the librarian between the hours of ten and four o'clock. We shall be glad to hear that the Society has extended its sphere of usefulness by attracting a large number of new members, and we trust it will have a most successful season.

DEATH FROM QUACK NOSTRUMS.

THE frequency with which deaths result from overdoses of patent medicines that contain poisonous drugs, demands that some restrictions should be placed on the sale of nostrums. On Monday an inquest was held by Mr. Danford Thomas on the body of a gentleman who committed suicide by taking a quantity of Leath and Ross's "Neuraline," which has been analysed and found to contain aconite. Of what use is it to pass a very stringent Act regulating the sale of poisons as such, when anyone may obtain possession of the most powerful poisons without difficulty in the form of patent and homœopathic medicines? No quack medicines should be permitted to be exposed for sale; nor should any medicine be supplied by anyone not duly registered as a medical practitioner, unless its composition is stated on the bottle or package. The public would then know with what they were dealing, more care would be exercised, and we should read of fewer deaths, both accidental and intentional, from taking poisonous doses of quack medicines.

A GOOD EXAMPLE.

A FEW weeks ago a child was admitted to the Bristol Royal Infirmary, suffering from eczema capitis, under the care of Dr. Spencer, of Clifton, one of the honorary physicians. Shortly after admission, small-pox developed itself in the child, and in the course of attendance on his patient, Dr. Spencer unfortunately contracted the disease. The question then arose as to whether he should remain at home with his wife and family, or enter a hospital for the reception of cases of contagious disease. Thinking that, if he remained at home, he might be the means of causing the small-pox to spread in Clifton, which was then entirely free from the disease, his own case excepted, he resolved, on the suggestion of his medical attendant, Dr. Davis, to enter, as a paying patient, the hospital of the sanitary authority at Philip's Marsh, Bristol. Here he remained three weeks, made a good recovery, and has now been discharged cured and perfectly free from infection. Dr. Spencer's conduct in thus relinquishing the comforts of home-treatment and entering a hospital for contagious disease, in order that the public health might not be endangered, is worthy of all praise; and it is to be hoped that if, unfortunately, the disease should manifest itself in others of equal social position, they will follow his example, and thus aid the sanitary authorities in their endeavour to prevent the spread of contagious diseases.

TYPHOID AT OXFORD.

WE regret to hear that typhoid fever again prevails at Oxford; but, fortunately, there have been but few deaths at present. Although a great deal has been done of late in the matter of drainage and improving the water-supply, the sanitary condition of Oxford is very far from satisfactory. As we showed in an article published in our columns just twelve months ago, many of the houses in the lower parts of the town are in a ruinous and filthy condition, and wholly unfit for habitation. There are few towns in which the application of the new Act on artisans' dwellings is more needed than at Oxford; and, for the sake of the lives and health of the poor and working classes of the city, we trust that the local authorities will lose no time in putting its provisions into operation.

THE PROFESSION IN MELBOURNE.

WE are sorry to see, by several copies of the Melbourne medical papers which have recently reached us, that things medical are no better in the colony than they used to be. One set of the practitioners seems to be violently antagonistic to another, and they seem to have no scruples in expressing their minds about each other. Particularly is this the case with the *Medical Record*. In many ways we sympathise with its objects; but surely its conductors could use language somewhat different from what they do. When necessary we can speak out strongly enough, as can our contemporaries, but we should all be shocked and horrified at such language as constantly appears in the paper referred to. If it is necessary to use such language for the advancement of our profession, it must, indeed, be in a fearful state. We do not admire Beaney or Beaneyism; but is there not a little too much about another gentleman in the *Record*?

CHOLERA IN INDIA.—From India we learn that Dr. Blane has furnished a report on the last outbreak of cholera which occurred in Yerrowda Gaol. This, in the opinion of the Acting Sanitary Commissioner, is a very interesting contribution to the medical history of cholera. The investigation tends to establish the conclusion that cholera-poison is, and in the case of the Yerrowda prisoners actually was, communicated through water. Proceeding upon this view, the Acting Sanitary Commissioner remarks that the practical lesson to be learnt from this outbreak is the great danger of allowing persons (as is so commonly the case throughout India) to drink water from the river after it has been polluted by dhobies washing dirty clothes in it, and by many other descriptions of impurities.

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THE HUNTERIAN MUSEUM.

One of the most interesting features in connexion with the annual election of Fellows into the Council of the Royal College of Surgeons is the exhibition in the Theatre of the additions about to be made to the Museum. We share the regret expressed by the indefatigable Conservator of the collection, that notwithstanding the appeal made to the profession in his last year's report, the contributions to the Pathological Department have not exceeded the average number of the last few years. Much has been done in improving the condition of the large series of dry specimens of diseased bones, which were formerly exhibited loosely in the bottle, so that whenever they were moved they suffered injury by knocking against its sides; and many of them had no regard paid either to the natural position of the object or the best manner of showing its points of interest: they have now all been remounted in an improved manner, being fixed in the bottles.

Among the numerous specimens by which the Physiological Series has been enriched are twenty-eight dissections of the brains of man and the horse, made by the late Mr. J. Swan, and presented by his nephews and executors, Messrs. Machin and Greetham. Mr. William Pearson, who was educated for the work under such men as Quekett, Flower, Pettigrew, and Goodhart, continues to add largely some interesting dissections of the ligaments, muscles, vessels, and nerves of the human body.

In the Osteological Collection is a beautifully articulated skeleton of the favourite deerhound "Hafed," belonging to the late Sir Edwin Landseer, which, while living, had served as a model for many of his well-known pictures. It was purchased at the sale of the artist's effects by Mr. Thomas Taylor, F.R.C.S., and presented by him to the Museum. But for this, and a considerable collection of the skeletons of Chinese birds and mammals presented by Mr. R. Swinhoe, of H.M. Consular Service, the additions would not perhaps have been so numerous as in some former years. The space in the Museum available for this department being so fully occupied, it becomes yearly more difficult to find accommodation for large objects without unduly crowding those already in the Museum, and so interfering with their value for the purposes of study. By careful rearrangement, however, room will be afforded for some years to come for many smaller specimens of interest which are required to make the series more complete and instructive.

A very important addition of this kind has been made during the present year by the arrangement and exhibition in the Museum of a collection of the osseous parts of the internal ear—*i.e.*, the bony walls of the labyrinth, and especially the auditory ossicles, of a large number of vertebrated animals. In the year 1864 the College purchased from Dr. Max Hübrich, of Munich, a very interesting and beautifully prepared series of such specimens (120 in number), chiefly from the domestic or common wild mammals and birds of Germany. To this nucleus of the present collection a great number of others have been added, taken chiefly from the skulls or preparations in spirit in the Museum, and all have been mounted in a uniform manner, well adapted both for their perfect preservation and at the same time for giving every facility for their examination. The collection at present embraces 222 specimens belonging to the mammalia, seventy birds, fourteen reptiles, and seventy otoliths of fishes—376 in all. The work of preparing, mounting, and arranging this series has been entirely executed by Mr. A. Doran, F.R.C.S.

The specimens of the *os penis* of various mammals which have been collected for some years past as opportunity offered, —many having been contributed by Dr. Murie and Mr. Garrod, of the Zoological Society,—appearing now to be sufficiently complete for systematic arrangement, have been during the past year mounted and exhibited in the upper gallery of the same Museum, in connexion with the physiological preparations of the male organs of reproduction. The series now includes upwards of seventy specimens belonging to sixty-six different species.

Several applications having been received for copies of the casts made some years ago from the interior of the cranial cavity, representing exactly the form and size of the brain (when covered by its membranes) of men of various races, and many other species of animals, the Council has permitted them to be reproduced and sold by Mr. Brucciani, of Russell-street, Covent-garden. Many educational institutions have already availed themselves of this opportunity of obtaining at a low price models which necessarily were made in the first instance at a considerable expense.

A new revised and augmented edition of the Catalogue of Dermatological Specimens, by Professor Erasmus Wilson, is passing through the press, and will very shortly be issued.

Mr. B. T. Lowne has arranged and described the specimens added to the Teratological Series since the publication of his catalogue of that department of the Museum.

Amongst valuable contributors appear the Zoological Society and its secretary Mr. P. L. Sclater; Admiral Ommaney, Captain Almond; Professors Gervais, Rolleston, Parker, and Flowers; the Revs. C. Lowndes and J. C. Lory; Drs. Church, Cousins, Dowse, Drury, Fayrer, Goodhart, Haast, Mierjeievsky, and Rae. Amongst the members of the Council are Messrs. Busk, Birkett, Curling, Clark, Sir W. Fergusson, Gay, Hilton, Sir J. Paget, Spencer Smith, and Spencer Wells. Amongst lady contributors are Mrs. Lainson and Miss E. N. Paget. The members of the College and others have been valuable contributors, as Messrs. Bryant, Jabez Hogg, Cock, Hussey, Woodman, Hutchinson, H. Smith, Lang, Garrod, Radford, etc.

HYDROPHOBIA.

The following copy of the report of the sad death of the Duke of Richmond was drawn up at the time by Mr. Thomas Lloyd, Surgeon in the Royal Artillery, for the late Sir William Blizard, and, as it was intended for publication, the name was suppressed.

"*Recollections of some of the Circumstances preceding the Death of a late illustrious Nobleman, Governor of a distant British Possession, as they were related by one of his attendants immediately after the event.*

"When about to set off on a long journey for the purpose of visiting some of the more distant parts of the country under his government, the noble governor had his hand severely bitten by a tame fox, whilst in the act of separating that animal from a dog with which it was fighting. In a few days after, the fox died; and in a few weeks the dog died also, under strong suspicions of being in a rabid state. In about six or eight weeks after the accident, the noble governor being on his return through a wild and nearly uninhabited part of the country, complained of indisposition, and observed with a smile one day at dinner that a medical man would say that he laboured under hydrophobia, as he was not able to drink his wine or any other liquid. On the following day his valet observed him to stop suddenly, and with apparent horror, on approaching a basin of water for the purpose of washing himself. After making one or two more unsuccessful attempts, he placed his hands behind his back, and in that position put them into the basin; but as soon as they touched the water he withdrew them in great agitation. Immediately afterwards he said, "This is childish," and exclaiming "Shall [calling his own name] be overcome by foolish fear?" he made a convulsive effort to plunge his hands into the water, but appeared to be arrested by some invisible power; upon which he called for a wet towel, and wiped his face with an appearance of much distress. As soon as he was dressed he resumed his journey homewards, attended by the gentlemen of his suite, without stopping to breakfast, the whole party being anxious to get within reach of medical advice as soon as possible. As it was difficult to travel by land, they embarked in a canoe in order to descend a river along the banks of which they were travelling. After proceeding a short distance, the noble governor ordered the canoe to pull towards the shore, saying that he could no longer bear the sight of the water; and as soon as he was sufficiently near he made a spring to the land, and ran into the woods with so much speed that his attendants were unable to keep up with him, nor did he stop until assured that the river was out of sight. They then continued their march until they came to a newly erected hut, which they entered, and placing the governor to a few bundles of straw, despatched a messenger to procure medical assistance; but the paroxysms of the disease increased so much, both in force and frequency, that the noble sufferer expired before any professional man could arrive.

"During the intervals of the fits he displayed in a remark-

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able degree the serenity of mind and manly fortitude for which he was distinguished through life. He wrote a long letter to his eldest daughter, giving directions relative to his funeral, and other matters about which he thought his family might be desirous of knowing his last wishes. He did this with as much coolness and self-possession as if in the full enjoyment of sound health.

"The writer of these recollections avails himself of this opportunity to observe that there appears nothing singular to him in a man of the noble governor's character showing himself on such an occasion so much superior to the ordinary weakness of human nature. In all cases of hydrophobia—of which he has seen but too many, considering that they were all unsuccessful—he has invariably observed a perfect indifference about the approach of death; and although nothing can be more frightful than the appearance of a patient in this disease to a bystander, there is reason to think that the suffering is by no means so great in a corresponding degree, of which the writer gives interesting illustrations."

FROM ABROAD.

Hypodermic Injection of Nutritious Substances.

In the *Wiener Med. Wochenschrift* for August 31, Dr. Krueg, a physician to a private lunatic asylum, gives an account of a trial of this which he has recently made. Drs. Menzel and Perco, he observes, were the first persons who tried, in 1869, some experiments on dogs on the absorption of articles of nutriment by the subcutaneous tissue, and found that an ounce of fluid fat was by the end of forty-eight hours completely absorbed without inducing any peculiar symptoms of reaction. The same was observed with regard to a solution of sugar, milk, and even the yelk of egg. Only one experiment seems to have been tried on man, and that only with nine grains. These authors state also that Stricker and Oser had made experiments with the peptons.

Dr. Krueg observes that cases are always being met with in which artificial feeding is necessary, but cannot be executed by the ordinary means; and it may be required on various occasions to sustain life, at all events temporarily, until other means, for the time inapplicable, can again be resorted to. There are no data for stating how long the functions of the stomach may be superseded by subcutaneous injections; but, at all events, this is possible for several weeks, during which time other measures may be resorted to. In illustration of this the following case is related:—

C. E., aged fifty-seven, a Hungarian proprietor, has been in an asylum at Ober-Döbling since 1868, and for the purpose of suicide had often refused all food, so that for twenty-seven months at a time he had to be daily fed by means of the tube; of late he has been more inconstant in his refusals, sometimes eating even abundantly, and at others allowing himself to be fed. On January 18, however, he began again to absolutely refuse food, and so continued, with the exception of one day, to the 24th, when it was resolved to feed him by the tube as heretofore; but all attempts to pass this proved fruitless, such violent coughing and irritation did it cause, so that the patient became breathless and cyanotic. Even when the tube was got into the stomach, the fluid injected was immediately expelled again by its side; so that the whole procedure, inducing so much suffering, proved useless. As ten days had elapsed without his taking any food, with the exception of some soup once, it was resolved to try the subcutaneous injection, under the hope that a slight quantity of nutriment might be so supplied, so as to ward off danger to life, and perhaps exert a favourable impression on the patient when he found his resistance unavailing. Olive oil was the substance injected, the syringe employed holding fifteen cubic centimetres. To the syringe was attached a thin caoutchouc tube, terminated by the canula of an ordinary subcutaneous syringe; so that the movements of the patient did not derange the working of the apparatus. One or two syringes full were injected daily; therefore from fifteen to thirty cubic centimetres of oil. At first each syringe-full was thrown into five apertures, but afterwards into three, or even only two. The oil passed drop by drop out of the canula, so that at first an hour, and afterwards half an hour, was occupied in the emptying of each syringe. This slow procedure rendered the injection painless, and prevented reaction, which, as well as pain, was caused when the injection was made too rapidly, or too much fluid thrown into one spot. Most of the injections were made in the foot, some in the belly, and others in the sides. Some effect was produced upon the patient's moral condition, so that he partially abandoned his opposition to food. Thus, during thirty-nine days, he completely fasted during nine, ate voluntarily during ten, and was supported by the injections during the other twenty. It was not possible to weigh him, but his general appearance was not changed for the worse. With some occasional exceptions, when the injections were resumed, the patient gradually abandoned his resistance, and at last ate in a natural way, the experiment lasting altogether about two months. The chloroform odour characteristic of fasting persons disappeared soon after the first injection.

Professor Bouchut on the Ophthalmoscopic Signs in Diphtheritic Paralysis.

In a clinical lecture delivered at the Hôpital des Enfants Malades (reported in *Gazette des Hôpitaux*, July 20 and 27), Prof. Bouchut observed that he had long been of opinion that the paralyses observed during the convalescence from diphtheria are a result of anæmia, hydræmia, or "*hypoglobulie*." This is, however, a theory that is open for reconsideration. Others regard them as specific paralyses—*i.e.*, connected with an infection of the blood by means of a principle derived from the prior disease; thus admitting paralysis caused by a diphtheritic principle, just as a syphilitic paralysis is connected with a syphilitic diathesis. This, too, is only a hypothesis; and if this theory of the paralysis of convalescence is to be admitted, we shall have to distinguish, besides the diphtheritic paralysis, the pneumonic, the typhoid, the scarlatina, etc., paralyses—which is inadmissible. It is in another direction that we should seek for the cause of these paralyses, and especially the diphtheritic, which is the most serious of them all.

This commences by dysphagia of liquids—*i.e.*, with paralysis of the velum, with return of drinks by the nose, and by *nasonnement*. Then come incomplete amaurosis, and paraplegia, which may become ascendant and attack the diaphragm; and, sometimes, hemiplegia, strabismus, etc. When the paralysis attacks the respiratory muscles, death is almost certain. There are cases in which, when the paralysis has become thus general, a singular condition of the patient is brought about, characterised by the dislocation of the limbs and the neck. Thus, I had a little girl in my wards, the subject of pharyngeal paralysis and ascending paraplegia, who was reduced to the state of a supple puppet, her head and four extremities falling without support or resistance in the direction of their gravity. When raised, her head fell backwards or to one side, just like that of a corpse. The case now under consideration is a curious one, being that of a little girl, four years of age, whose father and brother died of croup at the same time that she was suffering from diphtheria with two buboes under the angle of the left lower jaw. She was cured, and eight days afterwards she became the subject of *nasonnement*, without the rejection of drinks by the nose. She had convergent strabismus of the left eye, *i.e.*, paralysis of the external ocular motor; an incomplete paralysis of the diaphragm and of the abdominal muscles, which did not contract under the influence of tickling; and a complete right hemiplegia, extending even to the face, and producing a deviation of the mouth to the left. This is very rare in diphtheritic paralyses, in which we much oftener meet with paraplegia than with hemiplegia. Under the influence of the induced current, quinine, iron, and wine, continued during a month, the strabismus and hemiplegia have disappeared, and the child will be able to leave the hospital cured.

In twenty-two out of twenty-six cases of diphtheritic paralysis, double neuro-retinitis has been met with, characterised by a flattening and reddish diffusion of the papilla, the edges of which are effaced and veiled by a reddish-grey cloudiness. This is the most ordinary appearance, but in other children the retina is rendered opaline around the nerve by what is termed a retinian exudation, but which is only an acute steatosis of the nervous elements of this membrane. The vessels present nothing remarkable. In presence of so many facts establishing the habitual coincidence of different degrees of neuro-retinitis in very severe and extensive diph-

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theritic paralysis, it is difficult to believe that convalescence and hydræmia are its sole causes. A new problem offers itself for our consideration, and we have to seek whether these paralyses are not the result of changes in the central portions of the nervous system, and what these changes are. From neuritis and neuro-retinitis accompanying disturbances of the nervous system, we must conclude as to the existence of a nervous alteration in the nerve within the cranium as far as its origin, and consecutively a central organic nervous alteration. How is such an alteration brought about in simple or diphtheritic angina? It is the result of an ascending irritation of the pharyngeal nerves, which is transmitted to the mesocephalon at the origin of the glosso-pharyngeal nerve—an irritation which, according to its extent, gains the origin of the neighbouring nerves, and redescends by them to the optic nerve, the external ocular motor, the nerves of the limbs, of the abdomen, or the chest, giving rise to hemiplegia or paraplegia, and paralysing the diaphragm and the intercostals, so as to diminish respiration and hæmatosis. The same course is observed in wounds of the nerves of the eyebrow emanating from the fifth pair, when the inflammation may redescend the optic nerve, and give rise to hyperæmia of the papilla, to be followed by atrophy and amaurosis. So, also, in some dental affections, neuritis of the superior maxillary nerve may be produced.

After adverting to various examples of changes induced in the nervous centres by peripheric lesions, Prof. Bouchut concludes by observing:—

"All agree in the most significant manner in the establishment of the organic nature of diphtheritic paralyses. First, clinical observation shows, in a whole crowd of cases, that peripheric neurites may extend and mount up to the origin of the nerves in the cerebro-spinal centres; vivisections show the tearing away of nerves followed by central myelitis; the ophthalmoscope habitually reveals a congestive lesion of the optic nerve, and a granulo-fatty retinian peripapillary exudation; and autopsies have shown in some of these cases the existence of lesions of the medulla. This is more than is required to found a firm basis for the doctrine of cerebro-spinal lesions following diphtheria, in preference to the theory of the essential character of diphtheritic paralyses. These results are of great therapeutical importance. From the moment that we are able to believe in the existence of a congestive neuropathy produced by diphtheria, and inducing paralysis, the indication of tonics becomes formal. Iron, quinine, wine, good nourishment, electrisation, and hydropathy are the means to be resorted to with most advantage. Among these, electrisation and hydropathy, combined with substantial alimentation, are the most preferable; for quinine and iron, although useful adjuvants, are yet only adjuvants. In the employment of electricity in diphtheritic paralysis the currents by induction are to be used, the continuous currents, so useful in the myogenic or essential paralysis of children, not being here necessary. A feeble current that is easily borne should be directed for from five to ten minutes daily to the velum, the limbs, and other paralysed organs. Hydropathy also should be employed twice every day, the douches only being continued for a quarter of a minute, so that prompt and complete reaction may be obtained. If the douche be too prolonged, there is no reaction, and the remedy does more harm than good. Alimentation must also be conducted with discrimination; for if there be paralysis of the velum, but little of liquid aliments or drinks should be given, in order to avoid their return by the nose or their penetration into the air-passages. It ought to consist in thick porridge (*potages*), underdone meat, and well-cooked feculent vegetables. Under this treatment it is rare not to find diphtheritic paralysis soon disappearing."

Restricting the Area of Practice in France.

A singular provision of the French law has lately given rise to two cases of some hardship. It seems that an *Officier de Santé*, as distinguished from a Doctor of Medicine, is prohibited from practising anywhere except in the department where he has obtained his licence and where he is domiciled. Not only is he prohibited from establishing himself elsewhere, but he is not allowed to visit patients in any other department, even if sent for. One can hardly assign a reason why a person who has undergone an examination, which allows him to practise in one locality, may not do so in another, perhaps close at hand. However, that is the law, and on its being put into force a regular although a subordinate practitioner may be treated with as much, or even more, severity than an avowed charlatan. Last March the Paris Court of Appeal was called upon to decide in a case in which an *officier de santé* of Villemomble (Seine) was charged with having frequently passed over the frontier of his department in order to attend patients at Raincy (Seine-et-Oise). One hundred and thirty contraventions of the law were proved, and the tribunal of Pontoise, valuing each of these at 10 fr., condemned the defendant to pay a fine of 1300 fr. The Paris Court of Appeal confirmed the judgment of the court below, but reduced the fine to 750 fr.

A curious specimen of the operation of the same law, as it occurred in the case of a M. Petitbeau, who may be regarded almost as a medical hero, exhibits an octogenarian compelled to take up his doctorate in order to practise in a new place of residence. M. Petitbeau, following the example of his father and grandfather, attached himself in 1812 to the French army as sub-assistant surgeon. After the peace he became an *officier de santé*, and practised in the department of Seine-et-Oise during forty-five years. His course of life seems to have been very praiseworthy, and his kindness to the poor and needy most generous. When the late war broke out, he left his practice and came to Paris, and attached himself as assistant-surgeon to a battalion of the National Guard, the Prussians having the while rendered uninhabitable the house which he had left. He went, therefore, after the war, to reside with a daughter, who, however, living in another department, he was prohibited by law from practising therein. A petition to the Faculty was got up and signed by 250 persons, asking for permission for M. Petitbeau to practise amidst a population to which he had become endeared. The Faculty replied that the law was peremptory, and recommended him to undergo an examination, which alone could legalise his practising. He was equal to the task, and underwent, in his eightieth year, an examination, with which his judges expressed themselves "*très-satisfait.*"

REVIEWS.

Archives of Ophthalmology and Otology. By Professor Knapp in New York, and Professor Moos in Heidelberg. W. Wood and Co., New York; Trübner, Ludgate-hill. Vol. IV., No. 1.

On previous occasions we have had occasion to notice favourably the early numbers of this periodical, which was issued half-yearly. As the plan of its publication is altered, we extract the following from the preface for the information of our readers, and also because reform is promised in the matter of journalism, which we think well worthy of imitation.

"1. The numbers will be issued at intervals of as nearly three months as possible; four numbers, instead of two, constituting a volume. The number of pages of each issue will vary between 112 and 160.

"2. About four-fifths of the space will be devoted to original papers, the remainder to reviews of the current ophthalmological and otological literature.

"3. In order to secure the regular issue of the numbers, Drs. Emil Gruening, of New York, and Clarence J. Blake, of Boston, will assist, as associated editors, in conducting the English edition of the *Archives*, the former in the Ophthalmological department, the latter in the otological."

Further on, the preface says—"As the journal serves no personal or party ends, but is devoted exclusively to scientific interests, it is self-evident that the reviews are intended to be strictly impartial, discussing the merits and demerits of the papers under consideration, without regard to the rank or standing of their authors." And again, "Personal or unparliamentary remarks will be expunged by the editorial pen," and "every instructive contribution, etc. . . . . will be welcome, provided it contain exact observations scientifically recorded." The word *instructive* should, we think, for obvious reasons have been omitted. The concluding paragraphs of the preface cannot fail to be of interest to authors: "The appearance of papers in the special organ does not preclude the subsequent publication of extracts in the journals of general medicine. Compensation will be made for important original articles, except when costly illustrations are required. A limited number of extra copies will be furnished free of charge, when requested at the time the manuscript is sent in to the editors."

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Professor Knapp contributes two separate papers—the second describes a new ophthalmoscope with a single disc—and three in conjunction with other authors, which deal with retinal glioma and sarcoma of the choroid. These are well illustrated.

Dr. Schapringer, of New York, relates "A Case of Paresis of Accommodation, with Apparent Myopia," and Dr. Pooley of the same city writes on "Keratitis Vesiculosa, with Secondary Glaucoma." Dr. Schapringer communicates an "Historical Note concerning the Physiology of the Cochlea," showing that Du Verney nearly two hundred years ago announced the idea which has been recently attributed to Helmholtz. "The analogy of Du Verney's hypothesis to that of Helmholtz is evident, the only difference being that Du Verney supposes the co-vibrating apparatus to be a part of the bony labyrinth, while Helmholtz (and Hensen) place it in the membrana basilaris." This hypothesis is mentioned by Haller, but the author's name is not given. Physiologists and aural surgeons will remember that Helmholtz supposed that the rods of Corti acted as resonators; but since the discoveries of Hensen he has changed his opinion, and now thinks that the radial fibres of the membrana basilaris perform this function. According to this hypothesis, the shortest fibres, which are situated near the round window, would answer to the highest tones, and the remaining ones, which increase in length as we ascend to the cupola, would correspond to the lower tones.

Dr. Wreden narrates "A Remarkable Case of Phlebitis of the Sinuses of the Dura Mater, caused by Otitis, ending in Recovery," and Dr. Oscar Wolf descants instructively on "New Investigations on the Methods of Examination and the Derangements of Hearing."

The reviews and reports are excellent, and this number altogether supports the high reputation of the journal.

The Life of Sir Isaac Newton. By Sir David Brewster. A new edition, revised and edited by W. T. Lynn, B.A., F.R.A.S., of the Royal Observatory, Greenwich. London: William Tegg and Co., Pancras-lane, Queen-street, Cheapside. 1875.

The author of this new edition of Sir Isaac Newton's life has very modestly disclaimed any credit for the work now offered to the public; he only credits himself with having carefully preserved the author's text as it stands, with the simple addition of such notes as, in the present day, appeared desirable. The text, we are informed, is principally that of the edition published in 1831, but it has been collated throughout with that of the larger edition published in two volumes in the year 1855; by this means the greatest possible accuracy, according to the author's latest researches, has been secured.

It is hardly necessary for us to recommend the perusal of a life which few people of mature age have not already studied with amusement and interest. It was a graceful act on the part of one great man to undertake the task of historian to a predecessor, and how thoroughly well he acquitted himself these pages amply show. From the birth of Sir Isaac in 1642 to his death at the age of eighty-five in 1727, all the leading incidents of his life are instructively and minutely recorded. To the general reader the narrative is pleasant and instructive; to the student it is replete with that interest which can only be aroused when the tyro pauses to contemplate with amazement the efforts of some great master-hand.

The present volume is very neatly got up, and whilst its contents can never fail to enchain the reader's attention, its external appearance will readily gain for it a place in the library of the most superficial collector.

Will, Ability, or Mental Volition; with Essays on Free-will and Destiny. By Joseph Hands, M.R.C.S. and M.P.S., etc. J. Burns, 15, Southampton-row, W.C.

Considering that Mr. Hands has seen fit to dedicate his last work to "the reasoning philanthropist, the reflective legislator, and the intelligent dispensers of the law, whether in or out of the courts of justice; also to the deliberating jurymen, and to the humblest thinking individual who may be employed in carrying out the legal decrees of those who have the privilege, through their appointments, of issuing them," we feel some diffidence—not being included in the foregoing category—in offering an opinion on its merits. But as impartial critics of what is brought under our notice, we must take leave to question the utility, in a general sense, of the essays before us. The often-mooted point as to the advisability and necessity of capital punishment for crime is no nearer solution at the present day than it has ever been; and although Mr. Hands sets out by asserting that leniency and benevolence must be successful in repressing the great misdeeds of life, he utterly shatters his own theory by demonstrating (at page 88 of the Appendix to his book) that every event of our lives is directed by a *fate* over which we have no control—so that if at birth we have received a brain of a quality and formation similar to that which has been bestowed on an unfortunate criminal, not all our efforts to rescue ourselves from the crime of committing murder will avail to keep us from taking life. Pursuing this pet theory of the author's—fatalism—a step further, might it not be reasonably asked on what grounds he seeks the abrogation of the law of capital punishment, since, on his own showing, those who were born to be hanged are precluded from terminating their existence in any other way?

To that small section of the community who believe in *will-dominion* and electro-biology, the illustrative cases narrated by Mr. Hands in these pages may prove interesting; but we fear that the general reader—perhaps admittedly not educated up to the necessary point of belief—will find little to reward him for the trouble of perusing the book, and the "deliberating jurymen" into whose hands it may happen to fall will, we think, be but slightly influenced by the peculiar arguments with which the author has sought to establish his opinions.

The Thirtieth Report of the Committee of Visitors of the County Lunatic Asylum at Hanwell, Middlesex; January Quarter Session, 1875. London: Harrison and Sons, St. Martin's-lane.

It is with feelings of the most unmixed satisfaction that we commend the foregoing report to the attention of all those interested in the administration and management of lunatic asylums. The harmonious working of the whole staff, and the care and forethought displayed for the safe custody and improvement of the large number of inmates treated in the building, leave nothing to be desired; and, when it is remembered that 1829 insane patients were borne on the books of the establishment on December 31 last, it will readily be imagined how great is the responsibility thrown upon the different heads of departments. During the whole of the year 1874 there has been no outbreak of infectious disease in the Asylum, and the death-rate has been 25 per cent. less than in 1873. The number discharged recovered in 1874 was 150; while in 1873 only 118 were considered fit to be returned to their friends. By kindly perseverance the officers have succeeded in employing a large number of patients at various kinds of work—an experiment which has been attended with the happiest results as regards the workers themselves, and has benefited the funds of the Asylum to the extent of upwards of £4000. There can be no doubt that the Hanwell Asylum, as it is at present managed, is a credit to those upon whom the work of carrying on such a huge establishment devolves.

The Friend of China. The Organ of the Anglo-Oriental Society for the Suppression of the Opium Trade. London: P. S. King, Canada Government Building, King-street, Westminster. March, 1875.

The above is the first number of a publication which has been started with the view of making public the doings of a Society having for its object the suppression of the traffic in opium between India and China. The Society is not the first of its kind, other bodies having at different times attempted to bring about the abolition of this trade; the insuperable difficulty appears in every case to have been the enormous loss to Indian revenues which the suppression of this traffic would entail. Is the present time more propitious for obtaining the surrender by the Indian Government of some millions of annual revenue? We fear not; nevertheless, we wish the originators of the new movement the success we can scarcely predict, as the reward for their exertions.

Street's Indian and Colonial Mercantile Directory. London: Street, Cornhill.

Notwithstanding that this work is specially intended for the use of merchants and shippers, it will be found of great value by young men of our profession thinking of settling abroad, or to such as have friends already settled in these countries.

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For instance, it gives a correct sketch of the characters, size, population, etc., of a district, the number and names of medical men already there, and so on. The various steam routes to the places treated of, with rates of fares and times of transit, are given, thus placing concisely before the public the different facilities offered by the several companies, and enabling them easily to select the most advantageous course for their purpose. Particulars of the various railways in operation or construction are also supplied where practicable. All the London agents to each of the banks are named, so that the merchant is enabled to see to whom to apply where financial information or assistance is needed in connexion with any particular town or city. The other merits of the work, such as the lists of the various traders, which give the merchant full particulars of possible buyers abroad, populations, extent of countries, and official information, we leave to speak for themselves. We might perhaps, in conclusion, mention that a vast amount of time and labour has been bestowed, both locally and at home, on the production of the work, and no expense has been spared in the endeavour to render it as perfect as possible.

GENERAL CORRESPONDENCE.

THE LATE DR. MAUNSELL, OF DUBLIN.

LETTER FROM MR. ALBERT O. SPEEDY.

[To the Editor of the Medical Times and Gazette.]

SIR,—I think it right to inform the readers of your journal that a memorial fund is about being raised in order to show a recognition of the late Dr. Maunsell's literary services to the public, the medical profession, and especially to the Poor-Law Service of the United Kingdom. The desirability of such a movement was immediately thought of after his death; some delay arose until the feelings of his family were consulted. His widow having consented to receive a memorial, this difficulty has been removed. We shall have a special meeting in Dublin on Friday, the 24th inst., for the purpose of starting an organisation to carry out this object. Meanwhile, Dr. Rogers, 33, Dean-street, Soho, London, will receive subscriptions. This gentleman has written to some of the medical journals pointing out Dr. Maunsell's great labours for years in the cause of the public medical service, in England as well as in Ireland. Dr. Grimshaw, 13, Molesworth-street, Dublin, along with myself, will be happy to receive subscriptions for this fund.

I am, &c.,
ALBERT O. SPEEDY.

28, North Frederic-street, Dublin, September 20.

The following is a list of subscriptions:—

	£	s.	d.
Sir William Jenner, Bart.	5	5	0
Sir Dominic Corrigan, Bart.	2	0	0
Dr. Banks	2	2	0
Dr. R. M'Donnell, F.R.S.	2	2	0
Sir William Wilde	1	1	0
Dr. Cruise	2	2	0
M. J. Kilgarriff, F.R.C.S.I.	5	0	0
Dr. Dudley White, No. 3 North City Dispensary	1	1	0
Dr. Speedy, No. 3 North City Dispensary	5	0	0
Lambert Ormsby, F.R.C.S.I.	1	1	0
Dr. R. T. Wilson, No. 2 North City Dispensary	1	1	0
Dr. Joseph E. Kenny, No. 2 North City Dispensary	1	1	0
D. John A. Byrne, No. 4 South City Dispensary	1	1	0
Dr. Smyly	5	0	0
Dr. Edward Moran	1	1	0
Dr. Spencer, Burton Port, co. Donegal	1	1	0
Dr. James Shaw, Dublin	0	10	6
E. P. Ward, Resident Medical Officer No. 3 North City Dispensary	0	5	0
Dr. Edmund B. Blakely	1	1	0
Dr. Baxter	1	0	0
Dr. Atthill	2	2	0
Dr. Kidd, F.R.C.S.I.	3	3	0
Dr. M'Clintock, F.R.C.S.I.	3	0	0
Dr. Hyman Marks, South City Dispensary	2	2	0
Dr. Grimshaw	1	1	0
Professor M'Dowel	1	0	0
Charles F. Moore, South City Dispensary	2	2	0
Dr. Churchill	2	2	0
Dr. Ross Maguire, Castleknock Dispensary	1	0	0
George Porter, F.R.C.S.I.	2	2	0
John M'Donnell, M.D., Medical Commissioner, Local Government Board, Ireland	5	0	0
R. W. S. Maybury, Queen's Bench	1	1	0
Dr. Joseph Rogers, ex-President English Poor-Law Medical Officers' Association, London	2	2	0
Dr. Cameron, City Analyst	1	1	0
Dr. Peel, Medical Officer South City Dispensary	5	5	0
Dr. J. F. Pollock	1	1	0
E. S. O. Grady, F.R.C.S.I.	5	5	0

N.B.—In a letter received this day Dr. Rogers informs me that it is the intention of the Council of the English Poor-Law Medical Officers' Association to have a special meeting in London in order to promote the memorial fund.

A QUERY AS TO SANITARY FEES.

[To the Editor of the Medical Times and Gazette.]

SIR,—Could you or any of your correspondents inform me, if a sanitary officer be called to give evidence at a distance at a Petty Sessions Court, in a case under the Public Health Act (Ireland), is he entitled to a fee? If so, how much—from whom—and how procurable? I am, &c.,

Dublin, September 18. A SANITARY OFFICER.

NEW AND RECENT INTRODUCTIONS AND IMPROVEMENTS.

THE APOLLINARIS WINE COMPANY.

THE Apollinaris Water Company having made such an admirable hit as regards their speculation in water, have not unnaturally turned their attention to wine. They do not exactly seek to turn their water into wine, but, according to their very cleverly written prospectus, to get wine which will mix well with the Apollinaris Water. We could have wished, perhaps, a little more originality in their programme. Some of the wines of the Moselle, for instance, with others of a like class, would have been gladly welcomed by some of us. Be that as it may, the wines they have resolved to deal in they have chosen with infinite tact and sound knowledge. Sherry, as we know, is hardly ever sold in this country as a vintage wine, but as nearly as possible in accordance with a given sample. If the Apollinaris Company only keep their pale dry, and golden sherries, as now sold, up to their present mark, the public will have no reason to complain of them. The former of these, without any special pretence about it, is really as nice a specimen of light dry sherry as one could wish. Dry, well-flavoured, yet soft, and without any after-taste of added spirit, it is admirable for a lunch or dinner wine; nor is the golden sherry by any means too sweet and heavy for those whose palates are ordinarily adapted to dry wines only. These sherries cost respectively only 30s. and 36s. There are many other wines on the list, especially a Margaux—not a Château Margaux, but an admirable wine of the neighbourhood, most highly to be recommended for fulness and flavour—the flavour of the far-famed growth, and more than its fulness. Among the sparkling wines, what struck us most was a remarkably well-flavoured champagne at 48s. This is really such a wine as might be put before anyone: it is neither a dry, thin, flavourless potion, like some put in the market; nor is it a sweet, luscious concoction, the pride of the cheap restaurant,—but a good, sound, well-flavoured wine.

KINLOCH'S CATALAN.

WE should be sorry to do injustice to any person or thing, even in our thoughts; and this leads us on the present occasion to say a word on Kinloch's Catalan—a wine to which we have hardly in our thoughts done justice. Our reason for writing thus came about in this wise: Looking round the cellar, we came on a specimen of the Crown Red Catalan, which had for some year or more been laid aside in a quiet, warm place of even temperature. On opening the bottle we were quite surprised at the full, vinous character of the wine, which in many respects resembles port, but with characters of its own—fairly sweet, but not luscious, and exceedingly well flavoured. Moreover, the wine was not nearly at its maturity, but would have gone on improving for years.

BROMIDE OF POTASSIUM FOR HYDROPHOBIA.—The French *Journal des Connaissances Médicales* has the following:—A man forty-three years of age, having been bitten by a mad dog, had the place cauterised with a red-hot iron four hours later. A month passed without any distressing symptoms, but at the end of that time he began to complain of epigastric and pharyngeal constriction, and was much depressed. Chloral was prescribed for him in doses of three to four grammes, which succeeded twice in affording a good night's rest; but the third dose produced no results. The patient began to experience great anguish, the voice was hoarse, there were tetanic contractions in the arms, neck, and breast, with morbid terror and hallucinations. Four grammes of bromide of potassium were then administered, and the patient passed a quiet night, with improved symptoms the next day. Another dose of five grammes was then given with equal success, and all convulsive symptoms disappeared. The medicine being suppressed, they re-appeared again a week later, when six grammes of bromide of potassium were administered; and this, it is stated, completed the cure.

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MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 16:—

Archer, Robert Kendray, Cathcart-hill, Highgate.
Dearden, John Alfred, Douglas, Isle of Man.
Todd, John, Union-road, Tufnell-park, N.

The following gentlemen also on the same day passed their primary professional examination:—

Cant, William John, Queen's College, Birmingham.
Pratt, Alfred, Queen's College, Birmingham.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

SEED, WILLIAM HENRY, M.B., C.M.—Second Assistant Medical Officer at the Warwick County Asylum, Hatton, *vice* H. G. Peacock, M.R.C.S. Eng., resigned from ill-health.

SMITH, ROLAND D., M.R.C.S., L.S.A.—Resident Medical Officer to the London Hospital, *vice* Lewis Mackenzie, L.R.C.P. Lond., resigned.

WADE, A. LAW, B.A., M.D., L.R.C.S.I.—Assistant Medical Officer at the Warwick County Asylum, Hatton, *vice* Dr. Woods, appointed Medical Superintendent of the Killarney Asylum.

WOODS, OSCAR T., B.A., M.B., L.R.C.S.I.—Medical Superintendent of the Killarney Asylum.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Algernon W. Winn, Surgeon to the *Wye*.

WAR OFFICE—MEDICAL DEPARTMENT.—Surgeon-Major John Small to be Deputy Surgeon-General, *vice* Miah William Murphy, retired upon half-pay; Surgeon Nathaniel Alcock to be Surgeon-Major, *vice* John Small, promoted; Surgeon Donald Macgillivary Davidson, M.D., to be Surgeon-Major, *vice* Jonas King Carr, retired upon half-pay. *For* "Surgeon Charles Henry Swayne is transferred temporarily to the half-pay list, without half-pay, dated June 30, 1875" (as stated in the *Gazette* of August 6, 1875), *read* "Surgeon Charles Henry Swayne retires upon temporary half-pay."

BIRTHS.

BANTOCK.—On September 16, at 44, Cornwall-road, Westbourne-park, W., the wife of George Granville Bantock, M.D., of a son.

FARR.—On September 17, at Slade House, Kennington-road, the wife of G. F. Farr, L.R.C.P. Edin., M.R.C.S. Eng., of a son.

HOFFMAN.—On September 17, at Fulham, the wife of H. W. Hoffman, M.B., of a son.

NOAD.—On September 18, at East Cowes Villa, Lower Norwood, the wife of H. Carden Noad, L.R.C.P. Lond., M.R.C.S., of a son.

OLIVER.—On September 18, at West-end-park, Harrogate, the wife of George Oliver, M.D., of a daughter.

STEVEN.—On September 21, at 82, George-street, Edinburgh, the wife of Alexander Steven, M.D., San Remo, of a daughter.

WILSON.—On September 17, at Sandgate, the wife of Surgeon-Major F. R. Wilson, M.B., of a daughter.

WISE.—On September 16, at Gothic-villa, Burrage-road, Plumstead, the wife of William C. Wise, M.D., of a daughter.

MARRIAGES.

BLACKETT—GREY.—On September 15, at St. Mark's, Cheltenham, Edward Ralph Blackett, M.D., to Laura Jane, eldest daughter of the late Charles Samuel Grey, Esq.

BUSS—HOLTHAM.—On September 16, at West Hackney Church, William Henry, only surviving son of the late William Buss, M.D., to Sarah, third daughter of the late William and Sarah Holtham, of Hackney.

COLLES—DALLAS.—On September 16, at St. John's, Woolwich, A. Colles, M.B., of Bridgenorth, Salop, son of Henry Colles, barrister-at-law, Dublin, to Emily Agnes Georgina, daughter of the late Major Alexander Robert Dallas.

FIELD—RUSSELL.—On September 16, at Holy Trinity Church, Milton-next-Gravesend, Albert Frederick Field, M.D., to Frances, youngest daughter of George Ireland Russell, M.D., F.R.C.S., Surgeon H.M. Customs, Gravesend.

PARTRIDGE—DORMAN.—On September 16, at St. Luke's Church, Cork, S. R. B. Partridge, Captain 25th King's Own Borderers, to Mary Bishopp, second daughter of Edward Bishopp Dorman, M.D., of Kinsale.

SMITH—STUART.—On September 15, at Rectory-place Congregational Chapel, Woolwich, the Rev. James Smith, of Chatham, to Eliza, fourth daughter of William Stuart, M.D., of Woolwich.

DEATHS.

BENNIE, ANDREW, L.R.C.P., L.F.P.S., at Brighton, on September 13, aged 40.

BUSHNAN, MARY FARQUHAR, wife of J. Stevenson Bushnan, M.D, while on a visit to her son-in-law, W. O. Chalk, Esq., on September 16.

CARTER, WILLIAM HUDSON, second son of J. B. Carter, L.R.C.P., M.R.C.S., Chapel Allerton, near Leeds, on September 14, in his 21st year.

COOPER, GEORGE LEWIS, F.R.C.S., son of the late Sir George Cooper, at 7, Woburn-place, Russell-square, London, on September 17, aged 65.

DEMPSEY, JOSEPH MELDON, M.D., at 27, Charterhouse-square, on September 14, aged 53.

HOME, ALEXANDER GEORGE, M.D., J.P., of Whitfield, late Surgeon Queen's Dragoon Guards, at Mount Æolus, Portobello, on September 17.

HULKE, ELIZABETH POLLARD, widow of William Hulke, Esq., surgeon, at Deal, Kent, on September 20, aged 74.

RICHARDSON, WILLIAM, M.A., M.D., late of Tunbridge Wells, at Oatlands, Mortimer-road, Kilburn, N.W., on September 18, aged 64.

SMITH, JAMES THOMAS, M.R.C.S. Eng., L.S.A., of the Firs, Sutton Coldfield, after a short illness, on September 12.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BRISTOL HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Applications, with testimonials, to the Committee of the Hospital, Royal Fort, St. Michael's Hill, Bristol, on or before October 7.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Board of Management, on or before September 27.

DONCASTER INFIRMARY.—House-Surgeon. Applications, with testimonials, to the Honorary Secretary, Doncaster, on or before October 10.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be duly qualified, and unmarried. Applications, with testimonials, to the Secretary, on or before October 7.

LIVERPOOL DISPENSARIES.—Assistant Resident House-Surgeon. Candidates must be duly qualified, and unmarried. Applications, with testimonials, to the Secretary, on or before September 29.

LONDON HOSPITAL, WHITECHAPEL-ROAD, E.—Assistant Obstetric Physician. Applications, with testimonials, to the House Committee, on or before September 27.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained by application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

ROYAL HANTS COUNTY HOSPITAL, WINCHESTER.—House-Surgeon and Secretary. Candidates must be duly qualified. Applications, with testimonials, to the Committee, under cover to the Secretary, before September 29.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD, E.C.—House-Physician. Candidates must be duly qualified. Applications, with testimonials, to C. Lowther Kemp, on or before October 2.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, QUAY-STREET, MANCHESTER.—Candidates must be duly qualified. Applications, with testimonials, to Mr. J. Barber, 41, John Dalton-street, Manchester, on or before October 1.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, Ece Villa, Tiverton.

WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, Mr. A. P. Watkins, 50, Foregate-street, Worcester, on or before September 25.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Newcastle-upon-Tyne Union.—Mr. T. C. Nesham has resigned the First District; area 1400; population 17,350; salary £50 per annum.

Torrington Union.—Mr. H. B. Pattison has resigned the Peters Marland District; area 2200; population 316; salary £4 3s. per annum.

APPOINTMENTS.

Chesterfield Union.—Ambrose M. Palmer, M.R.C.S. Eng., to the Whittington District.

Hereford Union.—David W. Morris, L.K. & Q.C.P. Ire., M.R.C.S. Eng., to the Kentchurch District and the Workhouse.

Liverpool Parish.—David M. Kennedy, M.D., L.R.C.S. Edin., to the Second District.

Lymington Union.—Robert S. Adams, M.R.C.S. Eng., L.S.A., to the Lymington District.

Solihull Union.—W. M. Rosten, M.D. Ire., M.R.C.S. Eng., to the Yardley District.

DR. DUCHENNE (DE BOULOGNE).—This eminent member of our profession died last week, after a prolonged and painful illness. We shall shortly publish an account of his life and services.

AT a meeting of the Strand Board of Works, on Wednesday, September 22, the following notice of motion by Dr. Joseph Rogers was carried unanimously:—"That, with the view to the more effectually and economically securing the establishment of mortuaries in the metropolis, this Board do memorialise the Metropolitan Board of Works to apply in the next sessions of Parliament for powers authorising that body to undertake their erection in such parts of the metropolis as may be considered necessary." It was also resolved that a copy of the resolution should be forwarded to the several boards of works in the metropolis, and that they should be requested to co-operate with the Strand Board in pressing the question on the attention of the Metropolitan Board. Dr. Joseph Rogers, Mr. Betts, Mr. Phillips (the representative on the Metropolitan Board), and Mr. Jenkins, the clerk, were appointed to draw up the form of memorial to be forwarded to the Metropolitan Board.

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AN ANTHROPOLOGICAL MISADVENTURE.—According to an anecdote related in the *Union Méd.* (September 18), the excessive sharpness of the French police, which ends in producing such stupid actions, is not confined to their operations against foreign visitors, which have been so much commented upon of late. It seems that at the meeting of the French Science Association at Nantes, just over, four of the members of the Anthropological Section set out on an excursion to explore the banks of the Lake of Grandlieu, and had occasion to make many inquiries, and to consult the communal plans of the country. A gendarme, considering that these procedures had a very suspicious appearance, demanded of the party their papers. The Secretary of the St. Petersburg Geographical Society, who was one of them, at once displayed a Russian passport with a German translation, which, however, had not the smallest effect on the gendarme, who, also, pronouncing the cards of the Association which were produced by the others as still less satisfactory, marched the whole party off to his brigadier, this consisting of, besides the above-named secretary, the vice-president and secretary of the section, and an advocate attached to the Lyons Railway Company. The brigadier, after a tedious examination of all the proofs advanced, pronounced his judgment. "You are quite out of order, but as I do not find an actual *délit* in your case, I restore you to your freedom of action." It seems that the arrest of *savants* during their excursions takes place in France oftener than might be expected, and is not always so promptly terminated. Some time since, a professor of geology in an important faculty was not only arrested, but imprisoned, and was only extricated next day with great difficulty by means of the telegrams of the dean of the faculty.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN AUGUST, 1875.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	20·40	0·144	0·146	0·0015	15·4	4·0
West Middlesex .	18·03	0·040	0·146	0·000	14·0	3·3
Southwark & Vauxhall . . .	...	...	...	...	...	...
Chelsea . . .	20·18	0·096	0·146	0·0015	15·8	3·8
Lambeth . . .	20·10	0·103	0·166	0·0015	15·4	3·8
Other Companies.						
Kent	34·80	0·014	0·322	0·000	21·6	11·6
New River . .	17·77	0·055	0·114	0·000	14·3	3·3
East London . .	20·30	0·103	0·138	0·0015	15·4	4·0

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in those of the Grand Junction, Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 103,054,818 gallons; and the number of houses supplied was 439,077. This is at the rate of 29·9 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 31·4 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

IT is a curious fact that negroes, partly owing to their extreme susceptibility to cold and partly to their superstitious terrors of darkness, cannot sleep alone in a room, and prefer sleeping huddled up together on the floor. A negro's house of the better class, in the West Indies, always contains a large four-post mahogany bedstead, which is never occupied save in sickness—the floor being preferred. Very often in towns where rent is high the floors are covered with mattresses, and in a small room six, eight, or ten people sleep together. I have, when called in the night to see a case, sometimes had a difficulty in picking my way among the prostrate bodies of the coloured people. Not satisfied with packing themselves in this way, they close every cranny and nook by which air can enter, and wrap themselves entirely round with a sheet, head included. They look like corpses ready for burial. Any more ghastly spectacle than a hospital for negroes at night-time cannot be conceived. They all lie on their backs, stretched out at full length, and enveloped in their sheets like winding-sheets. Being well aware of this peculiarity, during the small-pox epidemic at Trinidad, I had the small-pox hospital huts built with a plank left out all the way round, just under the roof. Thus, though they closed all the doors and windows at night, ventilation was carried on in spite of them.—*From Dr. Bakewell, "On some Common Causes of Pulmonary Consumption."*—1875.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dens Sap., Brighton.—Neither of the persons mentioned by you are qualified men, and from their unprofessional conduct not likely to be admitted to examination for the licence in Dental Surgery; on inquiry, we find that the application of one of them to be so admitted has been refused. Mr. W. Robert Wood, senior, is a licentiate in Dental Surgery, and a highly respectable member of the dental profession.

D. Bruce Payne.—We are sorry that the matter should be as you state. Is there not some hidden hitch? Have you applied *since* your son has been studying?

Mr. Wilson.—No "introductory" will be delivered at St. Bartholomew's Hospital; a dinner of the old students will take place, as heretofore, in the hall of the institution.

Associate, King's College.—The subscribers to the portrait of Sir William Fergusson, Bart., have already received copies of the engraving by Mr. F. Joubert. By calling on that gentleman, at 36, Camden-road, you will no doubt be able to obtain a copy.

A Beginner.—We must refer you, and several other correspondents who write to us on the same subject, to the Students' Number of this journal.

Dr. Powell.—One of the most corpulent persons known was Mr. Lambert, of Leicestershire, who weighed fifty-two stone eleven pounds (fourteen pounds to the stone).

A Collector.—The nucleus of the collections of portraits in the possession of the College of Surgeons and of the Medical and Chirurgical Society was made by the notorious banker Fauntleroy, of Berners-street, who was hanged at the Old Bailey for forgery on some of his customers.

An Old Subscriber.—The first number of the *Medical Times* appeared on Saturday, September 28, 1839. We have still a gentleman on our staff who has been connected with it all that time. The then editor and proprietor died several years ago when conducting the *Daily News*—Mr. F. K. Hunt, M.R.C.S.

L.R.C.P. Lond.—On September 30, 1767, at the anniversary of the College of Physicians, the licentiates demanded admittance, which was not complied with. A smith was offered ten guineas and an indemnification of £300 to force the gates, which he refused. Consult the Roll of the College, by Dr. Munk.

A Lecturer.—Mr. Francis Mason, F.R.C.S., of St. Thomas's Hospital, delivered the oration. The first hospital for sick persons was founded at Canterbury by Lanfranc, Archbishop of that diocese, A.D. 1070, and Richardus Anglicus was the first English medical writer—viz., in 1240.

S., Manchester.—The celebrated physician Heberden gave the first description of angina pectoris.

M., Chelsea.—Monsey, who was Physician to Chelsea Hospital (in which he resided) for half a century, died at the great age of ninety-six. He left his body for dissection.

F. F.—Sir Paul Joddrell, a Fellow of the College of Physicians, was sent out by this Government to attend the Nabob of Arcot.

A. B. L., Shropshire.—"On the General Principles which should be observed in the Construction of Hospitals," by Captain Douglas Galton.

Shanghai.—Dr. Alexander Jamieson, in his report on the health of Shanghai for the half-year ended March 31 last, referring to the additional risks to life, if any, entailed by residence in Shanghai by foreigners, states—"It does not appear that, as yet, there is a sufficient array of facts to warrant a very decided opinion one way or another, but, at least, there is nothing to justify alarm in view of having to settle for a term of years. The ratio of deaths between twenty and thirty to the total number of deaths is here far larger than in Europe, but this is due to the overwhelming majority of men of that age. The ratio of deaths from diseases of the heart and great vessels to the number of deaths from all causes is here higher than in Europe, but, on the other hand, very many of the diseases which are annually fatal in Europe to large numbers of men at the ages chiefly represented here, are here unknown. If we are to some extent unfortunate in one respect, we are fortunate in other respects. At the same time it must not be thought that nowhere else do deaths occur at early ages from aneurism."

Y. W., Gosport.—Dr. E. J. Morgan, of Manchester, in his little book on the deterioration of the English race by the ever-increasing populousness of great cities, states that "in the manufacturing districts, four out of every five of the recruits sent up by the sergeants for medical inspection are rejected on the ground of physical disqualification."

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S. G. P.—Mead, in 1708, before he was thirty years of age, was chosen Physician of St. Thomas's Hospital, in Southwark, and in 1707 he received his M.D. diploma from Oxford, and admission to the Fellowship of the College of Physicians.

Xeno.—In 1856, Dr. Scott Alison exhibited a sphygmoscope of his invention at a meeting of the Royal Society.

P. C.—Yes, Dr. Müller, the Government Botanist at Melbourne.

Giles N.—Dr. Benjamin W. Richardson, F.R.S., will preside over the Health Department of the Social Science Congress, at Brighton, on October 6 next.

E. J.—Sir Henry Holland's book, "Travels in Portugal, Sicily, the Ionian Islands, and Greece" was published in 1815.

Beta.—The amount collected in June last for the Metropolitan Hospital Sunday Fund was £26,703 7s., as against £29,817 3s. 9d. received last year.

Antiquus.—Mr. John Fuller, of Rose-hill, endowed the Royal Institution, London, with a Professorship of Chemistry, of the value of £100 per annum, in February, 1833, and Dr. Faraday was appointed the first professor.

A. D. C.—The Metropolitan Water Supply Act of 1871 provides power to compel the companies to give constant supply as and when the public authorities may see fit to require.

W. L., Colchester.—The Scottish Meteorological Society has upwards of eighty-five observing stations in Scotland, and others in foreign parts.

COMMUNICATIONS have been received from—

Dr. Denton, Bridlington; Mr. J. Wilks, Manchester; Mr. D. W. Shoebridge, Hirwain; Dr. Inglis, Worcester; Mr. Burbidge, Stratford; Mr. T. M. Stone, London; Mr. J. S. Dismoor, Gravesend; Mr. W. A. Cairns, Newcastle; Mr. J. W. Moore, Dublin; Mr. Becher, London; Mr. George Brown; The Registrar of the Apothecaries' Hall, London; Surgeon-Major Black, Cheltenham; Mr. R. Smith, London; Dr. T. W. Hime, Sheffield; A Sanitary Officer; Mr. J. Walker, London; Mr. F. Smith, Weston-super-Mare—The President of St. Thomas's Hospital; Mr. J. Inner, London; Mr. T. G. Carew, Buckfastleigh; Dr. Needham, Gloucester; Mr. D. B. Payne, Deal; Dr. Edward Mackey, Birmingham; Dr. C. Handfield Jones, London; Dr. Eddison, Leeds; Dr. Fothergill, London; Dr. Sparks, Weymouth; Mr. J. Chatto, London.

BOOKS AND PAMPHLETS RECEIVED—

Fitzgerald on the Public Health Act, 1875—Winn on Materialism—Report of the Board of Works, Holborn District, by Dr. Gibbon—Wagstaffe's Osteology—Taylor's Medical Jurisprudence, second edition, two vols.—Smith's Lectures on Nursing.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Canada Medical and Surgical Journal—The Western Daily Press—Dublin Medical Journal.

APPOINTMENTS FOR THE WEEK.

September 25. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

27. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

28. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

29. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

October 1. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 18.

BIRTHS.

Births of Boys, 1158; Girls, 1131; Total, 2289.
Average of 10 corresponding years 1865–74, 2106·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	685	653	1338
Average of the ten years 1865–74	659·7	627·8	1287·5
Average corrected to increased population	...	...	1378
Deaths of people aged 80 and upwards	...	...	34

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	13	2	8	2	3	2	19
North	751729	...	4	21	3	13	..	2	2	35
Central ...	334369	...	2	7	...	8	...	2	...	16
East	639111	...	3	15	2	9	...	6	...	36
South	967692	...	4	26	2	12	...	3	2	41
Total	3254260	...	15	82	9	50	2	16	6	147

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·978 in.
Mean temperature	63·4°
Highest point of thermometer	81·0°
Lowest point of thermometer	47·8°
Mean dew-point temperature	54·4°
General direction of wind	N.E.
Whole amount of rain in the week	0·18 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 18, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Sept. 18.	Deaths Registered during the week ending Sept. 18.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.)	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2289	1338	81·0	47·8	63·2	17·33		0·18	0·46
Portsmouth ...	122632	27·3	73	57	...	...	...	...		...	...
Norwich	82842	11·1	63	49	77·0	52·0	61·5	16·39		0·01	0·03
Bristol	196186	44·1	153	96	77·4	47·8	61·0	16·11		0·12	0·30
Wolverhampton ...	71718	21·1	49	42	71·7	47·0	59·4	15·22		0·05	0·13
Birmingham ...	366325	43·6	293	181	74·5	46·2	61·9	16·61		0·00	0·00
Leicester	109830	34·3	85	73	78·2	50·5	61·1	16·17		0·03	0·08
Nottingham ...	92251	46·2	65	41	74·8	52·1	60·8	16·01		0·00	0·00
Liverpool	516063	99·1	355	262	71·1	51·5	59·9	15·50		0·04	0·10
Manchester ...	356626	83·1	264	159	74·2	44·3	61·6	16·45		0·00	0·00
Salford	135720	26·3	120	84	75·5	43·4	59·7	15·39		0·01	0·03
Oldham	87437	18·7	87	44	...	...	...	...		...	...
Bradford	168305	23·3	130	115	70·2	48·8	59·4	15·22		0·05	0·13
Leeds	285118	13·2	238	153	73·0	46·0	59·3	15·17		0·00	0·00
Sheffield	267881	13·6	211	126	70·5	44·5	57·7	14·28		0·13	0·33
Hull	133932	36·8	99	80	69·0	48·0	57·5	14·17		0·03	0·08
Sunderland ...	106342	32·2	74	53	...	...	...	...		...	...
Newcastle-on-Tyne	137665	25·6	108	72	...	45·0	...	...		0·13	0·35
Edinburgh	211626	50·5	128	80	...	...	...	...		...	...
Glasgow	534564	88·6	378	226	76·1	41·1	58·6	14·94		0·37	0·69
Dublin	314666	31·3	216	139	74·5	44·5	59·8	15·45		0·55	1·40
Total of 21 Towns in United Kingdm	7742889	37·0	5503	3470	78·2	41·1	60·2	15·67		0·10	0·25

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·98 in. The highest was 30·14 in. on Sunday morning, and the lowest 29·83 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond., F.R.C.P.,
Physician to H.M. the King of the Belgians,
Physician to the East London Children's Hospital,
Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest.

Lecture IX.—Fibroid Induration of the Lung (Cirrhosis).

(*Continued from page* 261.)

During an early stage of the disease the symptoms are very slight, and the physical signs are those which have just been enumerated. If the lesion extends over a considerable portion of the lung, the percussion-note is slightly high-pitched, with a certain wooden quality; resistance is rather increased; vocal fremitus presents nothing characteristic, for, if sometimes stronger, it is sometimes weaker than natural; the breathing is harsh or bronchial, and the vocal resonance, unless there be dilatation of the bronchi, is generally normal. If there be accompanying catarrh, some coarse bubbling or crepitating rhonchus may be heard at various parts of the chest. The patient is sensitive to cold, and prone to catarrhs and attacks of catarrhal pneumonia, but between such attacks the expansion of the side may be fair and the general health leave little to be desired.

When the induration is limited to the base of the lung, as it is sometimes found to be, as a consequence of an attack of pleurisy, there is dulness at the extreme base behind, with excessively weak bronchial breathing, and often coarse liquid râles. A case of this kind has already been related in a previous paper (see the case of Martha B., *Medical Times and Gazette*, vol. ii. 1873, p. 116).

As the induration of the lung increases and the fibroid tissue comes to be in great excess, the lung is reduced in bulk, the bronchi become dilated, and more or less contraction of the side is the result. The physical signs are then the following:—The wall of the chest immediately over the diseased part is flattened, and the respiratory movement is hampered, or, if the disease be extensive, even suppressed. The contraction of the lung draws in the soft parts in its neighbourhood, so that the mediastinum is drawn towards the diseased side. As a consequence of this, the opposite lung is found to project across the middle line of the sternum, and the heart is usually displaced. If the induration affect the upper part of the left lung, the heart is drawn upwards; if the right lung be the one diseased, the heart is drawn towards the right side, and in extreme cases may be felt beating to the right of the sternum. In cases, however, where the pericardium has become adherent to the left pleura, this displacement is prevented. On account of the contraction of the chest-wall the circumference of the thorax at the part affected is reduced. Vocal vibration is sometimes increased, but more frequently it is diminished, and is often hardly perceptible. The percussion-note is dull, with wooden or tubular quality, and resistance is usually, but not always, increased. The respiration differs in character according to the quantity of secretion in the tubes: if the tubes are nearly empty, it is of the blowing variety, either tubular or cavernous, and is generally very loud: vocal resonance is, as a rule, bronchophonic, and there is much clicking rhonchus mixed up with creaking sounds. If, however, there be great accumulation of secretion, the breath-sound is weak and bronchial, with but little rhonchus and faint vocal resonance. The signs are in most cases limited to one side of the chest, as both lungs are rarely affected. Of the symptoms, the most characteristic is the violent paroxysmal cough, occurring at rare intervals, and ending in retching efforts and the expectoration of enormous quantities of offensive purulent matter. The fetor of the sputum is due to its retention in the tubes, on account of the loss of elasticity of the bronchi. The difficulty with which it is brought up is owing to the same cause, and in bad cases its expulsion is only effected by violent contractions of the diaphragm. The respiration is habitually rather hurried, and ranges from 30 to 40 in the minute. Hæmoptysis is rare, but is sometimes seen in older children. There is sometimes a tendency to diarrhœa; and in bad cases, towards the end of the disease, ulceration of the bowels may take place.

Unless the expectoration be very copious, or the diarrhœa troublesome, the general nutrition of the child is often good, for where the disease is not far advanced, emaciation is certainly not necessarily produced by such a condition of the lung. There is in many cases a considerable amount of plumpness, and the complexion is often healthy. When nutrition suffers, it is chiefly as a consequence of the catarrhal attacks to which these patients are so subject; but at the end of such attacks the temperature, which had been elevated, sinks to a natural level, the strength usually returns, and the child regains flesh and colour.

So long as it remains uncomplicated, fibroid induration of the lung does not give rise to pyrexia. If the temperature in any case is found to be high, the elevation is due, in the majority of instances, to the presence of catarrhal pneumonia, which is so frequent an accompaniment of the disease. Ulceration of the bronchial tubes will also cause the temperature to rise. In these cases the cause of the febrile symptoms may be discovered by a microscopical examination of the sputum. The expectoration must be boiled in a test-tube, with an equal quantity of caustic soda, and after a short time the mixture will be found to be converted into a perfectly transparent fluid. If any fragments of elastic tissue be present, they will sink to the bottom of the tube, whence they can be easily removed by a pipette, and placed under the microscope. Such fragments, if areolar, are conclusive evidence of ulcerative excavation.

The indurated lung offers a certain impediment to the pulmonary circulation. Consequently, if the disease be at all extensive, there is some enlargement of the right side of the heart, and the aortic venous system is fuller than natural; so that the veins of the neck and chest, and often of the limbs, are unusually prominent. The fingers soon become clubbed. If any catarrh be superadded, the patients often present something of the congested, turgid appearance of the face which is seen in old emphysematous subjects.

In adults, a late stage of the disease is often accompanied by a certain amount of œdema of the extremities. This may, probably, be also true of children. In the only two cases, however, of fibroid induration complicated by œdema which have come under my notice, the patients were the subjects of extensive amyloid degeneration of organs—a condition which would itself account for the serous effusion.

In the following case the induration of the lung is seen to have advanced to the stage of contraction. It presents a condition which is not uncommon in children as a consequence of pneumonia:—

Alice P., aged fourteen, was admitted into the East London Children's Hospital on March 24. Her illness had begun three years before with shivering, followed by fever and cough, and the girl kept her bed for a fortnight. Since that time the cough had continued, and she had slowly lost flesh. Last Christmas she became worse: her cough was more troublesome, she lost flesh faster, and often complained of feeling cold, and of pains in the left side of her chest.

State on Admission.—The girl is rather thin, but does not look ill. She has some colour in her cheeks; appetite pretty good. She coughs a great deal, and expectorates thick greenish-yellow matter, but the sputa are not offensive, and there is no fetor of the breath. She states that some weeks ago the expectoration was much more profuse, and was rather offensive. It was brought up with retching efforts after prolonged fits of coughing. Temperature at 5 p.m., 99·8°. The left side of chest is flattened at the upper part, and is unnaturally hollow below the nipple. Respiratory movement very deficient on that side. Heart's apex half an inch below the nipple, and slightly to the inner side. The percussion-note is dull from above the clavicle to the third interspace. Just below the clavicle the note is rather tubular. Vocal fremitus is felt faintly above the clavicle, but is only just perceptible below over the dull area, and is very much weaker than on the opposite side. The respiration over the same area is cavernous, and is accompanied by a little metallic bubbling rhonchus and creaking sounds. At the base the breath-sound is excessively weak, and the same creaking and bubbling sounds are heard. The vocal resonance is bronchophonic. At the left back there is only dulness at the supra-spinous fossa, but the respiration from apex to base is bronchial and very feeble, with the same rhonchi as in front. Vocal vibration is faint, and vocal resonance is stronger than natural. In the axillary and infra-axillary regions percussion is natural. Respiration towards the armpit is blowing; below it is merely weak and harsh. On the right side the chest is

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naturally resonant, both before and behind; respiration is everywhere rather wheezing, with prolonged expiration; and a little bubbling rhonchus, not metallic in character, is heard here and there. There is no creaking, such as is heard on the left side.

While in the hospital the girl improved considerably in general health, although during her stay she had an attack of pneumonia affecting the middle lobe of the right lung. This, however, passed off without producing any permanent injury, for the removal of the deposit appeared to be complete, although the percussion-note did not become perfectly resonant at the right scapular region until nearly three weeks after the beginning of the attack. The usual temparature, before the attack of pneumonia, was normal; afterwards it remained a little higher than natural (99·6° to 100°). The pulse was, as a rule, just over 100; and the respirations varied from 30 to 38.

On April 26, shortly before the girl left the hospital, the physical signs were exactly the same as on her admission, and the bubbling and creaking rhonchus still persisted. Her general health had, however, greatly improved. She looked well, and had gained considerably in flesh.

Another illustration of the same condition is seen in the following case:—

Clara S., aged seven, was admitted into the East London Children's Hospital under Dr. Bruce. She had been healthy until the age of six years, when she had an attack of whooping-cough. Three months afterwards she was ill for six weeks with scarlatina, but had no dropsy. After this, however, her strength did not return, and three months before admission she caught cold and was very feverish. Since that time she had been losing flesh, and her cough had been very troublesome.

When admitted, the child was pale, but tolerably stout. There was considerable flattening at the upper part of the left front, and the whole of that side moved less perfectly than the right during inspiration. The heart's apex was immediately to the inner side of the left nipple, and the impulse could be seen over the greater part of the præcordial region as the child lay on her back. On the left side there was dulness with increased resistance from above the clavicle as far downwards as the cardiac dulness. The percussion-note was also dull in the axillary region, and at the back from the supra-spinous fossa as far as mid-scapula. In front the dulness did not reach quite to the middle line, for the resonance of the right lung passed across the centre of the sternum and encroached somewhat upon the left pleural cavity. Over the whole area of dulness, vocal fremitus was excessively feeble, and this was especially the case under the clavicle in front. At the base, however, and all over the right side, vibration was well marked. Respiration was loud and blowing, with prolonged hollow expiration above the clavicle. Below, it was weaker but still blowing, and near the acromial angle it was cavernous. The cavernous respiration was heard as far down as the nipple, becoming fainter as the stethoscope was moved downwards. At the base the breath-sound was merely harsh, and here and there a coarse superficial crackling sound was heard, which disappeared after a cough. In the axilla the breathing was loud and cavernous; behind it was merely harsh. Over both backs a little crackling rhonchus was heard, which was removed by coughing. Vocal resonance was everywhere bronchophonic over the dull area. On the right side the physical signs were perfectly healthy, except for the slight rhonchus before mentioned.

During the child's stay in the hospital the rhonchus disappeared, but otherwise the physical signs remained unaltered; still, her general health greatly improved, and she gained flesh. Her temperature was 99°, as a rule, both morning and evening, but occasionally it rose slightly, from some temporary cause unconnected with the pulmonary lesion.

In these two cases the fibroid induration occupied the upper part of the left lung, and the physical signs were sufficiently well marked to indicate with certainty the nature of the disease. In both cases the lung was evidently contracted, for the heart was displaced upwards, and the chest had fallen in. In the case of Clara S., it was noted, in addition, that the mediastinum was drawn to the left, so that the right lung encroached upon the left pleural cavity, and that the cardiac pulsations were plainly visible over the præcordial region—showing that the margin of the left lung had receded from between the heart and the wall of the chest. Such an amount of contraction of the lung should at once lead us to suspect something more than ordinary caseous consolidation. Again, the vocal vibration of the thoracic walls was well marked on the healthy side of the chest; but over the seat of disease it was almost completely suppressed. In the case of an unabsorbed pneumonic deposit, the vocal fremitus is increased over the seat of solidification. The auscultatory signs were also peculiar. Common bronchitic bubbling râles were mixed up with the creaking sounds which are considered characteristic of fibroid induration. Lastly, the stethoscope revealed signs of a cavity; but a careful examination of the chest detected no indications of disease in the apex of the opposite lung. Now, it is well known that the softening process affecting a caseous pulmonary mass is very rapidly followed by signs of disease in the upper part of the lung on the other side of the chest; and when the process has gone on to the formation of a vomica, the apex of the previously uninjured lung furnishes unmistakable evidence of disease. To this rule there are few, if any, exceptions. In the present cases, therefore, some other explanation of the cavernous signs must be sought for than that supplied by the supposition of a softening cheesy mass. Fibroid induration of the lung almost always leads after a time to dilatation of the bronchi; but the disease, even when extensive, is seldom accompanied by any lesion of the opposite lung—probably because absorption from the seat of disease is prevented by obliteration of the lymphatics of the part. In such a case, therefore, we should find evidences of consolidation of lung, with signs of a cavity, limited strictly to one side of the chest—the very conditions, in fact, which are met with in the two cases under discussion. In these cases the part of the lung concerned had been, no doubt, the seat of pneumonia, which had left behind it an unabsorbed cheesy mass. After a time the caseous matter had completely disappeared, and the lung was left with the connective tissue at the apex in great excess. The new tissue had contracted, indurating the lung; consequently the bronchi had become dilated, and the chest-wall had sunk in at the seat of disease.

(*To be continued.*)

Death of Professor Porta.—Prof. Luigi Porta, of the University of Pavia, so well known for his great work on Diseases of the Bloodvessels and numerous other contributions to medical science, has just died, leaving a large sum of money to the Ateneo of Pavia.

Successful Employment of Aspiration for a Strangulated Inguinal Hernia in an Infant.—Dr. Rees relates the case of a male infant, aged nine months, brought to the Melbourne Children's Hospital, offering all the symptoms of strangulated inguinal hernia. The child was in a state of collapse, and constantly vomited fæcal matters, the tumour at the lower third of the inguinal canal being about a pigeon's egg in size. After trying in vain to reduce it under chloroform, he passed in the smallest needle of the aspirator, and withdrew about four or five drachms of dirty-brown fluid and some gas. An empty portion of intestine now seemed to be rolling under the finger, and this suddenly slipped back into the cavity of the abdomen. Dr. Rees believes that this is the first case in which the aspirator has been used in strangulated hernia in so young a subject.—*Australian Med. Jour.*, April.

Sudden Death after Paracentesis Thoracis.—Besides the case reported by M. Besnier, which we recently noticed, M. Legroux has related one to the Paris Hospital Medical Society in which death took place in three-quarters of an hour. The patient was a man of prior good health, fifty-two years of age, and on admission presented an immense effusion from a pleurisy of a month's duration. About two litres of liquid had been discharged to the great relief of the patient; but, after coughing and speaking quietly for a while, he complained of feeling faint, and suddenly died. The autopsy furnished no explanation of the fatal occurrence. M. Legroux concludes as follows:—1. That sudden death, which is frequent in pleurisy with abundant effusion, is also to be feared when a large quantity of liquid has been withdrawn by operation. 2. This mode of death is probably due to syncope. 3. The liquid should be slowly evacuated, and at two operations in preference to a single one. 4. The aspiratory apparatus may be suspected as having had something to do with this fatal accident. 5. A person who has undergone this operation should be carefully watched for some time after its termination, so that aid may be furnished at the slightest sign of syncope.—*Gaz. Hebdom.*, September 3.

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ABSTRACTS OF THE INTRODUCTORY ADDRESSES AT THE OPENING OF THE MEDICAL SCHOOLS.

GUY'S HOSPITAL.

The Introductory Lecture was given by Dr. Stevenson at 2 p.m. The lecturer took up as his topic the study of medicine. He made reference to the varying esteem in which the profession of medicine has been regarded in different ages, showing that it has not been invariably in periods of the greatest culture and enlightenment that its professors have been most honoured. Taking a hopeful view of the future, he combated the assertion of Dr. Gregory, which has recently been publicly referred to, that medicine will soon cease to be considered a liberal profession, and asserted that on the members of the profession it depended whether medicine should be regarded as a liberal profession or not. Should gain, greed, and applause be the aims of our profession, the worst anticipations might be expected to be fulfilled; whilst if knowledge of disease, culture, and an honourable professional spirit be dominant, the medical profession need not fear adverse criticism.

The qualifications necessary for the study of medicine were next touched upon, and thoroughness of study inculcated, together with the acquisition of accurate knowledge and a sound judgment. In the acquisition of these the teacher could but assist; and the requisite opportunities being given, it rested with the student to make right use of them.

In the more detailed exposition of his subject, Dr. Stevenson drew a distinction between the preliminary and more scientific studies which first engaged the attention of the student—the basis of medicine, and the study of medicine proper (in which term was included medicine and surgery in all their branches).

When natural science first began to make rapid strides, too much was expected to be the immediate and direct result of scientific study: all our old notions were to be overturned and superseded. Such, however, has not been entirely the case; and now the mutual relations of science and medicine are perhaps better understood.

Anatomy, chemistry, and physiology were next considered, and then it was pointed out that these are auxiliary to the study of clinical medicine, which, indeed, is to be the central object of the student. The mutual relations of patients and students were also dealt with.

The desirability of making a study of preventive medicine and the use of statistics in determining the healthiness or unhealthiness of communities received notice, and it was urged that it should no longer be possible to say that medical men, as a rule, care nothing for sanitary science, and even view it with suspicion.

The system of stimulating students by prizes was also defended, where not carried to excess; as also the moderate indulgence in manly sports. The lecturer concluded with an exhortation to the students, manfully and at all times to do their duty to the profession and to their patients, and not cease the study of medicine when a qualification to practise it had been obtained, but to make it a life-long study.

KING'S COLLEGE.

The Introductory Lecture was delivered by Dr. John Curnow, Professor of Anatomy. The lecturer began by welcoming the students, and by referring to the changes in the medical staff during the past year, and to the completion of the new physiological laboratory, which is one of the most perfect in its teaching appliances either in Great Britain or on the Continent. After pointing out that the purpose of an introductory address was to benefit the student, and not primarily to instruct the lay public, he passed on to the question of "Medical Education, its Spirit and its Method." Preliminary or general education was defective, and the standard low, and should be improved, in order that the student of medicine should not have to start under such disadvantages as at present; for, generally speaking, his training in the classics was very superficial, he possessed little knowledge of physics, and was entirely unacquainted with the most elementary facts and laws of biology. Those whose powers of observation and reasoning had been called forth during school-life had an immeasurable advantage; and the innovation by which a scientific training had of late years, in a few cases, taken the place of an early apprenticeship to the practical details of medicine and surgery, was greatly to be commended. The medical sciences were to be mastered in their liberal as well as in their technical aspects; for, although most students were fairly well informed in the latter, the benefits of mental discipline and of correct habits of thought were too little appreciated. Questions of mere utility were frequently allowed to overrule the advantages derived from a cultivation of the powers of observation and of the faculties of instituting proper experimental inquiries, and drawing just conclusions from them. Hence students rested too much on authoritative teachings, and made little use of their individual judgment, which was so necessary in their after-practice. Demonstration of everything that can be shown is the all-important means of education. Although this system had been greatly developed in late years, yet it was merely a return to the older plan of instruction, which had been temporarily thrust aside by the lecture-system, whose office was more to guide than to educate. Physiology particularly was now in need of this means of imparting a knowledge of its conclusions and the facts on which they were based; and the lecturer hoped that no penal regulations would retard the recent advances in extending or in teaching this science. Progress in medicine was "a function of two variables," direct observation and novel experimentation; and an education of the faculties by which those could be secured was the chief essential. After showing that anatomy, physiology, and chemistry were the great means of obtaining this result, and referring to the care with which they were taught, as far as the healthy body was concerned, the lecturer thought that the teaching of morbid anatomy, and especially of pathology, might be improved and made more practical. He next adverted to the charms of scientific pursuits, especially of those which dealt with the phenomena of life; and to their uses in correcting the inevitable tendency of a purely mathematical training to lead us to expect definite results. In the medical sciences, probable and approximate data only could be obtained; and the anticipation of grasping all the factors engaged in the production of a diseased state, and of possessing certain and reliable means of combating it, was quite Utopian. The practical side or *art* of healing is, therefore, not necessarily dependent on theory; and so especial care must be taken to acquire as good a knowledge as is possible by "bedside" study. Neither the scientific nor the practical excludes the other, but they should be cultivated side by side. He alone is learned who reduceth his learning to practice; and practical skill without learning degrades our profession to the level of the days of barber-surgery and mediæval medicine. The history of medicine was then appealed to, in order to show that the scientific portion had reflected in every age the state of the sciences in general and the phases of speculative thought. Still a large amount of medical practice of great value was purely traditional; and this comprised the employment of many very important drugs. It was here that such scope was found for individual skill and dexterity. Some striking examples were quoted, where remedies had been neglected for long periods, and then again brought into every-day practice, so that the importance of tradition might be quite evident. The stages through which medicine had passed indicated that every succeeding age had drawn a wider circle round the knowledge of its predecessor; and the same process was still going on, and would go on in the future. Medical education two centuries ago was contrasted with the present method; and the address was concluded by pointing out the life-long nature of all education, the advantages of order, method, and a proper spirit in its pursuit, and the necessity of a never-ending patience for its consummation.

ST. MARY'S HOSPITAL.

The Introductory Address at this Hospital was delivered by Dr. Randall, Lecturer on Medical Jurisprudence and Hygiene. The lecturer began by stating, that as the advice given to those entering their profession had been well-nigh worn out, and addresses on medical education had been often published, he should begin by touching on a hygienic subject, as a part of State medicine, before dealing with the ethics and mental discipline of student-life. He did not intend to dwell upon

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the air we breathe, the water we drink, and the food we eat; but on the earth as a receptacle for the dead—perhaps not a pleasant subject, but one exciting much interest and attention at the present time.

The productive earth is health-giving and health-destroying, also a purifier and preserver, or antiseptic. After mentioning the health-destroying effects of the earth, and referring to its various conditions under which good and efficient drainage was the only preventive of disease, he proceeded to refer to the purifying action of some kinds of soil, which acted by facilitating decay and preventing emanations, and then reviewed in detail the preservative qualities of different kinds of earth, and the modes adopted by some nations for preserving and others for destroying the body. He illustrated the result which dry and sandy soil seemed to have in not permitting decomposition by examples of the dry and calcareous vaults at Toulouse and Dublin, and of bodies found in Peru in a state of preservation, buried in those sandy regions where the rain never falls, whence the sand is rendered so perfectly dry as to cause absorption so rapidly that putrefaction does not take place. He alluded to the dryness of Upper Egypt, to the localities of the catacombs both in Egypt and Rome, and to the mode of embalming the bodies in Egypt.

He then explained the results of some experiments in the use of charcoal, as proposed by Mr. Haden, and its adaptation to the double wicker coffin when kept above ground; the result being that three or four inches of charcoal, as the intervening space between the outer and the inner basket, were not sufficient, nor six inches; it was not until twelve inches had been reached that offensive emanations, and the evidence of ammonia, carbonic acid, and water charged with organic matter, ceased to be given off. Without disapproving of bodies being placed in wicker baskets so as to come in contact with the earth, he did not advocate Mr. Haden's plan of burying the dead, with the known object of their being consumed and exhumed at the end of a certain time that others might be placed in their stead. Do not our notions run counter to such expedients? Are we not imbued with the principles of inviolability of our graves and cemeteries? Is not the burial-ground "God's acre"?

> "I like that ancient Saxon phrase, which calls
> The burial-ground "God's acre": it is just;
> It consecrates each grave within its walls,
> And breathes a benison o'er the sleeping dust."

If a cemetery is filled, is it not preferable to have a new one rather than that the ground should be disturbed and turned up? Let us remain where we have been placed; let that mould with which we are mixed, and a part of which we form, remain quiescent, and not be made to form a fresh mould to imbibe the emanations and to purify the exhalations of that putrid body which will be put in our stead. In the words of the late Rev. Canon Dale, "For all must feel that an unbroken sod beneath the canopy of heaven is better, far better, than a pyramid which enterprise can penetrate, or a catacomb which curiosity can explore"; and further to quote his words, "Grant that in less than a century even this wide space be fully occupied, yet the shady grove, the quiet walk, the graceful tree, the budding rose, the springing flower, yea, even the grey worn stone, will be profitable and pleasant to the living."

The lecturer then referred to the proposal for burning our bodies, called "cremation," as a heathen and pagan custom, which could not be approved of in a Christian country. The present proposal of burning the dead in reverbatory furnaces or near gas-works, is something more than disagreeable; it appears revolting and almost brutalising. This dismal annihilation, taught by the Pagans, has in it something so unsuited to the wants of a Christian world, that it takes us back to the ages when those barbarous customs were in vogue, as unsuitable to us, as to have our bodies exposed on the summits of the "towers of silence," there to be devoured by the ravenous birds of the air, or to be thrown into the sacred Ganges, a prey to the rapacious reptiles.

The lecturer lastly referred to the great age of Egyptian mummies—one having been unrolled by Mr. Pettigrew, which he dates as being 1430 years before Christ, or twenty-one years after the death of Moses; hence, 3305 years old—a historical wonder, which seems to make past things appear closer, and is one of the things that are like magnifying-lenses, through which we can look at past times, and bring them nearer. Turning from "grave to gay," Dr. Randall then addressed himself to those who were studying the profession, and more especially to those who were commencing. He exhorted them to consider well, and reflect upon the exertions which would be required of them, and the amount of labour which was before them. They ought with a determined mind to fix their line of conduct, and to repeat, "To be or not to be, that is the question." Their answer should be a ready and quick one—"To be" what those who brought them up and nurtured them expect them to be; what their teachers desire them to be; what their school, for its honour and reputation, demands them to be; and what their conscience tells them to be—diligent, hard-working, and attentive and determined students. He reminded them that they had passed the school of their boyhood, and were now entering that of their manhood, and that the strict discipline of the school of their youth having ceased, they were now comparatively free agents, and their moral and mental discipline, regularity, and orderly conduct rested with themselves. Lecturers and tutors had been appointed to teach them, to assist, guide, advise, and encourage them; and provision for studying and becoming acquainted with disease had been made for them. He said: The trench has been mapped out and dug; it is for you to lay the foundation, to lay a substantial and lasting one; to fill up this trench, and raise it by degrees to a superstructure—a temple of knowledge, which, it is true, will take a period of four years to build; an apparently long time, therefore the more likely to be well and firmly built, and well furnished.

He pointed out to young beginners the necessity of making a good start with anatomy, histology, and chemistry, and the advantages of thorough knowledge of each subject. He exhorted them in their moments of despondency and anxiety—for the most conscientious students were often the most anxious—to remember that determination and perseverance were more necessary for success than great talent or ability.

After strongly recommending the study of anatomy, which he said required attention, observation, and memory, he reverted to chemistry and natural philosophy. He believed that chemistry had of late years been neglected, and he said: Chemistry has now become a most important element in your education. Pray do not neglect it; without it you cannot study physiology advantageously, nor pathology, nor the principles upon which the treatment of many diseases is based. Under the present system of appointments, many or most of you may become sanitary officers, or have something to do with sanitation, and without you assiduously go through a regular course of the elements and theories of that science, you will not comprehend its complications, or be able to cope with future difficulties.

He advised the study of the laws of light, heat, and electricity, as this branch of physics had become a powerful factor in the treatment, diagnosis, and prognosis of disease. He illustrated this by different instruments now so much used, including the microscope and clinical thermometer, which was an instrument as replete with safe diagnosis and prognosis as the stethoscope. Again, electricity and galvanism, which as therapeutical agents have made such rapid strides in the last few years, the beneficial effects of which, as remedies for the relief of pain, and the restoring of a paralysed limb to use and feeling, or as stimulants, tonics, and sedatives, yes, even to the arresting of hæmorrhage, and of saving life, are now fully recognised.

In the study of chemistry and physics, the reasoning and calculating faculties will be brought out: you will have scratch and slate work, and thus, combined with those already mentioned in the study of anatomy, a training of the mind will be formed—a necessary training,—and as good and efficacious as could be found in the mental training of the best of our educational bodies. Soon you will reach the wards of your hospital, there to learn and diligently watch the symptoms and signs of disease, the action of remedies, and the means adopted to relieve pain and to cure.

You may rest assured that if you begin well, and learn slowly and gradually and effectually, and are well grounded, you will attain your end, and enter life as an honest, efficient, and faithful practitioner. He who sows ought to reap, but if you have been idle and careless and inattentive, you will deeply repent of your conduct, you will have no confidence in yourself, nor be trusted by those who employ you.

> "He that trusts you,
> Where he should find you lions, finds you hares;
> Where foxes, geese; you are no surer, no,
> Than is the coal of fire upon the ice,
> Or hailstone in the sun."

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You will not have the boldness of the lion—that is, commendable assurance and reliance; nor the cunning of the fox—that is, wisdom and aptness gained from knowledge; but truly you will be as timid as hares and feel as foolish as geese; your reputation will be extinguished like the coal of fire upon the ice, or melt away like the hailstone in the sun.

He believed that there was a want of perfection in learning, and reminded them that the secret of being successful and accurate as students, next to perseverance, was the constant habit of reviewing the same subjects daily, weekly, and monthly.

In reviewing, he advised them to try and write what they remembered; "for the habit of writing, by which you attain a facility of describing accurately, is of paramount importance, not only for the sake of learning well, but also with the object of attaining that art for particular occasions, when your knowledge will have to be tested at the different examining boards, and for competitive appointments. Remember that if Bacon said that 'reading makes a full man,' he also said that 'writing makes an exact man.'" He then earnestly recommended them not to enter into sports or games which would interfere with their attendance at lectures or more important instruction in the wards.

After some further remarks upon the line of conduct which the students ought to pursue during their studies, the lecturer, in conclusion, said—"Educate your minds to thoughtful and careful study; the training which you will thus acquire will render you more fit to gain that most important knowledge to be acquired at the bedside; it will tend to make you expert clinical observers and practitioners—the object of all your learning. Do not let this opportunity of acquiring knowledge pass by. Do not let this vast field of information run to waste; store and husband it as you would the best riches of your professional life, and be assured it will form the backbone of a successful career in after days. And thus, session after session, if you feel that you have been a real worker—that you have employed your time diligently and assiduously—that you have used the abilities with which God has endowed you to the best advantage, to the satisfaction of your own conscience and to that of your teachers—you will possess such an inward feeling of comfort and of pleasant reflection, that you will be able to exclaim with the French poet Lamartine—

"'Le jour c'est ecoulé comme fond dans la bouche
Un fruit delicieux sous la dent qui le touche,
Ne laissant après lui que parfum et saveur.
Oh, mon Dieu! que la terre est pleine de bonheur.'"

ORIGINAL COMMUNICATIONS.

THERAPEUTIC NOTES.

By Surgeon-Major FRANCIS R. HOGG, M.D.,
Fellow of the Royal Medical and Chirurgical Society.

In 1863, Dr. John Wilkie drew up a list of articles of materia medica procurable in bazaars in Upper India; for instance, acacia, aconitum heterophylum (commonly called *atees*), acorus calamus, antimonii sulph., arsenic, berberis asiatica, borax, camphor, cannabis sativa, capsicum, colchicum, convolvulus scammonii, croton tiglium, datura, stramonium, cupri sulph., ferri sulph., galbanum, gentian, hydrarg. bichlor. et bisulph., hyoscyamus, juniper; oleum lini, papaveris, ricini, sesami, sinapis; opium, plantago isphagula, potassæ nitrat., punica granat., quercus infectoria, gallæ, rheum, scilla indica, sarsaparilla; sodæ carb., sulph., muriat.; strychnos nux vomica, sulphur. Amongst other remedies, aloes, alum, assafœtida, bael, chloride of ammonium, chiretta, turpentine, may also be purchased. A choleraic kind of damson plum-tree called "jaumon," when made into vinegar or jelly, is said to be valuable for enlarged spleen. The babul bark (*Acacia Arabica*), when made into a decoction, is given in chronic diarrhœa, besides being used in conjunction with astringents as a vaginal injection, rectal enema, or gargle for sore-throat. The babul yields gum, fodder for goats and camels, thorny branches for fences, and an excellent timber for agricultural purposes. On the line of march, the baker placing an iron crinoline on the ground, covers it over with mud, just leaving a small orifice in what looks like a beehive—in reality, an admirable oven, in which most delicious bread is baked; the heat generated by burning logs of babul; all ash and *débris* of course swept out before the introduction of the loaves on iron platters. Next day the iron cage is cleaned, to be daubed again with fresh mud at the next camping-ground. Dr. Waring has published a most interesting book on the common medical plants of India; and with this at my elbow, besides the statements of residents to rely upon, it is noted that the natives believe in atees in half-drachm doses in intermittent fever, taking also kaladana-seeds as a purgative, or ipecacuanha as emetic; and the anti-periodics include gulancha, bonduc-nut, chiretta, and nim. Chiretta-tea is largely consumed by European soldiers and their families for many months in the year, with occasional advantage. Nim-trees are very abundant—the bark, a valuable astringent tonic, given in drachm doses or in two ounces of decoction, and a tincture is now being extensively tried for paludal fevers with a certain amount of satisfaction. Externally, the leaves make an admirable poultice, somewhat pungent at times, very useful in hepatic or splenic congestion or when applied to old, indolent, ill-conditioned ulcers. A severely sprained ankle caused by a dangerous accident connected with equitation was rapidly cured by fomentations and poultices of nim. One side of a plantain-leaf irritates, whilst the other heals a blistered surface. Waring includes Gurjun balsam for gonorrhœa (without allusion to leprosy), and the oil of the white shark would appear a powerful rival to that of the cod. In the *Medical Times and Gazette* for 1874 Dr. Fayrer recommends Goa powder for ringworm generally, including chloasma and that distressing prurigo of the nates so often an indication of impoverished blood. Goa powder, or chrysarobine, is said to contain chrysophanic acid, antagonistic to animal or vegetable parasites. Having tried nitrate of silver, carbolic acid, chloral, tincture of iodine, tincture of steel, and bichloride of mercury with indifferent success, and hearing so much in favour of chrysarobine, it shall have fair trial. Mr. Gaskoin, who apparently practises in London, throws cold water on this remedy. The powder, dissolved in vinegar or lime-juice to the consistency of cream, is applied over the eruption. In my garden, or in the hospital grounds, or along the roads, will be found the papan-tree, useful for lumbrici, the mulberry for coughs, and the tamarind and the lime for fever-drinks, besides the nim and the sturdy babul. Ruskin tells us that the sacred chord of colour as appointed in the tabernacle was composed of blue, purple, and scarlet, with white and gold. Perhaps the eternal white faces, clothes, and walls of Europeans, the mud-coloured faces, clothes, and habitations of natives, turn the wearied eye towards the fleecy clouds, relieved by shades of rose-pink or azure blue at certain seasons, when the peaks of the Himalayas are so transcendently lovely; or towards the roses, violets, butterflies, or green trees and shrubs. The rich dark-green leaf, the damask flower, the golden fruit blushing a coral red, always attract admiration to the pomegranate: the rind of the fruit useful in diarrhœa and dysentery, the root-bark of the male tree for tape-worms. The bael fruit, so valuable in dysentery, has a pleasant pungent taste, and in jam, jelly, or sherbet form is almost delicious. Space wasted on the pomegranate leaves no room to dilate on the varied infinite virtues of ipecacuanha, so useful when administered in enema of warm milk. The sweet flag and the omum seeds for debility and dyspepsia have yet to be tried. Plantago isphagula seed, commonly called Æsop gold, is considered by very many a specific for dysentery. Two drachms of the seed, mixed with sugar-candy—the seeds exhibited whole,—absorb in their passage through the intestines as much fluid as will make them swell. By the time they reach the central or lower portion of the canal, the seeds give out a bland mucilage,—the therapeutic value increased by giving the patient an anodyne enema and restricting food.

Chloride of ammonium, price one shilling a pound, is sold extensively in Indian bazaars, for cleaning gold lace, as well as for medicinal use, and appears obtained from the unburnt extremity of brick-kilns in which camels' manure is used as fuel. Of course, dirty and impure, it requires to be dissolved, strained, and re-crystallised before internal administration. In England, sal-ammoniac appears chiefly used for cold lotions or freezing mixtures; yet for years the Germans and the French have used it as an alterative deobstruent: and, in that interesting work the "Indian Pharmacopœia," the properties of chloride of ammonium include being useful in chronic affections of the lungs, liver, spleen, in hepatic or ovarian dropsy, in passive hæmorrhages (especially hæmoptysis), in facial neuralgia, rheumatism, sciatica, amenorrhœa, whooping-cough, intermittent as well as remittent fevers.

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Locally it has been applied to indolent tumours, enlarged glands, incipient mammary abscesses, hydrocele, bruises, strains, and certain cutaneous diseases. One reads constant praises of the bromide, the iodide of ammonium, yet scarcely ever even mention of the chloride. Just as Dr. Docker revived the fame of ipecacuanha, so did Dr. Stewart, in 1870, endeavour to introduce into notice the varied virtues of chloride of ammonium, and was, according to custom, promptly contradicted. The fact is, he tried to prove too much: for instance, that the remedy would charm away the pus out of an abscess or abscesses in the liver; would bring the sides of the cavity together, and, with a reduced, reinvigorated liver, the patient would go on his way rejoicing. Dr. Stewart gave scruple doses morning and evening, kept his patients very still, and on the lightest of diet. His idea was that chloride of ammonium, besides being a general stimulant—diaphoretic, laxative, diuretic, and sedative,—relieved the portal circulation, causing also absorption and elimination of diseased products. Very many medical officers think highly of this remedy: others say it is worse than useless, causing dysentery. So far, in remittent and intermittent fevers, in hepatic congestion or splenic enlargement, the satisfactory results are sufficiently encouraging to make extensive trial of chloride of ammonium. Whooping-cough is comparatively seldom met with this year, otherwise one would like to try this remedy in conjunction with others. Clearing the decks with hydrarg. cum cretâ and ipecac., I would give chloride of ammonium during the day, belladonna at night; would give the child an occasional hypodermic injection of quinine under the scapula, besides applying stimulating liniments over the spine and stomach. Very possibly an occasional hypodermic injection of apomorphia over the stomach might be of service in this troublesome, dangerous, intractable disease, whose complications so often lead to permanent mischief.

PUERPERAL SUSCEPTIBILITY TO SPECIFIC INFECTION.

By Surgeon JOHN C. LUCAS,
H.M. Indian Army.

The following cases, which came under my observation, tend to support the view that the parturient female is more susceptible to specific infection:—

Case 1.—In the autumn of 1873 I attended Mrs. D. L., aged twenty-nine, residing in Robertson's-close, Cowgate, in Edinburgh. This is an unsanitary part of that clean city, as regards filth, bad drainage, overcrowding, etc.,—in short, everything that can favour the production and spread of zymotic diseases; and at this time enteric fever was prevalent. The labour of this woman, which was at full term, was perfectly natural, and her general health was at the time apparently fairly good. On the ninth day after parturition she experienced a chill and general *malaise*, and though at the onset there was some difficulty in the diagnosis, the case soon proved to be one of unmistakable enteric fever. Now, what seems remarkable and striking in this case is, that during what must have been the incubative period there slept in the same room her husband, aged forty; and another room which was immediately adjoining was occupied by another married couple and their three children; and, strange to say, not one of these latter took the disease, though they were equally, if not more, exposed to the same exciting cause, whether originating from an affected person in the vicinity or whether originating *de novo*, or, again, whether in this case the contagium was conveyed through the medium of the drinking-water or the atmosphere (*i.e.*, in other words, whether the affection be contagious, or infectious, or both). These and other conditions were seemingly common to them all, and still this woman should only be specially selected and attacked by the disease, for no other reason that I can see but for her puerperal state, on account of which her lymphatic system absorbed the specific virus with greater facility; or it might have been that the degree of concentration of the poison was not sufficient to tell upon the other occupants, whose physiological conditions were as if equal to cope with, and resist, the action of the morbific agent.

Case 2 occurred to me in a practice in Somerset. The patient was a young woman, aged twenty-two, who was recently confined. In the same house there lived her sister, who was a laundress, and who had been washing the linen of a family where there was scarlatina. The children of the latter woman sickened with the exanthem, and she of course nursed them as well as continued to attend on her lying-in sister, between whom she was the medium of communication, and, though she became the carrier of the scarlatinal poison from the children to her sister, who afterwards had the disease in a mild form, she herself escaped its influence. My notes, moreover, say that neither of these women had had the disease in their infancy.

Case 3.—In this instance the patient, instead of sickening for the particular disease to the poison of which she was exposed, became subject to a very severe form of adynamic puerperal fever, which very nearly carried her off. The patient was aged twenty-six, residing at an unhealthy part of Hammersmith, and during her pregnancy had very frequent and profuse attacks of uterine hæmorrhage, which destroyed the fœtus in utero, and rendered her excessively anæmic and feeble. The symptoms of pregnancy gradually subsided—so much so that the case simulated one of a solid tumour in the womb. As the hæmorrhage continued, and as there was every sign, positive and negative, to show that the fœtus was not alive, premature delivery was effected, and a decomposed fœtus expelled. At this time measles was prevailing in a very fatal form amongst children, especially of the poorer classes, in Hammersmith, as well as in other parts of London; and, if I remember rightly, her own children had the disease. Four days after delivery she had rigors, and symptoms of metritis set in, the fever of which put on a low or typhoid character. Enormous abscesses formed in the groins, from which, and from others, vast quantities of very offensive matter were withdrawn. The patient also had pneumonia, and expectorated purulent stuff of exactly the same nature as that from the external abscesses. Notwithstanding this extremely bad pathological state, she fortunately made a recovery, though after a very protracted convalescence. I carefully inquired, and found that there was no puerperal fever in the neighbourhood. My firm belief is now, as it then was, that in this instance the exciting cause of the very malignant fever from which this poor woman suffered, emanated, not from a puerperal fever case, but that of rubiola. The uterine hæmorrhage which so debilitated her predisposed towards it.

These few cases go a long way to prove the latter part of Mr. Orton's belief, "that there is a peculiar susceptibility to infection during the puerperal state" (*vide Medical Times and Gazette*, May 15, 1875); and if carefully sought after by those engaged in large general practices, the same important and interesting fact may be observed: which, if it be the case, would imperatively lead obstetricians and general practitioners to take additional precautions of placing their puerperal patients under as good hygienic conditions as possible, as well as for themselves, when attending on obstetric cases, to keep aloof from zymotic diseases.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES OF FRACTURE OF THE SKULL.

Case 1.—*Fracture of Base and Vault of Skull—Paralysis of Left Side of Body—Scalp Wound—Death.*

(Under the care of Mr. BIRKETT.)
[Reported by C. F. PICKERING.]

Daniel M., aged fifty-two, watchman, was admitted in accident ward, July 14, 1874. This man was brought into the hospital, at 8 a.m. this morning, with fractured skull. He was watchman in a dockyard, and last night, as he was on duty, he fell into a dry dock nineteen feet deep.

On admission, both pupils were acted on by light; he had a cut on the left side of head about an inch long—there was a rough edge of bone to be felt. He had paralysis on same side as the injury, and subconjunctival effusion. He was insensible until he died, which was at about 11 p.m. of the same evening.

Post-mortem.—There was fracture through both orbital

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plates, and the dorsum ephippii had been broken off. There was a large clot of blood under seat of injury, from rupture of middle meningeal artery.

Case 2.—Fracture of Base of Skull—Violent Bleeding from Nose and Left Ear—Subconjunctival Ecchymosis—Left Hemiplegia—Violent Delirium—Death on Fifth Day.

(Under the care of Mr. BIRKETT.)

[Reported by Mr. E. C. BEALE.]

Thomas B., aged thirty, dockyard labourer, was admitted to Lazarus ward on January 25. Patient is unmarried, and has been generally healthy. Lost the sight of his left eye early in life, and is deeply pitted about the face with small-pox. On January 25 he fell on board a vessel in dock down into the hold, striking his head heavily over the left eye.

On admission, there was violent bleeding from the nose and left ear; left eye was completely closed, and there was subconjunctival ecchymosis, as well as much discoloration over and round the left orbit. Patient was breathing quietly, and was insensible until he had been in about half an hour. He then complained of pain over left eye, and was partially sensible. In the afternoon of the 25th he vomited some blood, altered by gastric juice. No clear fluid came from the ear. Bleeding ceased.

January 26.—Patient appears better. There has been no recurrence of bleeding, and ecchymosis over orbit is subsiding. Pulse 72, very irregular; temperature 98°; respirations 20.

27th.—Very restless to-day. The left side of the face has fallen, and the muscles are paralysed on that side. Tongue, which is bruised on left side, also hangs over when protruded.

28th.—Patient is beginning to be delirious, but appears partially sensible now and then. The paralysis of the face is more marked. Pulse 62, more regular. Milk diet only.

29th.—Since 4 a.m. patient has been delirious and very violent, and has to be strapped down to the bed. Pulse 108; temperature 102·4°.

30th.—Patient died about 3 a.m. this morning.

The next case is one of fracture of the base of the skull, with escape of cerebro-spinal fluid, followed by death. In this case the symptoms were from the first serious, and indicative of more mischief than fracture of the bones and laceration of the membranes. At the post-mortem examination it was found that the base of the brain had been considerably damaged, though not on the same side of the median line as that on which the bones and membranes were injured. The following are the notes of the case taken by Mr. Birkett's ward clerk, Mr. Lowdell:—

Case 3.—Fracture of the Base of Skull, with Escape of Cerebro-Spinal Fluid—Contusion of Brain—Death.

(Under the care of Mr. BIRKETT.)

James McK., aged thirty-three, a boot-closer, residing at Sunbury, was admitted into Lazarus ward on December 29. Patient is a married man, and has had four children; two only are living now; the two others died from premature birth. Patient has always been a healthy man; never had any illness. The present injury was caused by the patient falling from the top of an omnibus. He was brought in here on the 27th insensible, and remained so till about nine o'clock the next morning, when he first spoke.

On admission, there was yellowish discharge from his left ear, slightly tinged with blood; this has ceased to flow this morning. It was tested by Mr. Morley, and found to be cerebro-spinal fluid, with a trace of albumen. He has a sharp shooting pain all about his forehead, and feels sick, but has not vomited. He has taken nothing but milk since he came in, and has ice applied to his head. Temperature 104·1°; pulse 68; respirations 28. Bowels have not acted since he came in; vomited this morning. Evening temperature 103·8°; pulse 80.

December 30.—Temperature 100·4°; pulse 98; respirations 20. Is ordered—℞. Pil. cal. c. col. gr. x. statim, calomel. gr. v. statim (mitte gr. x.); is taking milk and tea. Feels better this morning, but is still very low. Head aches, and has ice applied. Bowels acted several times (not known exactly how many). Evening temperature 103·2°; pulse 44.

31st.—Has lain on his back and thrown the bedclothes off his chest since three o'clock in the morning. Is insensible, at times breathing extremely hard and quick (respirations 48), then seems to stop so that respirations can hardly be noticed. Pulse is very weak and irregular. Still has ice applied to his head, which is shorn. His skin is spotted and bluish; eyes sunken, and pupils equally dilated. Temperature 102·8°. Died this day at 1.20.

At the post-mortem examination made on the day after the patient's death by Dr. Fagge, it was found that the fracture extended from the top of the squamous portion of the left temporal bone, across the basilar process, but the pulping of the brain was on the opposite side and on the middle lobe. There was an effusion of pus on the anterior part of the brain, and more on the right hemisphere than on the left. The viscera were pretty healthy. The tubes of the lungs were rather enlarged, extending in some places almost to the surface. The spleen was extremely hard. The patient died of meningitis.

Case 4.—Fracture of Skull of four weeks' standing—Secondary Injury to Head, followed by Unconsciousness and Symptoms of Inflammation of Membranes.

(Under the care of Mr. COOPER FORSTER.)

Robert M., aged sixty-five, zinc-worker, was admitted on December 30, 1874. Patient has had no illness to speak of before this, but he has been a very hard drinker. On inquiry, patient stated that about four weeks ago he was tripped up by a soldier and fell, striking the right side of his face and head on the ground; at that time he bled from the nose, and the bleeding continued for two or three days. He was very much stunned by the blow, and says his head has not been free from pain since. He also mangled his thumb and left arm very severely. He went to a metropolitan hospital at once, where his arm was put in splints and his thumb bound up. Yesterday afternoon patient slipped and fell backwards, striking his head. He was unconscious for some time after the accident, and until about 6 a.m. this morning, when he began to call for his daughter. He was not coherent in his speech, and was very irritable all day. He was brought to the hospital at 5.30 p.m., being at the time of admission very noisy, until put on the couch, when he turned on his left side and became more quiet.

On examination, his pupils were contracted and equal, his pulse slow; there had been some bleeding from his mouth while being carried to the ward in strong room on a stretcher. He shouted and struggled very much when put to bed, but afterwards curled himself up on his left side and had some sleep. He breathes naturally. Ice was applied to head. When he was admitted, his arm was still in splints and his thumb was bound; there was a bruise just about the elbow of the left arm.

December 31.—Slept well, muttering occasionally; drank some milk; passed urine twice voluntarily; bowels not moved. Pulse 60; respirations 20. Occasionally sensible.

January 1.—He is partially sensible to-day. During the night, from three to five, was very restless. Pulse 74.

2nd.—Answers questions, and can describe his former accident. An abscess was opened in the left arm to-day; it discharged a quantity of pus.

3rd.—Pulse 64, irregular; sensible.

4th.—Patient is sensible, and does not complain of pain in his head.

6th.—Mist. pot. chlor. ℥j., t. d. s. Patient is much the same as on the 4th. Is quite sensible, but rather cross.

8th.—Patient took off the ice from his head, and says it is much better. His mouth is better.

11th.—Patient refuses to take his medicine, because, as he says, it does not benefit him. Lint soaked in cold water applied to his head, which, patient says, pains him very much.

13th.—Patient was rather violent yesterday, desiring to go home. Asks for some spirituous liquors, and will not take his medicine. Says his head is very painful, but will not have the ice on. The wet lint still applied to the head. His arm seems very painful; there is another abscess forming near the first.

31st.—Relieved.

Case 5.—Fracture of the Base of the Skull, etc.—Good Recovery.

(Under the care of Mr. BRYANT.)

William S., aged twenty-six, came under Mr. Bryant's care at Guy's Hospital in February for dislocation of the thumb; and on taking the history of the case it was found that he had also received at the same time a fracture of the base of his skull. The history was as follows:—On August 21, 1867, when at sea, he fell into the hold of a ship (a height of twenty feet) upon his head. He was taken up insensible, bleeding from severe scalp-wounds situated over and behind the *right* ear. He remained unconscious but quiet for three days. During this time he vomited much blood. After

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the third day he became delirious, and remained so till the fifth, the captain of his ship, who acted as doctor, thinking he was sure to die. He then became conscious, and all mental disturbance gradually subsided. At this time, according to the captain, his face was drawn completely to the left side, and the right eye was fixed open. He had also dimness of vision and difficulty in articulation. These symptoms lasted until the end of December (about four months), and then gradually began to improve. He was deaf also on the right side after the accident. He does not know whether he bled from the ear or not.

On admission, he was quite deaf in the right ear; there was also some partial paralysis of his right face. He could close his eye, although not completely. His face was slightly drawn to the left side. He was unable to whistle.

It is tolerably certain that this man had been the subject of a fracture through the middle fossa of his skull, from which a good recovery had taken place.

GREAT NORTHERN HOSPITAL.

CASE OF SUPPOSED SYPHILITIC SARCOMA OF THE PHARYNX AND UPPER JAW, SIMULATING NASO-PHARYNGEAL POLYPUS.

(Under the care of Mr. W. SPENCER WATSON.)

Susannah F., an apparently healthy girl, with a fresh colour and clear skin, aged ten years, was first brought to Mr. Watson, at King's College Hospital, in April, 1863, on account of obstruction of the nostrils and a flattening out of the bridge of the nose, accompanied with severe pain. The flattening of the bridge of the nose and stuffiness of the nostrils had been noticed by the girl's mother about four months, and during this period several of the girl's teeth had become loose and had fallen out, so that she had lost all the incisors and bicuspids. She still, however, continued well nourished.

Her mother was a weakly, haggard-looking woman, who had three other living children, and had had two miscarriages. The girl Susannah, when an infant, had suffered from sores about the anus soon after her birth, but her milk-teeth were sound and good, and there had been no eruption on her body. The two nasal bones were both thrust forwards, the right being the more prominent. She could force air through the nostrils with difficulty, and there was nothing abnormal visible through the anterior nares. Posterior rhinoscopy was attempted, but failed. She had a muco-purulent discharge, sometimes offensive, from the nostrils; there was a softening and yielding of the front part of the alveolar ridge. Passing the forefinger behind the soft palate, a firm nodular mass was felt projecting from the posterior aperture of both nostrils, but chiefly from the right. On the anterior aspect of the third and fourth cervical vertebræ a distinct enlargement was felt projecting into the pharynx.

In February, 1864, the flattening of the nasal bridge and the distance between the eyes had increased, and the posterior nares become still more obstructed, while the tumour in front of the vertebræ projected more and extended higher. There was now much difficulty in swallowing.

March, 1864.—All the teeth have now fallen out of the upper jaw. She complains of severe pain at the back of the neck, but is otherwise in good health.

January, 20, 1865.—A nodal swelling has appeared over the left side of the frontal bone; this swelling is very tender on pressure. The intranasal and pharyngeal tumours remain in much the same condition. [The nodal swelling suppurated, and ultimately cicatrised.]

January, 1866.—She has grown much taller and thinner, but the nasal tumour remains unaltered in bulk or consistence.

March, 1873.—The patient was again sent to Mr. Watson, at the Great Northern Hospital, eleven years after he had first seen her. In this time she had grown very tall, but very miserably thin and cachectic. Her forehead was marked by numerous white cicatrices along the line of the eyebrows, the upper jaw was much shrunken and contracted, and her soft palate was perforated by several apertures and ragged openings, the results of old cicatrised ulcers. She says her nostrils are completely closed, but she can still breathe a little through the left. She has occasional bleeding from the nostrils, and often very severe headaches.

CASE OF RECURRENT FIBROID POLYPUS.

(Under the care of Mr. W. SPENCER WATSON.)

Robert J., aged fifty-five years, a labourer in the country, came to the Great Northern Hospital in June, 1873, with an expansion of the bones and walls of the left nostril, which he said had been obstructed for seven years. The swelling had increased during the last eighteen months, and very rapidly within the last six weeks, and the surface had become of a slightly red colour, and the tears now constantly flow over the cheek in consequence of the obstruction of the lachrymal sac caused by the growth of the tumour. The left nostril is occupied by a reddish growth, which looks and feels, when touched with the probe, much firmer than the ordinary gelatinous polypus. It bleeds very readily when touched, and when an attempt was made by a surgeon in the country to remove it by avulsion with the forceps, very free bleeding came on.

The evident firmness of the growth, as compared with the gelatinous variety, and its probably high attachment, made it extremely probable that this was a fibro-sarcoma, and forbade the hope of removing it by the avulsion method, or by the snare or ligature. The following operation was therefore performed, the patient being under the influence of chloroform on June 18.

The left ala was separated from the cheek by an incision commencing from the inside of the nostril, and carried through the thickness of its attached border and upwards along the groove between the ala and cheek towards the inner canthus. The arteries divided in this incision were then tied, and the flap reflected inwards, exposing a fibrous tumour of about the size of a walnut. Its high attachment could not be reached, however, without dividing the bone at about the junction of the nasal process of the superior maxillary and the nasal bone. This done, the root of the polypus was easily torn away by passing the forefinger behind it and thrusting it forwards. It was attached by a very broad base to the anterior and upper part of the outer walls, and to a small portion of the cribriform plate of the ethmoid. The inner wall of the antrum had become much compressed and flattened in an outward direction, and one attachment of the tumour was at the margin of the orifice of the antrum, the two upper turbinated bones having been pushed aside and in part absorbed. Several separate gelatiniform masses were removed from the turbinated bones. The bones at the upper part of the cavity were well scraped by the gouge, and strong perchloride of iron solution was then applied freely to the surface of attachment. The edges of the wound were brought together with stout silver-wire sutures, and the line of incision covered with lint saturated with carbolised oil (one in forty).

The nostril was syringed out daily with a weak solution of carbolic acid (one in eighty), the discharge being for some days very offensive. There was also a slight threatening of erysipelas about the third day, which, however, soon passed off under the stimulant treatment with perchloride of iron, and thenceforward the progress of the case was perfectly satisfactory.

Six months after the operation he returned to the hospital; the wound had been healed entirely for some time, and the scar was only perceptible above the ala. The nostril was quite free from obstruction, and there was not the slightest overflow of tears. The patient expressed himself as being perfectly comfortable, and very pleased with the result of the operation.

The tumour, however, showed signs of a return about February, 1874, and a foul-smelling discharge began to escape from both nostrils. About the middle of April both nostrils were obstructed, and in the left there was a visible tumour of a greyish colour which bled on the slightest touch. Towards the end of the month he began to suffer from severe frontal and occipital headache, for the relief of which morphia was prescribed, first as pills and then in the form of hypodermic injections, but with only partial relief.

On April 29, chloroform having been administered by Mr. Eastes, the old line of incision was reopened, and a large soft polypus exposed, occupying the whole nasal cavity as far back as the sphenoidal cells and pterygoid processes. The deeper portion of the tumour came from the sphenoidal cells, and in order to reach them it was necessary to split up the nasal bones and to cut away a portion of the nasal process of the superior maxillary. The whole mass of the tumour removed was of the size of a small hen's egg, but it was so friable that it was removed piecemeal by tearing and gouging, and the knife was not required. The bleeding from the superficial parts was very free, and there was also considerable oozing from the deep

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attachments; but the application of the actual cautery to the former, and of a plug of cotton-wool to the latter, effectually checked it. On the following day he was quite free from the pain, and expressed himself as greatly relieved, having slept well with the aid of morphia. On the fifteenth day the superficial wound had healed, but the discharges from the nostrils were very offensive, in spite of the use of frequent injections of solution of permanganate of potash.

On June 17 he became delirious, and in a few days died with symptoms of intracranial disease, the nostrils having, during the last few weeks, become again completely obstructed.

Remarks.—The nodules of the tumour, after removal on the second occasion, presented on section a white mottled surface, with bloody points of extravasation, and had very much the aspect of brain tissue. Microscopically examined, they consisted of closely aggregated cells with granular contents and with no distinct nuclei. These cells had every variety of shape, and seemed to have assumed their various forms in consequence of very close packing. There was no intercellular matrix. A few of the cells were fusiform, with large nuclei; but the majority were those of embryonic connective tissue, and, though very various in shape, were tolerably uniform as to size. The above description is taken partly from my own observations, and partly from those of Dr. Thomas Parker Smith, who kindly undertook the microscopic examination of the tumour for me. I look upon the tumour as fibroid or sarcomatous, and as resembling the recurrent forms of epulis or fibro-plastic tumours of the gums.

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Medical Times and Gazette.

SATURDAY, OCTOBER 2, 1875.

THE PRESENT SYSTEM OF MEDICAL EDUCATION.

The question as to how far the present system of medical education meets the wants and requirements of the age, is one which is by no means unimportant, but demands careful consideration. The medical curriculum, as we now find it, is the gradual growth of years—nay, perhaps of centuries,—and it has from time to time been modified and added to, to meet the demands made upon it by the advances of medical science, and consequently the increased amount of knowledge required of the student.

This gradual growth is in some respects advantageous, as it is in many cases easier to add to and improve an existing system than to invent and institute an entirely new one; but, on the other hand, custom and old usage often perpetuate evils which the conservative spirit of our country, and the let-well-alone disposition of John Bull, render it extremely difficult to remove.

We intend, therefore, to make some inquiry into the manner in which medical men are educated in the present day, and to point out where we consider modifications or alterations in the system are advisable.

The education of a medical man is a much more arduous task now, both for the teacher and the student, than it was some years ago. This is in a great measure owing to the vast amount of work which the last few generations have produced in the medical field, which has caused each subject of the medical curriculum to assume such huge and unmanageable proportions, sufficient to strike terror into the heart of any student who is told that a competent knowledge of all these subjects is necessary before he can be considered fit to practise the healing art. Truly was it said long ago—"of the making of books there is no end"; and in no branch of knowledge is this more evident than in medicine.

Now as to the course of study. The General Medical Council, which is supposed to regulate—and no doubt does to a certain extent regulate—the education of those intended for the medical profession, has laid down certain rules as to the curriculum, or, rather, has made certain recommendations to the examining and licensing bodies, which they have adopted, and in accordance with which they have framed their regulations as to the education and examination of candidates for their diplomas. This being the case, the medical schools are bound to follow a certain course, and to teach the student the subjects in a certain order.

The ten subjects, a knowledge of which the Medical Council considers essential to the medical man, are anatomy, general anatomy, physiology, chemistry, materia medica, practical pharmacy, medicine, surgery, midwifery, and forensic medicine. "Chemistry" includes the principles of chemistry and also those details of the science which bear on the study of medicine. "Medicine and surgery" include a knowledge of systematic and clinical medicine and surgery, and of morbid anatomy. The Council also recommends that a knowledge of the natural sciences be obtained before commencing strictly professional study. This last recommendation we heartily approve, and it would be well if natural history, botany, and physics were made essential subjects of the preliminary examination.

For the teaching of the above ten subjects, and also of botany, which some of the examining bodies require, complete arrangements are made at our medical schools. The first four are generally taken during the first winter session of the student's course, and the manner in which they are taught in most of our schools does not leave much to be desired. In considering the scheme of medical education, we are brought at the outset face to face with the great controversy as to lectures or no lectures. Time-honoured custom has sanctioned the teaching of medical subjects by lectures; and it would require a great revolution to change this custom. Whether lecturing is really the best method for imparting knowledge is a vexed question, and one extremely difficult of solution: so much must always depend upon the individual lecturer and the individual student. One teacher will content himself with droning through a course of lectures hashed up from the writings of the authorities on the subject; while another will not be satisfied with such a mere perfunctory discharge of his duties, but will endeavour to teach his hearers all he knows himself, will provide them with original matter drawn from the resources of his own experience, and will at the same time enchain their attention by his earnest and animated tone and

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manner. Students, also, vary much in their capacity for the reception of knowledge when imparted orally. Where one man may be able to follow and digest all his teacher tells him, another and a slower student may become confused in the mass of words flowing from the lecturer's lips, and will leave the theatre no wiser than he entered it. It has become somewhat the fashion of late years to decry lectures, and to advocate what is called the tutorial system of education. Between the two methods it is scarcely possible to decide; each presents its own special advantages and its own special drawbacks, and we think it probable that in a careful and judicious combination of the two will be found the most effective system of education. Lectures form in many respects an admirable and convenient medium for imparting knowledge, particularly where that knowledge has to be communicated to many students at a time; but where only a few have to be instructed, a more tutorial system is doubtless preferable. Many lecturers have an excellent practice of examining their pupils periodically *viva voce* on the subject of their lectures; and this plan might with advantage be more extensively adopted. Were each lecturer to hold *viva voce* examinations every week, it would keep his listeners up to the mark; and if he made proficiency in these examinations a *sine qua non* for the "signing up" of the students' schedules, he would soon find that there were fewer novels and newspapers on the back benches of the theatre, and there would less frequently be heard the euphonious snore from the same quarter.

We will now, however, consider each subject *seriatim*. First as to anatomy: This science must be taught and learnt systematically and practically, and we do not know that the method of teaching it at present pursued in our schools can be much improved upon. Demonstrations and examinations are the great means for teaching anatomy practically and effectively, and all students should be compelled to dissect a sufficient number of "parts," and to dissect them *personally*. It is, we believe, not an uncommon practice for idle men to dissect by proxy—that is to say, they get some good-natured fellow-student to do the mechanical work with the scalpel and forceps for them. Students should, however, remember that without actual dissection with their own hands it is a most difficult—nay, almost an impossible—task to get an accurate and extensive knowledge of anatomy.

It is this practical teaching which is of the greatest importance in all subjects. Let the knowledge be conveyed to the mind through as many channels as possible, and let the eye, the ear, the nose, and the touch all be employed wherever practicable.

Physiology is a science which is now beginning to have a definite and separate existence, and to mark out for itself a distinct path. Not many years have passed since anatomy and physiology were taught in one course and by one lecturer, but now we have not only a course of physiology, but a separate course of practical physiology or histology, and a most useful one it is. Here, again, is seen the growing tendency of the present day, which cannot be too much encouraged, to make teaching more practical. Let each student learn to do and see things with his own, and not only with his teacher's hands and eyes. An accurate knowledge of the minute structure and microscopical appearance of the normal healthy tissues of the body is absolutely necessary to the student, as unless he is well acquainted with the healthy structure he will be unable to recognise the unhealthy ones.

Chemistry is also taught both theoretically and practically. Elementary or theoretical chemistry would be much better learned before commencing professional education, as it is almost impossible, during the four short years at the disposal of the student, with such a crowd of other subjects before him, for a man to gain more than a mere smattering of a science so extensive as chemistry now is. It is, we are glad to see, becoming the rule in most of our large public schools to teach chemistry, often practically as well as systematically; and where this has been the case the student will find it of incalculable advantage to him.

Materia medica, including therapeutics, and practical pharmacy, are subjects often greatly neglected by students. This neglect is, we believe, greatly owing to the manner in which they are taught, and is not entirely the fault of the student. The course of lectures on materia medica is, generally speaking, of the driest and most uninteresting nature, and the student is told a vast number of facts of an utterly useless description. It is not so much a description of the appearance, habitat, and mode of procuring the various drugs which we want to know, as the art of applying them when they are procured, though at the same time every student should be able to recognise drugs by sight and smell, and to know something of their history and characters. Therapeutics is a science which is now beginning to receive the attention which it deserves, and which will in time, perhaps, place our systems of treatment on a rational rather than on an empirical basis. It is, therefore, a science of very great importance; and we would urge on all lecturers on it to lay less stress on the natural history of drugs, and more on their therapeutical application. We have often found in young practitioners a lamentable want of knowledge on this subject, many young men going forth into the world ignorant of even the doses in which they should prescribe the medicines at their disposal. This is owing, in a great measure, to the very imperfect way in which practical pharmacy is learnt and taught. In former days, when apprenticeship was in vogue, every student learnt to dispense, and in dispensing learnt the doses, and in many instances the uses of drugs, while "serving his time," and before entering upon his hospital work; but now the majority of young men, coming straight from school to their medical studies, have no opportunity of becoming practically acquainted with the compounding of drugs and medicines. The course of practical pharmacy, as it is found in many of our medical schools, is little better than a farce. The members of the hospital staff are probably in the habit, for convenience sake, of prescribing a number of formulæ, gallons of each of which the student of practical pharmacy is required to make up; and beyond this he does but little during his three months' "dispensing." We know of no branch of medical knowledge which, under the present system, is so difficult to learn as the doses and uses of drugs. In this subject a grand reform in the method of teaching is required. Many, indeed, long for the old apprenticeship system back again, and its total abolition was, we think, a grave error, for which no adequate remedy has yet been devised.

Medicine and surgery are required to be taught and learnt *systematically*, *clinically*, and *practically*. Lectures on these subjects are doubtless absolutely necessary, but the student is required to attend them at too early a period of his course. The second and third winters are the sessions appointed, but the third and fourth would be better. During the first two years the student should be engaged in laying the foundation of descriptive knowledge of such subjects as anatomy, physiology, and chemistry; and then, after passing the primary examinations, should enter on the study of those subjects in which this descriptive knowledge is applied. During the second winter, when the student's attention is, or should be, mainly concentrated on anatomy and physiology, it is almost impossible for him to pay much attention to medicine and surgery. He will therefore probably only attend the first course, because it is so arranged in the curriculum; but being beyond the range of his comprehension, he will pay but little attention to it. We therefore advocate the postponement of attendance upon lectures on these subjects until the third and fourth winters, when it will be found that the student, being

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well acquainted with anatomy and physiology, will better understand and gain more advantage from them.

In the clinical teaching of medicine and surgery, the teachers should remember that they are talking to those who are ignorant of what appear to themselves very elementary points, and should endeavour to explain even the most simple and trivial matters. It is also, we fear, rather too much the custom for physicians and surgeons to draw the attention of the students to what are called "good cases"—that is, cases of a rare or peculiar kind,—forgetting that when the student goes into practice it is not these rare cases that he will daily be called upon to treat, but the common coughs, colds, and derangements of the digestive organs, which form nine-tenths of the disorders of humanity. There are many senior students who will tell you all about Addison's disease, or some other rare and obscure ailment, who would be utterly at sea when placed before ordinary cases of measles, pneumonia, or dyspepsia.

In the teaching of practical surgery the student should, if possible, be allowed to perform operations on the living as well as on the dead body. Here, again, we miss the apprenticeship system. Under it the student came to his hospital work familiar with many minor surgical duties, such as bleeding, bandaging, dressing wounds, and even adjustment of fractures; and in this way much useful information was gained, which it is most difficult to learn in the hospital.

In connexion with medicine we must mention pathology or morbid anatomy, another subject which is often imperfectly taught, and much neglected by students. It should be taught hand-in-hand with anatomy and physiology, and the professor of pathology should exhibit, and point out to the student attending the post-mortem examinations, the difference between the normal condition and that produced by disease, and should explain the significance of the various morbid appearances. Students often shirk the post-mortem-room, but it is only by constant attendance there that a competent knowledge of pathology can be obtained.

The arrangements for teaching forensic medicine and midwifery are in most cases adequate, and ample opportunity is always afforded by the maternity departments of our hospitals for obtaining practical knowledge of the latter subject.

In conclusion, we would advise all teachers to make their instruction as practical as possible; to resort, on all available occasions, to diagrams or other assistance, and to endeavour to claim their pupils' attention by making their lectures interesting; and to the student we would say, "Take every opportunity afforded you of gaining practical knowledge of your profession." A bookworm can never become a competent or reliable doctor. Experience alone makes the complete medical man; and the more he can gain by the actual close observation of cases, the more confidence will the student feel in his own powers to meet every emergency.

We would also advise him to pay attention to the so-called "special" branches of medicine and surgery, and gain an accurate knowledge of the diseases of the eye, the ear, the throat, the skin, etc. Were students more in the habit of making themselves acquainted with all branches of the profession, there would not be so much so-called "specialism," often little removed from quackery.

We have now glanced at the system of medical education, and endeavoured to show where we consider there are faults and imperfections, and trust that before long these faults will be remedied, these imperfections removed, and the course made more efficient for the education of sound and thorough practitioners of the healing art.

CHANGES AT THE METROPOLITAN HOSPITALS AND MEDICAL SCHOOLS.

THE onward march of time has brought us to the commencement of another Winter Session, and again it is our duty to chronicle the changes which have taken place in the medical and surgical staffs of the metropolitan hospitals, as also the additions and changes which have been announced in the teaching staffs at the medical schools.

To commence with St. Bartholomew's Hospital, we find that no change has taken place in the *personnel* on the surgical side, but on the medical side Dr. Harris has retired from the post of Physician, and has been elected a Consulting Physician. The vacancy caused by the retirement of Dr. Harris was filled by the promotion of Dr. Church, late Senior Assistant-Physician, whilst Dr. Lauder Brunton, F.R.S., formerly Casualty Physician, was elected Assistant-Physician. After the election of Dr. Brunton to the Assistant-Physicianship, Dr. Hollis, Senior Casualty Physician, resigned; and thus two vacancies were created, which were filled up by the election of Dr. Hall and Dr. Moore. Another addition to the medical staff has been made by the appointment of Dr. Clement Godson as Assistant Physician-Accoucheur. The changes on the tutorial staff are:—Dr. Norman Moore, Lecturer on Comparative Anatomy, in place of Dr. Church; Mr. Morrant Baker to demonstrate Diseases of the Ear, in place of Mr. Langton, who has charge of the department of Orthopædic Surgery; and Mr. Willett succeeds Dr. Duckworth as Demonstrator of Diseases of the Skin.

The only alteration in the medical or surgical staff at Charing-cross Hospital is the retirement of one of the Assistant-Physicians—Dr. Vivian Poore—who has been elected Assistant-Physician to University College Hospital. The vacancy has not yet been filled up. By the resignation of Dr. Poore, the lecturership on Forensic Medicine becomes vacant. In consequence of ill-health, Dr. Dowson has been compelled to retire from the office of Lecturer on Botany, and Dr. Irvine has been elected to fill the vacancy. Dr. Irvine also has charge of the Auscultation Class in place of Dr. Green, and gives clinical instruction in Diseases of Children, in place of Dr. Bruce. The Anatomical Department has suffered a severe loss through the resignation of Dr. Cantlie, the late Demonstrator. He has been succeeded by Mr. Rickman Godlee, late Medical Registrar at University College Hospital. The only other change worth noticing is the appointment of Mr. J. F. Blake as Lecturer on Comparative Anatomy in the place of Mr. Garrod.

At St. George's Hospital the changes have been both numerous and important. Mr. Prescott Hewett having retired from the Surgeoncy, Mr. Rouse was promoted to be full Surgeon, and Mr. J. Warrington Haward, late Demonstrator of Morbid Anatomy, was appointed Assistant-Surgeon. A vacancy having occurred in the office of Obstetric Physician through the retirement of Dr. John Clarke, Dr. Robert Barnes, late Obstetric Physician to St. Thomas's Hospital, was elected to fill the vacancy. Dr. R. J. Lee has resigned the post of Assistant Obstetric Physician, but retains his connexion with the Hospital as Demonstrator of Morbid Anatomy. Mr. Haward has also been appointed teacher of Practical Surgery, and Dr. Ralfe teacher of Physiological Chemistry, which office became vacant through the death of the late Mr. S. W. Moore. In the lectureship on Comparative Anatomy Dr. Brailey takes the place of Dr. Cavafy, who retains the lectureship on Physiology.

At Guy's Hospital, Mr. Birkett has retired from the Surgeoncy, Mr. H. G. Howse has been promoted from Assistant-Surgeon to full Surgeon, and Mr. R. C. Lucas and Mr. C. H. Golding Bird have been appointed Assistant-Surgeons. Several changes have taken place among the lecturers; thus, Mr. Cooper Forster and Mr. Birkett cease to lecture on Surgery, and their places are taken by Mr. Bryant and Mr. Arthur E. Durham; Mr. Howse has been appointed additional Lecturer on Clinical Surgery; Mr. Davies-Colley takes the place of Mr. Durham as joint Lecturer on Anatomy with Mr. Howse; Mr. Jacobson succeeds Dr. Pye-Smith as Lecturer on Com-

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parative Anatomy and Zoology; and Dr. Taylor succeeds Dr. C. Hilton Fagge as Demonstrator of Cutaneous Diseases.

At King's College Hospital there has been no alteration in the *personnel* of the surgical staff, and the only alterations in the medical staff have been the appointment of Dr. E. B. Baxter as Assistant-Physician in succession to Dr. Rutherford, and the appointment of Dr. John Curnow as additional Assistant-Physician. In the College, Dr. Gerald F. Yeo, late Lecturer on Physiology in the Carmichael School of Medicine, succeeds Professor Rutherford in the Chair of Physiology. Laryngoscopic demonstrations will in future be given by Dr. J. Burney Yeo, instead of by Dr. George Johnson.

At the London Hospital no change has occurred in the medical or surgical staff, with the exception that Dr. Head has retired from the post of Obstetric Physician, and has been succeeded by his late junior colleague Dr. Palfrey, who also takes the lectureship on Midwifery vacated by Dr. Head. Dr. Ramskill and Dr. Down have retired from the Lectureship on Medicine; the present lecturers are Dr. H. Davis and Dr. S. Fenwick. Both these gentlemen assisted in this course of lectures last Winter Session. Mr. E. B. Aveling has been appointed Lecturer on Comparative Anatomy.

No change has taken place in the hospital staff at St. Mary's, and only minor changes have occurred in the school department. Dr. Mahomed has been appointed Demonstrator of Morbid Anatomy, Dr. Wiltshire lectures on Midwifery in conjunction with Dr. Meadows, and Mr. A. B. Prowse succeeds Mr. Giles as Assistant-Demonstrator of Anatomy.

At Middlesex hospital there has been no change in the medical or surgical staff, but in the school department Mr. Hulke has become joint Lecturer on Surgery with Mr. Campbell de Morgan. Mr. Hensman succeeds Dr. Morris as Demonstrator of Comparative Anatomy. The chair of Chemistry, which has been vacant for some time past, was filled up only on Wednesday by the appointment of Mr. William Foster, of Sidney Sussex College, Cambridge.

At St. Thomas's there have been several changes. Dr. Clapton has retired from the Physicianship, and Dr. Barnes resigned the office of Obstetric Physician on his appointment to St. George's Hospital; Dr. Gervis, who was Assistant-Obstetric Physician, succeeded Dr. Barnes, and Dr. Cory was elected to the post vacated by Dr. Gervis. In the school department, Dr. Stone is sole Lecturer on Forensic Medicine, Dr. Gervis, who formerly lectured conjointly with Dr. Stone, having taken the lectureship on Midwifery vacated by Dr. Barnes; Mr. MacKellar has been appointed to teach Practical and Manipulative Surgery in conjunction with Mr. Croft; Mr. W. G. Ranger assists Mr. Elliott in the teaching of Dental Surgery; Mr. H. Arnott continues to lecture on Morbid Anatomy, but has Dr. Greenfield for a colleague instead of Dr. Payne; and Dr. T. W. Cranstoun Charles has been appointed Physiological Demonstrator.

At University College Hospital the staff changes have been as follows:—Sir Henry Thompson has retired from the full Surgeoncy; Dr. Vivian Poore has been appointed an additional Assistant-Physician; Mr. A. E. Barker, L.R.C.S.I., late Surgeon to the City of Dublin Hospital, has been appointed additional Assistant-Surgeon. Mr. Barker is, perhaps, better known as the translator of "Frey's Manual of Histology and Histo-Chemistry." In the College, Mr. E. R. Lankester has been appointed Professor of Comparative Anatomy, in place of the late Professor Grant. Mr. Christopher Heath has been elected Holme Professor of Clinical Surgery, in place of Mr. Erichsen, who has retired. Mr. Barker succeeds Mr. Heath as one of the teachers of Practical Surgery, and Mr. Marcus Beck as one of the teachers of Operative Surgery.

At Westminster there have also been numerous changes during the year, and others, we hear, will shortly take place. The vacancy on the staff of Physicians, which was caused by the lamented death of the late Dr. Anstie, was filled up by the promotion of Sir Duncan Gibb, late senior Assistant-Physician, and Dr. Donkin was appointed Assistant-Physician. Sir Duncan Gibb has, however, resigned, after less than twelve months service as full Physician. The reason of this is not exactly clear, but it is reported that Dr. Gibb entered into an arrangement with his colleagues to resign within twelve months if his election were not opposed. The staff of clinical lecturers has been strengthened by the addition of Dr. Radcliffe, late Physician to the Hospital. Drs. Fincham and Sturges have been acting as joint Lecturers on Medicine since the death of Dr. Anstie. Dr. C. D. F. Phillips, who is known as the author of a work on Materia Medica which savours strongly of homœopathy, has been appointed to the lectureship on Materia Medica vacated by Dr. Sturges. In the dissecting-room there has been an entire change. Formerly there were two demonstrators, each of whom was expected to attend three days a week; but the arrangement was not found to answer very satisfactorily, and the Committee decided in future to have only one paid demonstrator, and appointed Mr. Malcolm Smith, late Assistant-Demonstrator in Edinburgh University, to the vacant office. We shall be glad to hear that the new arrangement works well, and that a larger proportion of Westminster students pass at their primary examinations; but we could have wished that the services of Mr. Cooke, who for more than four years has acted as senior Demonstrator of Anatomy, and who has certainly earned a good reputation as an anatomical teacher, had not been altogether overlooked.

In bringing our notice of the changes at the metropolitan hospitals to a close, we may be permitted to express the hope that the various alterations that have been made may prove to have advanced the interests and educational advantages of the students.

THE LATE DR. HUGHES BENNETT.

It is with no ordinary feelings of regret that we have to announce the death of Dr. Hughes Bennett, so long and so well known as Professor of the Institutes of Medicine in the University of Edinburgh. Dr. Bennett was born in London in 1812, but was educated at Exeter. On entering the profession he became a pupil of a surgeon at Maidstone, and later a student in the University of Edinburgh. In 1837 he graduated M.D., and proceeded to the Continent for the further prosecution of his studies. These he continued till 1841, and then, no doubt, laid the foundation of his future reputation, for almost the first thing he did on returning to Edinburgh was to start a course of teaching with the microscope—a course which, during the greater part of his professoriate, remained one of the most distinguishing characteristics of his system of education in physiology. In due time he was elected to the chair of Physiology—or of Institutes of Medicine, as it is called—in the University of Edinburgh; but the true opening of his career may be described as having occurred some years earlier, when he was appointed Pathologist to the Royal Infirmary, Edinburgh. It is in this conjoint character of Physician and Physiologist that Dr. Bennett has to be estimated, and to form such an estimate is far from easy. Probably we can best do so by bearing in mind the nature and order of Dr. Bennett's work. He began by teaching histology and the microscope: he from the beginning dealt with entities,—with things, not conceptions; and this positive character implanted itself in all his teachings and writings. To him the microscope and test-tube were all in all; his sphere of knowledge was not of the most extensive character, and, above all, he held fast by his earlier and somewhat crude knowledge, but what he knew he taught, and taught most thoroughly. But such an influence, especially

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if not the sole influence, is of infinite service to students, and many nowadays would say that their first introduction to exact medicine was the teaching of Professor Bennett.

Probably the first of Dr. Bennett's purely medical achievements was the writing of a treatise on Cod-liver Oil in Phthisis, from the publication of which dates the introduction of that substance into general use in this country. The service thus done was a great one, though we make bold to doubt if it has not been since that time more abused than even his pet abhorrence—calomel. This, and his discovery of the condition of the blood in the state called by him leucocythæmia, and by Virchow, who about the same time had his attention directed to the subject, leukæmia, will be probably the *opera peracta* which will hand his name down to posterity, but assuredly they do not constitute a sufficient means of judging the man's capacity. For years and years Bennett was a great living power in our largest medical school; thousands have been influenced by his teaching, the more especially as this was best adapted for the younger students, and consequently came upon them at the time they were most susceptible. On these young men he was never tired of impressing the importance of accurate knowledge, however far or however short it went, whether in percussing a chest or defining a bruit, and in this respect his influence was altogether and thoroughly good. This cannot, however, be said of all his works. Like all such strong men, Bennett was fond of controversy, and was not altogether scrupulous in the use of language. By far the most important of these controversial writings is a treatise on Pneumonia. In this he contended strongly, and endeavoured to show by figures, that the old plan of treatment by bleeding, antimony, and calomel was a mistake, that patients did far better under a stimulant or simple treatment, and that it behoved us to turn to this last as soon as possible. This view was met by the change of type theory, but has, nevertheless, steadily made its way. Nowadays, when we know something more of the history of pneumonia, left to itself, with good nursing and food, we should be still less likely to turn to the old belief; but, somehow, we do not so freely meet with acute sthenic pneumonia as they seem to have done in former times.

By far the best known of Dr. Bennett's books was his book on Medicine, distinguished for its positive teaching, but not altogether and entirely sound. It contained much that was characteristic of the man, and much which would have been far better outside such a volume; nevertheless, it constitutes a true memorial of Dr. Bennett and of his method of teaching. He wrote the article on Physiology in the "Encyclopædia Britannica," and afterwards republished it separately; but as a work it commanded little more than the acceptance of students as a class text-book. In an improved form it appeared more recently under the joint-editorship of himself and Dr. M'Kendrick. Dr. Bennett had long been ailing, and latterly had been unable to conduct his class. Last year he sought and found retirement; but it came too late, for now, a few months after, he has passed away. At the last graduation term at Edinburgh he was made an honorary LL.D., and his bust was presented to the University; but he himself was too ill to attend. The Committee are anxious to present a replica to the new Infirmary at its opening, and for this purpose a sum of £60 or £70 is still needed. Subscriptions will be gladly received by Dr. A. P. Stewart, 75, Grosvenor-street; Dr. Andrew Clark, 16, Cavendish-square; Dr. M'Kendrick, Edinburgh; or by Mr. Lawson Tait, Birmingham. In Professor Bennett has passed away a man of mark, and one of the great leaders in the teaching of positive medicine. His fame and reputation can hardly be sought in printed books or papers, but rather in the minds of the vast number of men whom he has taught and moulded.

THE WEEK.

TOPICS OF THE DAY.

THE report of the sanitary condition of the Holborn District for the year ending Lady-day, 1875, by Dr. Septimus Gibbon, which has lately been forwarded to us, presents rather a singular feature, from the fact that the birth-rate, death-rate, ages at death, and causes of death in the district being omitted. The cause of this is stated to be a recent decision of the Registrar-General, declining to supply medical officers of health with the weekly returns of the births and deaths of each district, as has hitherto been done. The reason for this step is, that in the opinion of the Registrar-General the local registrars are entitled to receive additional pay from the boards for furnishing these weekly returns. Dr. Gibbon reports that the cases of syphilis increased from twenty-one to twenty-five, and of congenital syphilis from thirteen to eighteen. The deaths from hereditary syphilis show a corresponding increase, and he pronounces it, in his opinion, the duty of the Legislature to step in and interfere in such a manner as to limit the spread of this shocking disease. The Contagious Diseases Acts, as applied to certain naval and military stations, have reduced this disease about one-half amongst soldiers and sailors, and, to judge from the workhouse returns in the protected towns, to a very much greater extent amongst the civil population; hence Dr. Gibbon would have the Acts extended to all large cities.

An outbreak of scarlatina is reported from Carrickfergus, in Ireland, of a more extensive character than has been noticed there for the past ten years. The accounts received say that scarcely a street in the town is free from it, and that it is not unusual to come across families of four or five persons all laid up together from this disease.

We have received a copy of the prospectus of a new company to be started in London under the title of the Lavatories Company. The object of the Company, as duly set forth, appears to be to supply a long-felt want. Rooms are to be opened in the principal thoroughfares of London (connected with shops or stalls for the sale of useful articles), which are to be under the entire superintendence of trustworthy matrons, and these are to be fitted with every convenience, and to be kept scrupulously clean. But we notice that the Company propose to have rooms for gentlemen in the same establishments, and this we consider to be a decided mistake. If ladies and children only were to be admitted, there might have been some reason for supposing the idea would succeed, but it is most unlikely that ladies will be induced to avail themselves of these retiring-rooms if in the antechambers they are to be brought in contact with idlers of the other sex. In our opinion, the sooner the Company reconsider the subject and attempt to provide accommodation for ladies and children *only*, the better it will be for their interests.

We have only recently recorded the unfortunate mistake which resulted in the death of Lady Cottesloe, and now we have to announce another case of accidental poisoning in North Wales of a similar nature. A nurse attending the confinement of Mrs. Griffiths, wife of a well-known builder at Wrexham, last week administered to her charge a lotion instead of a mixture, and the unfortunate patient expired very shortly afterwards. Such carelessness, when all means are taken to call attention to the poisonous nature of lotions, liniments, etc., is highly culpable.

The working-men of the metropolis have lately held a public meeting on Clerkenwell-green, to raise a fund for the defence of Mr. P. Kenny, whose trial for libel upon the charge of Captain Charles Mercier, Chairman of the Hospital Saturday Fund, is fixed for the 25th inst., at the Central Criminal Court. An address was read, which stated that "Mr. Kenny, being

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but a working-man, has no means to procure the necessary legal and other assistance necessary to put his justification fully and fairly before the Court, which would, in our opinion, be a calamity for public bodies, as no man will in future venture to condemn peculation or mismanagement if in this case a poor man is to be overborne because he has not the means for a proper defence." If this is the outcome of the Hospital Saturday movement, how much longer will its promoters see fit to advocate its continuance?

Last Sunday was observed as Hospital Sunday in Portsmouth, and in several of the churches and chapels collections were made in aid of the funds of the Portsmouth, Portsea, and Gosport Hospital. Last year the total amount realised amounted to the sum of £362.

The Medical Congress at Brussels was brought to a close on Saturday last. From the accounts received it would appear that from a medical, as well as from every other point of view, the organisation of the Congress was all that could be desired. Several highly important questions were amply discussed, and the reception of the foreign members of the Congress was cordial and flattering. A farewell banquet was organised in the Gothic Hall of the Hôtel-de-Ville, presided over by Dr. Vleminckx, who had on his right hand the Minister of the Interior and Dr. Bouillaud, and on his left the Burgomaster of Brussels and Mr. Critchett. Altogether about 200 persons were at the banquet, and several toasts appropriate to the occasion were proposed and duly honoured.

By latest advices received from India, it is reported that cholera has broken out amongst the European garrison at Delhi in the fort. Five seizures and four deaths have taken place. The troops, it is stated, are going into camp.

Numerous cases of typhoid fever are reported to have occurred in Glasgow, on the south side of the river, in the districts of Kingston and Kinning Park. So far the disease has been of a very mild type, no deaths having taken place. All this year there have been cases of typhoid fever in Hutchesontown, and latterly these have considerably increased. In Pollokshaws-road it has assumed such an epidemic form that recently in one large house no fewer than four medical men met upon the staircase, all having called to visit patients. A doctor in large practice at Kingston states that for fifteen years past he never at one time had so many fever patients upon his books.

It is reported that the Home Secretary will order a fresh inquiry into the cause of the death of Mr. Blackmore, or, as he called himself, Turberville, and who recently died at Yeovil, apparently from poison. The peculiar circumstances surrounding this case have been already referred to by us.

We regret to find by the newspapers that one of our professional brethren, Dr. Arthur, of Brighton, has been made the subject of a charge of indecent assault by a former servant. These charges are so easily brought, and so difficult to repel, that it is a wonder medical men are not more frequently made the subject of them. In many instances we know groundless charges have been the not altogether ineffectual means of extortion. We sincerely hope that Dr. Arthur will be able to repel the foul aspersion *in toto*, and to secure the punishment of its author.

At a meeting of the University Court, last week, Dr. James Bell Pettigrew, F.R.S., Lecturer on the Institutes of Medicine at the Royal College of Surgeons, Edinburgh, was unanimously elected to the chair of Medicine in St. Andrews University.

THE NORWOOD POISONING CASE.

It is not a pleasant circumstance to find that in the present day, with all our boasted caution and terrible legal enactments, it is possible for some one to walk about amongst us with poison in wholesale quantities in his pockets. The Norwood poisoning case, which terminated last week in a sentence of five years' penal servitude for the man Walter Thomas Hunt, has exposed perhaps the most reckless instance of trifling with human life which has ever been recorded. This man, who appears to have been a confirmed drunkard, willing to drink with the first person he came across, on August 12 last, in the neighbourhood of Norwood, met with a labourer and his wife, named Taylor. The evidence did not show that he had any previous acquaintance with these people; but the freemasonry of the public-house was amply sufficient to cement an intimacy, and the three continued to drink together the greater part of the day. Eventually the woman, possibly the less seasoned vessel, fell off a bench, and cut her head. This necessitated an adjournment to Taylor's home; and as the wound bled a good deal, a neighbour, the unfortunate Mrs. Mary Hudson, was summoned to bind it up with plaster. Hunt, however, pronounced the assistance of a doctor to be necessary, and left to procure the attendance of one. Eventually he returned without a medical man, and took a bottle from his pocket, asserting that he was as good as a doctor himself. Mixing some drops from the bottle in a little water, he gave the mixture to Mrs. Taylor, who drank it. The husband was next supplied with a similar dose, which he also swallowed, and in his drunken liberality Hunt then offered the unfortunate woman Hudson a similar draught, which she accepted without compunction. What prompted him to hand Mrs. Hudson the bottle containing the deadly compound does not appear; but the woman, possessed with the idea that such an opportunity should not be lost, availed herself of the chance thus offered to take a good pull before returning it, and on receiving it back, Hunt exclaimed, "Why, she has drunk enough to kill a pig!" At any rate, she had drunk enough to kill a woman; for, returning almost immediately to her own house, she was seized with violent spasms, and, although a doctor was fetched, before he could procure an emetic for the patient she died. Subsequent examination proved that the mixture thus recklessly administered contained strychnine in large quantities, and the most unsatisfactory feature of the whole trial must be said to be the fact that no evidence could be produced by the prosecution to show in what manner the prisoner obtained such an enormous quantity of this powerful poison. It was proved that Hunt had been inquiring in Norwood during the day for shops where he could obtain the poison, and by two chemists he had had his application for it refused; so that it is only fair to assume that he must finally have succeeded in obtaining it in the locality. The police would appear to have made every possible inquiry with a view of tracing the source from whence it came; but, as all their efforts were fruitless, it is to be feared that some chemist in the neighbourhood has denied the sale of it from a fear of being implicated in the sad results which such criminal carelessness have entailed. What, then, can legislation do to protect life against the easy acquisition of the most poisonous substances? As the present case proves, just nothing—so long as amongst the trade, whose business requires that it should have them in possession, here and there an individual can be found who, for the most paltry amount of gain, is willing to break the laws, thereby affording opportunity for a catastrophe such as that we have just related.

THE LATE DR. DUCHENNE.

L'Impartial, a journal of Boulogne-sur-Mer, has the following remarks in the number of September 22; and as the name of Dr. Duchenne is of European reputation, it may be interesting to many English readers to see in print a record of what he did for medical science, and how aptly Dr. C. Gros alluded to the same in the funeral oration he delivered at the tomb yesterday. Dr. Gros said:—"The town of Boulogne has just lost one of her most distinguished men of science;

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and in mourning that loss—a loss shared in by everyone in France, especially by the members of his own profession—she, at least, has one consolation, and that is to see the mortal remains of Dr. Duchenne confided to a tomb in the place where he was born, and where he began to make his researches, which, later on, marked him as a man of fame in the capital of France. He was a schoolfellow of mine at our local college, and later a fellow-student at the École de Médecine of Douai, where we both passed the same day our examination for the degree of 'baccalauréat-ès-lettres'—and that was fifty years ago! It is without doubt from my association with Duchenne in former times that I have been requested to address you to-day beside his tomb, and in so doing over the remains of my *last* fellow-student, I am forcibly reminded that my own may be opened before long, for who can say what a day may bring forth? This is neither the place nor yet the time to refer to the scientific researches by which Duchenne's name has become illustrious. I leave others more competent than myself to detail his studies and their results. I will only allude briefly to his medical and scientific career. He practised in Boulogne from 1831 to 1842, when he went to Paris to give himself entirely up to the study of electricity as a physiological and medical means of treatment, and he soon acquired the co-operation of *confrères* in that city for his skilful treatment of nervous diseases by his means of treatment. I remember that as far back as 1833 I assisted at several operations by electro-puncture, proving that even then he was at work on a study which subsequently brought him fame. In 1847, on a visit to Paris, Dr. Duchenne read me a manuscript, still unpublished, of the result of his first experiences, and was exceedingly sanguine of his success in his branch of the profession. Everyone knows his grand work on Local Electricity and on so-called Faradism connected with the name of the illustrious Professor Faraday. I would only mention the works on infantile paralysis, progressive muscular atrophy, fatty muscular degeneration, locomotor ataxy, and others in connexion with his name. Dr. Duchenne has assisted his colleagues in the profession much in their diagnosis of the different sorts of paralysis which come under their treatment, and was esteemed in consultations relating to the same in Paris. He was always kind and affable to medical students from Boulogne, and willing to render them any service that lay in his power. Duchenne, after an illness which lasted two or three years, died at the ripe age of seventy, regretted by the medical profession of his own and other countries for his researches in electricity, as also by a numerous circle of relations and friends. I may also add that he was always very good to the poor. I can only add, in the words of a truly Christian philosopher, which suggest themselves to me at the present moment in connexion with the life of Dr. Duchenne, who died as an example of true Christian philanthropy—'True science, far from taking us away from God, brings us nearer to Him.'"

THE EFFECT OF ELECTRISATION OF THE SURFACE OF THE BRAIN ON THE VASO-MOTOR SYSTEM AND ON THE SALIVA.

MM. LÉPINE AND BOCHEFONTAINE have been lately examining, in Professor Vulpian's laboratory, the action of weak induced galvanic currents when applied to certain portions of the exposed hemispheres in curarised dogs. They found that if the post-frontal gyrus was stimulated, the increase of vascular tension in the femoral artery corresponded to a rise of eight centimetres of mercury, and closely resembled that produced by section of the sciatic nerve.

Other parts of the convolutions which surround the crucial fissure gave rise to a similar increase of vascular tension when electrically excited; and, curiously enough, if a curarised dog be galvanised on that part of a convolution where stimulation in a non-curarised dog is followed by movements in the foot of the opposite side, the temperature of that foot rises several tenths of a degree centigrade, while at the same time there is no rise in the temperature of the rectum. MM. Lépine and Bochefontaine further found that if very weak currents were applied to the anterior part of the hemispheres, the heart's action was accelerated; whereas stronger currents, even though the pneumogastric nerves were undivided, rendered it much slower.

The same authors examined the action on the salivary secretion of weak induced currents applied to the anterior surface of the hemispheres. They inserted a canula into Wharton's duct on both sides, and found that electrisation immediately caused a marked increase in the flow of saliva on both sides; but sometimes the effect was most marked on the side corresponding to the hemisphere galvanised. The secretion was clear, and but slightly viscous, and resembled that obtained by irritation of the chorda tympani. If the latter nerve were divided, galvanisation ceased to excite secretion on the corresponding side.

It was not found possible to define accurately the point from which the salivary secretion could be increased; it lies however, in the anterior part of the hemisphere, and no effect is produced by electrisation of the posterior part. The vaso-motor effects described above appear to be quite independent of the action of electrical irritation on the salivary glands, for if the surface of the brain nearest the olfactory lobes be galvanised, the flow of saliva is distinctly augmented, while the arterial tension remains unaltered.

A LESSON TO CORONERS.

MR. THOMAS, Deputy Coroner for Central Middlesex, has just concluded an inquiry into the circumstances attending the death of a man named Clark, who resided at St. John's Wood, which shows the absurdity of holding so-called inquests without a post-mortem examination of the body of the deceased person having been made, as is now so frequently done in order to conciliate the more economical of the county magistrates. The deceased, it appears, was taken suddenly ill, after returning from work one evening, with violent retching. His wife gave him warm water and ipecacuanha wine in order to make him vomit; but as these had no effect, and he became worse, she sent for a doctor, shortly after whose arrival he died. An inquest was ordered, at which the wife of deceased gave evidence as above; and the medical man—Mr. Sumner, of Wellington-road, St. John's Wood—stated that, in his opinion, death resulted from inflammation of the lungs and heart disease. The jury would have returned a verdict of death from natural causes had it not been that another witness was called, who stated that she was present during the illness of deceased, and saw a bottle of fluid near him, and a paper which appeared to have contained a powder. The wife of deceased destroyed the paper, but before she did so the witness observed that it was labelled "oxalic acid." Mr. Thomas said that this evidence put a new complexion on the case, and that the inquiry must be adjourned until a post-mortem examination of the body and an analysis of the contents of the stomach had been made. The adjourned inquiry took place on Monday, when it was proved that death resulted from oxalic acid, taken for the purpose of committing suicide. The lesson conveyed by this case should not be allowed to pass unheeded either by medical men or coroners.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

THE following are certain further details as regards the new Association:—On September 17 an Association under the above title was formed at the house of S. W. North, Esq., Castlegate, York. There was a considerable gathering of medical officers of health from all parts of Yorkshire, the important districts of the county being well

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represented. The meeting took place in reply to an invitation circular issued by Mr. North, who was unanimously voted to the chair. The president informed the meeting that a considerable number of officers of health who were unable to attend had expressed their cordial approval. Preliminary rules were drawn up, the objects of the Association (as had been well defined by Dr. Parsons) being stated to be "to promote the progress of sanitary science, to watch the course of legislation on subjects relating to the public health, and to afford mutual counsel and support to medical officers of health." The following gentlemen were appointed members of committee (with power subsequently to add to their number):—S. W. North, Esq., York, President; T. Britton, Esq., Halifax; T. Deville, Esq., Harrogate; G. Goldie, Esq., Leeds; E. B. Fletcher, Esq., Easingwold; H. F. Parsons, Esq., Goole; W. T. Wade, Esq., Wakefield; J. S. Wesley, Esq., Weatherby, hon. treasurer and secretary. The secretary was empowered to issue circulars to every public health officer in Yorkshire, stating the objects of the Association; and the next meeting was appointed to be held at the public offices of Dr. Goldie, Corn Exchange, Leeds, on October 27, at three o'clock, members of committee being requested to attend at two o'clock.

INTRA-MURAL SEPULTURE IN DUBLIN.

Lying between St. Patrick's Cathedral on the north, and the Meath Hospital on the south, in the midst of a thickly-populated district, is an old graveyard, called the "Cabbage Garden Burial-ground." Philologists may be interested to learn that "cabbage" in this case is a corruption of "Capuchin," the fact being that the graveyard occupies the site of an ancient Capuchin monastery. The Cabbage Garden Cemetery, as we have said, is very old—one tombstone in it bears the date 1604, and the graves are "thick as leaves in Vallambrosa." This being so, we are somewhat surprised to hear that it has been seriously proposed by some members of the South Dublin Union Board of Guardians—a Sanitary Authority under the Public Health (Ireland) Act of 1874—to utilise the graveyard for 500 more interments. "Five hundred *Protestant* paupers" are to be buried there. Be this as it may, we, in common with several authorities in Dublin, have serious doubts as to the propriety of such a proceeding. We thought the days of intra-mural sepulture were numbered. The Executive Committee of the Dublin Sanitary Association, at a meeting on September 24, passed this resolution:—"That this Committee are strongly of opinion that the so-called Cabbage Garden Burial-ground, near St. Patrick's Cathedral, should not be used for the purposes of interment in future. They base their opinion, amongst other reasons, on the fact that the graveyard is in the midst of a crowded and sickly neighbourhood, closely contiguous to several dairy yards, and in dangerous proximity to the Meath Hospital." It was also resolved—"That a sub-committee be appointed to inspect the so-called Cabbage Garden Burial-ground, and to investigate the legal bearing of the question as to future interments in that graveyard." The Standing Committee and the Medical Board of the Meath Hospital have also taken the alarm—as well they may, seeing the graveyard is within 100 yards of the hospital,—and have forwarded representations on the subject to the Board of Guardians, who will, we trust, for their own sakes, and in the interests of the public health, abandon this unwise project.

THE "MAUNSELL MEMORIAL FUND."

A very successful meeting in aid of the above deserving object was held in Dublin on Friday, the 24th ult. Dr. H. Kennedy, Vice-President of the King and Queen's College of Physicians, took the chair. The following resolutions, amongst others, were unanimously adopted:—"That, considering the valuable services rendered by the late Dr. Daniel Toler Thomas Maunsell to the public and the medical profession, by his writings on the Poor-law and the Public Medical Services, and his zealous and untiring efforts to improve the position of the poor-law medical officer throughout Ireland, his memory is entitled to some substantial mark of public respect." "That a subscription list be opened with a view of raising a Maunsell Memorial Fund. This fund to be applied to the educating and forwarding in life of Dr. Maunsell's family, who at present are insufficiently provided for." It was announced at the meeting that £130 had already been collected. Dr. A. O. Speedy, 28, North Frederick-street, Dublin, was appointed honorary treasurer; Dr. Grimshaw 13, Molesworth-street, and Dr. Kenny, 71, Lower Gardiner-street, Dublin, were appointed honorary secretaries.

UNHEALTHY AREAS AND THE ARTISANS' DWELLINGS ACT.

The medical officers of health in the various districts of the metropolis are exhibiting commendable promptness in directing the attention of the Metropolitan Board of Works to the existence of fever dens and unhealthy areas, and urging their prompt removal under the provisions of the Artisans' Dwellings Improvement Act. At a meeting of the Board last week a letter was read from Dr. Whitmore, Medical Officer of Health for Marylebone, making an official representation of certain houses and places in the parish as being unfit for human habitation, and expressing his opinion that an improvement scheme for the locality in question is necessary. A letter was also read from the Vestry of St. Martin-in-the-Fields, calling attention to the necessity that exists for this Board exercising the powers conferred upon them by the Act, by effecting an improvement in the district known as Bedfordbury, in the parish, and stating that their medical officer of health is preparing a report on the subject, which will also embrace a portion of Drury-lane, and requesting the early consideration of the Board thereto. Dr. Rygate, Medical Officer of Health for the parish of St. George's-in-the-East, reported three unhealthy areas in the parish, and stated that in his opinion an improvement scheme is essential for remedying the evil.

THE WORCESTERSHIRE MEDICAL PROFESSION AND THE BRETHREN OF THE INFIRMARY.

At a meeting of the Worcestershire Medical Society, held September 29, it was resolved unanimously—"That this meeting has learned with much regret the differences which exist between the honorary medical staff and the Executive Committee of the Worcester Infirmary. Having confidence in the moderation of their professional brethren connected with it, this meeting assures them of their sympathy and approval in their attempt to obtain for themselves and their successors such protection by the rules as may be needful to secure them from unnecessary vexations in the responsible yet privileged position of honorary medical officers of that institution."

QUEEN'S UNIVERSITY IN IRELAND.

At a meeting of the Senate, held at Dublin Castle, on Wednesday, September 15, his Grace the Duke of Leinster, Chancellor of the University, presiding, the following Examiners in the Faculty of Medicine were appointed for two years:—Benjamin G. M'Dowel, M.D., Examiner in Medicine; Anthony H. Corley, M.D., Examiner in Surgery; William Roe, M.D., Examiner in Midwifery; Charles F. Moore, M.D., Examiner in Materia Medica; and Matthias O'Keeffe, M.A., M.D., Examiner in Medical Jurisprudence.

TYPHOID AT CRIEFF.

Typhoid fever is said to prevail to a considerable extent at Crieff, Scotland. Several deaths have recently occurred, and the disease appears to be spreading chiefly among the juvenile portion of the population.

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THE MEASLES IN FIJI.

(*From a Correspondent.*)

LEVUKA, June 27.

OUTBREAKS of European diseases among the natives of isolated districts are commonly severe. The spread of the infection brought from Sydney in February last by Thakombau, his sons, and their servants, has but too well attested the fact. Scarcely an island or a plantation has escaped, and the ignorance and terror of the natives have insured a fatal result in most of the serious cases. The rainy and windy weather, also, which prevailed during the epidemic, added to the mortality. In all but a few cases it was impossible to prevent the sick natives from going down to the beach and letting the waves wash over them, or lying naked on the wet ground. As a proof that many might have been saved who died from want of proper care and control, it may be mentioned that among 147 native police stationed at Levuka, who are under tolerable discipline, only nine, or 6 per cent., died, though every one took the infection; whereas authentic accounts from some places give a number of deaths, amounting to or even exceeding a fourth of the population. The total amount of loss has not been fully ascertained, but it probably will not be far short of 20 per cent. As there is some doubt whether the disease is quite extinct in the eastern islands of the group, Dr. Mayo, in whose district they lie, is just starting on a visit of inspection, which, as the resources of the Government as regards locomotion are almost *nil*, will probably occupy a considerable time.

Great as the losses have been in this epidemic, the Fijians remember one still more severe about forty years ago; but what its character was is not known. About a dozen years ago measles nearly depopulated Tanna and some other islands among the New Hebrides; and there are numerous records of similar disasters in other groups. But the fact that small-pox has up to this moment been kept out of Sydney with its 100,000 or more inhabitants, seems to show that by effective quarantine regulations such calamities might be rendered less frequent, if not prevented altogether.

THE INTERNATIONAL MEDICAL CONGRESS.

THE International Medical Congress, which was held at Brussels last week, was the fourth gathering of the kind, the previous Congresses having been held successively at Paris, Florence, and Vienna. The Congress was opened on Sunday, September 19, in the great hall of the Palais Ducal, by Dr. Vleminckx, President of the Belgian Academy of Medicine, and provisional President of the Congress. His Majesty the King of the Belgians occupied the royal box during the opening ceremony, and a brilliant company of ladies and more than 350 distinguished medical men were present. At the conclusion of the President's address a number of honorary presidents were appointed, among them being Messrs. Critchett and Bowman, Surgeons to the Royal London Ophthalmic Hospital.

On the Monday a reception was given to the members of the Congress by the Communal Authorities of Brussels at the Hôtel-de-Ville. The guests were received at the top of the grand staircase by the Burgomaster of Brussels, who was assisted by the Aldermen in doing the honours of the occasion. M. Delcour, the Minister of the Interior, was also present, and entered freely into conversation with the members of the Congress. An unlimited supply of cigars and champagne was provided, the discussion of which occupied the early part of the evening. Towards midnight a dance was improvised in the Gothic Hall, and was kept up until an advanced hour. Next morning the various sections settled down to their work, when several important papers were read, and at two o'clock a general meeting of the Congress took place, at which the report of the Section of Obstetrics on the question whether women of the poorer classes who require assistance, medical or otherwise, should receive such assistance in lying-in hospitals or in their own homes, was read, and a long discussion followed. Dr. Sigmund, of Vienna, spoke in favour of hospitals, and pointed out the great improvements introduced in the Lying-in Hospital at Vienna, which is now considered the best in Europe. The great majority of the meeting, however, condemned lying-in hospitals, and resolutions were adopted declaring the necessity of radical reform in this matter; that the great lying-in hospitals should be abolished, and replaced by small ones with a separate room for each patient; that, in connexion with these, convalescent homes should be instituted; and that the principle of giving, by preference, assistance at the homes of the patients should be extended as much as possible.

On Wednesday the Congress again met in sections, except a party of about eighty members who joined in an excursion to Louvain to view the Maison Pénitentiaire Cellulaire, which is said to be one of the model cellular prisons of Europe. The prison contains 600 cells, nearly all of which are occupied. It is built after the model of Pentonville Prison, with a round centre and six buildings radiating from it. The members inspected the cells, hospital, dispensary, chapel, etc., and expressed themselves as much pleased with their visit. In the afternoon another general meeting was held, at which the report of the section on the prevention of cholera was read and discussed. In the evening, Dr. Bockert, of Paris, gave a lecture at the Cercle Artistique et Littéraire, on the Diagnosis of Cerebral Disease by the examination of the eyes.

At the general meeting on Thursday, Dr. Lefort, of Paris, defended the resolution proposed by him, that the adoption of the principle of assistance at the homes of the patients offers the means for the suppression of lying-in hospitals, and that in cases of epidemics such institutions should be closed. In the course of his remarks he spoke of the Royal Maternity Charity of London as a model institution. Since the adoption of the system in Paris, 5020 accouchements took place in the course of three years at the patients' homes, which would otherwise have occurred at the hospitals. The propositions of Dr. Lefort were adopted. Several reports of sections were received and adopted, including one submitted by the Section on Public Medicine, which stated the necessity of both national and international organisations of public hygiene, and gave the outlines for both kinds of organisation. At the general meeting, Dr. Chapman, of London, read a report on prostitution in England and the effects of the Contagious Diseases Acts on the health of the army, in which he endeavoured to prove that the surveillance of prostitution is to be condemned, on the ground that it leads to clandestine immorality. A brisk discussion followed the reading of Dr. Chapman's paper, in the course of which Dr. Sigmund stated that since the adoption of a system of surveillance in Vienna a remarkable diminution had taken place in disease, both as to the number of cases and their virulence. Dr. Vleminckx, the President of the Congress, said that the mastery over the scourge had been obtained in Belgium only by the system of legal surveillance. He was unable to understand why England, which decreed compulsory vaccination, did not take a like action in this matter, and said that the maintenance of the English way of treating this grave question appeared to him a danger for the whole of Europe. Dr. Gaetano Pini complained that English medical men do not limit their propaganda to England, but practise it even on the Continent. He suggested that the question of combating disease should be made one of the subjects for the consideration of an international hygienic commission.

On Thursday night, a brilliant *soirés* took place at the official residence of the Minister of the Interior, in honour of the Congress. The *soirés* was attended by many members of the diplomatic body, the Burgomaster of Brussels, and other high officials. The guests were received in the *salons* of the first floor. The celebrated band of the Belgian Guides was stationed in one of the rooms, and played a choice selection of music.

The proceedings of the Congress were brought to a close on Saturday, by a farewell banquet in the Gothic Hall of the Hôtel-de-Ville. Dr. Vleminckx presided, and was supported on his right by the Minister of the Interior and Dr. Bouillaud of Paris, and on his left by the Burgomaster of Brussels and Mr. Critchett. Many toasts were drunk and congratulatory speeches made; after which the members of the Congress separated, each much pleased with his reception at Brussels and the success of the whole meeting.

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FROM ABROAD.

M. Duchenne.

Awaiting the biographical accounts which doubtless will be published before long of this, in many respects, so remarkable a man, M. Brochin furnishes, in the *Gazette des Hôpitaux* (September 25), the following appreciation of the nature and extent of his scientific services :—

"When M. Duchenne arrived in Paris in 1848 or 1849, with the various specimens of faradisation apparatus of which he was both the inventor and constructor, and a large mass of cases, experiments, and notes, destined, multiplied by his incessant activity, to form the material of his first and important publication, 'Electrisation Localisée,' it was easy to foresee that a man entering, so provided, on the field, with so firm a purpose, and with a love of labour and research carried to a passion, would not be long in getting himself spoken of and in making himself a distinct place amidst that crowd where all sorts of ambitions were in motion and clashing against each other. But what was less easy to divine, and what probably surpassed all prevision, was the extension which M. Duchenne's undertaking was ulteriorly to receive by the successive progress of his ideas, and the logical connexion of the facts which he gradually brought to light, and the rank to which he was to raise himself in those high regions of science so difficult of access.

"While we have just stated that, from the point of departure of M. Duchenne's labours, it would have been difficult to divine whereto he would reach, yet a little reflection enables us to seize the logical connexion of all his work. In fact, what do we find in his first publication? Multiplied investigations, with facts in considerable number in support, on the physiological effects and therapeutical applications of the localised electrisation of muscles. If he had stopped there, M. Duchenne would still have rendered incontestable service to muscular physiology (concerning which his earliest researches extended our knowledge by rendering it more precise), and he would have been regarded as a skilful electrician and a fortunate specialist. Happily, he did not stop here. Before, during, and soon after the publication of his great work, he produced a great number of detailed memoirs, all more or less relating to this or forming part of it. Among these we may especially note his memoirs on the art of limiting electric stimulation of organs, or a new method of electrisation; the application of localised galvanisation to the investigation of muscular functions, and on the special action of inductive electricity on the tonic force of muscles, which have been the true points of departure of all his other works; his critical researches on the condition of contractility and electro-muscular sensibility in paralyses of the upper extremities; his electro-physiological researches on the muscles of the face, on the properties and uses of the tympanum, on the muscles of the shoulder, on the special action and uses of the muscles of the thumb and fingers—the physiology and orthopædics of which he reconstructed,—on the diaphragm, on the uses of muscular sensibility, the muscular sense, etc.

"From the study of muscular faculties and properties, M. Duchenne was naturally led to pathological and therapeutical applications. One of the first pathological facts which he most contributed to place in a true light, thanks to his method of exploration, and which he has investigated and made known with far more precision than had been hitherto done, was muscular atrophy with fatty transformation, which he compared at a later period, while rendering its distinctive characteristics more precise, to general paralysis and to atrophic paralyses of traumatic origin. He at the same time sought to determine the value of localised electrisation as a means of treating this progressive atrophy, and applied this therapeutical method in the fatty atrophic paralysis of children and in the treatment of the paralyses consecutive to cerebral hæmorrhage, of facial hemiplegia, of angina pectoris, of nervous deafness, etc. From the epoch which corresponds with the publication of his first edition, M. Duchenne's labours take a wider development, as he proceeded from the study of the physiology and pathology of the muscular system to that of lesions of the nervous system, which henceforth occupied his attention as prominently as had the muscular lesions. It was then, under the designation of *ataxie locomotrice* (a term of doubtful value, with which he was himself ill-satisfied, but which, as no better has been substituted, still remains in science), that he described and made known this primarily chronic disease attacking simultaneously several points of the cerebro-spinal nervous system, manifesting itself especially by disturbance in the co-ordination of movements and sensibility, and one of the fundamental characteristics of which is to continue to progress, while becoming aggravated, to a nearly certain fatal termination. It is with reference to this disease that M. Charcot, who has so thoroughly studied it since, declared in one of his lectures in 1872 that, after the numerous descriptions of it which have been made, he could not but recommend his hearers to frequently refer to that by M. Duchenne, which, after all, remains the best. It is from this same epoch that dates the first description that has ever been made, as a special affection, of progressive muscular paralysis of the tongue, velum, and lips, and to which M. Duchenne afterwards gave the name of glosso-pharyngeal paralysis, and which Trousseau proposed to designate as 'Duchenne's disease.'

"The rapid succession of these important works, which, while they enriched clinical observation with facts either new or unknown before, had led also to new investigations destined to control or complete them, rendered necessary the remodelling of M. Duchenne's classic 'Electrisation Localisée.' Its first edition was not a methodical book, but rather a collection of memoirs and notes, in which were consigned accounts of innumerable experiments on the physiology and pathology of the muscular system which had led him to the discovery of new morbid species, and had led to his comprehension of the genesis of numerous deformities, both congenital and acquired, which had hitherto been ill described or incompletely investigated. These numerous materials required to be grouped and recast in a more methodical manner; and accordingly the second edition, published in 1861, became a didactic treatise on muscular pathology and therapeutics. A third edition was published in 1872, and became this time also a new book, not only in consequence of the different order and modifications of the original text adopted, but by the addition of the new results derived from such persevering investigations. To the family of progressive diseases which Duchenne had bestowed on pathology, and which he had introduced into his second edition, he added in the third a species not hitherto described, and not less fatal in its progress and its termination—viz., pseudo-hypertrophic or myosclerotic paralysis. Other clinical studies, of not less importance, are also found there, and among others a species of infantile paralysis which he terms obstetrical, acute anterior spinal paralysis in the adult, and subacute general spinal paralysis.

"This is not yet all; M. Duchenne's contributions to pathology and clinical practice, great as these are, not being the whole of what he has done for science. We have seen that the point of departure of his labours was muscular physiology, concerning which he has since assembled all the ideas acquired by aid of electrical experimentation and clinical observation in a work published in 1863, entitled, 'Physiologie des Mouvements.' By a first tangent he was led to the important pathological researches on the muscular and nervous systems which we have summarily noticed; and a second led to histological researches on the nervous centres, and to studies of the greatest interest on the mechanism of the human physiognomy by the aid of the electro-physiological analysis of the expression of the passions, of which he made some ingenious applications to the practice of the plastic arts. . . . . His researches into the mechanism of the human physiognomy have not been the least original portion of his labours. He has had, one may say, the boldness to seek the solution of this difficult yet beautiful problem, by inducing, by means of electrical currents, the contraction of the muscles of the face in order to compel them to exhibit the language of the passions and the feelings.

"When we now reflect upon these immense labours, all of which are far from having been enumerated, and upon the conditions amidst which they have been undertaken—without chair or hospital service, without other laboratory than that he had formed, without other instruments than those which he himself had made, and without other field of observation than that of the hospitals (open to all who work with a will), and his own practice,—and when we seek in vain for the titles and honours that have rewarded his labours, we can comprehend with what respect should be encompassed the memory of a man who has done so much with such disinterestedness and such a love of science."

A writer in the *Gazette Hebdomadaire* (Dr. Béhier, we believe) thus expresses himself :—"The priority of his dis-

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coveries has often been disputed with Duchenne, and this criticism has been especially urged with respect to *ataxie locomotrice*. It is well known that he was not what is called an erudite; and at the time when his first works appeared he read but little. No one was more astonished than himself when it was proved to him that certain facts—which he, as well as a great many others, believed to be absolutely new—had been described before, if not in France, at least among our neighbours. The merit of the invention was not, however, the less for him; and what cannot be denied is, that he knew how, by the care he bestowed on the study of these facts—new, at all events, for us—and by the ingenious analytical methods which he applied to them, to place them in a light, and bring them out in a relief which were unknown before.

"Who does not recollect the astonishment exhibited in the clinic at that experiment of Duchenne of drawing from his bed a patient regarded as absolutely paraplegic, and loading him with the weight of a man of ordinary size, without his ever flinching under it? It was one of his merits to always have at his disposition some demonstrative procedure capable of striking the attention and fixing the facts in the memory. Until his last days he was ever working, investigating, and perfecting. The clinic, at the bedside of his patients, was his place of predilection. He expounded his ideas badly, his diffuse explanations contrasting with the certainty of his investigations and the clearness of his conclusions, which he was fond of summing up in formulæ easily retained. It was during the examination of the patients that he recovered all his superiority, no one being better able than he to analyse a clinical fact. His patience was extreme; nothing was neglected. How many patients have been watched by him for several years, and at the same time aided, succoured, and encouraged with a benevolence that never was wanting! This patience in investigation, joined to his remarkable faculty of invention, constituted Duchenne truly an exceptional observer. His ardour never abandoned him. He was a true artist in medicine. His reputation, slowly acquired, increased day by day; and his superiority was rarely met by incredulity."

The New École d'Anthropologie et de Géographie Médicale.

The *Gazette Hebdomadiare* makes the following interesting announcement:—"Thanks to the active iniatitive of Prof. Paul Broca, and the ready concurrence of the Faculty of Medicine, an 'École d'Anthropologie' has just been founded at Paris. The École Pratique is to be employed for its purposes, and it will be supported solely by private subscriptions. The subjects of the various courses of lectures have been settled, and the following is the list of the professors:—Anatomical Anthropology, M. Broca; Ethnological Anthropology, M. Dally; Linguistical Anthropology, M. Hovelacque; Prehistorical Anthropology, M. De Mortillet; Biological or General Anthropology, M. Topinard. Moreover, a very distinguished *confrère*, to whom we owe a remarkable work 'On the Influence of Atmospheric Pressure on the life of Man' (M. Paul Bert), has placed at the disposal of the new school a sum of 40,000 fr. to meet the expenses of a supplementary course on Demography and Medical Geography, and for this chair M. Bertillon has been chosen. We have only one observation to make. If the lay element among our *savants*, far more disposed to lamentation than to action, does not feel itself endowed with a propagandic energy, and a spirit of sacrifice sufficient to enable it to combat its adversaries with equal arms, opposing faculty to faculty, and university to university,—at least let it follow the example set by M. Broca, and establish near the Faculties of the State schools with more limited objects—schools of physiology, of medical history, of general pathology, etc. These would serve for the affirmation and propagation of doctrines, without withdrawing pupils from the teaching of the faculties."

The Financial Condition of Anderson's University.—At a meeting of the trustees of Anderson's University, Glasgow, last week, a statement of accounts was submitted, which showed the net stock of the institution to be £35,572. The income amounted to £3183, including £2126 from Mr. Young for the chair of Applied Mechanics, and £100 for a scholarship from Mr. John Heugh. The interest amounted to £569; rents to £263; museum fees, £17 17s.; and annual subscriptions to £62. The total expenditure amounted to £876, leaving a balance of £2307.

REVIEWS.

Lectures on Pathological Anatomy. By Samuel Wilks, M.D., F.R.S., and Walter Moxon, M.D., F.R.C.P. Second edition. London: J. and A. Churchill. 1875.

If we have been somewhat backward in directing the attention of our readers to this book, our reticence has been in nowise prompted by disregard of its value. We retain far too grateful a remembrance of the earlier edition to be neglectful in noticing it in its new dress, especially when this dress has been so laboriously prepared and so handsomely turned out by both editor and publisher as in the present instance.

But indeed the work is not an easy one to review. Apart from its charming, readable style, which tempts one to peruse it from end to end before forming an opinion of its merits, there is in every page such unmistakable evidence of real original work and observation, that one hesitates to point out what appear to be defects. And yet, to be candid, we doubt whether, as a text-book of pathological anatomy, this is altogether the most useful work for students. As a monument of its authors' industry and evidence of their splendid field of research, it is perhaps all that can be desired: as a companion to the fairly educated practitioner it is very valuable: and as a refreshing reminder to an old "Guy's" man of the quaint, forcible instruction he received in the post-mortem-room in his student-days, we imagine it will be widely welcomed; but as a text-book of pathology for general students, we conceive that it is not quite satisfactory.

For instance, although we are grateful for the inclusion in this edition of some beautiful plates in Dr. Moxon's best style, representing the histology of new growths, we cannot help regretting that the editor was unable to carry out more fully his intention of illustrating this edition, for we all know how helpful even to the best-written description is a clearly executed diagram (if more be unattainable) in conveying an idea of many morbid changes to minds unfamiliar with the subject. One of the chief features in the older book was its thorough originality. Dr. Wilks, revelling in his almost unequalled opportunities, advisedly abstained from making any statement unverified by his own observation and experience. The result was a work which at once established its author's fame for industry, zeal, and research; but, as might have been anticipated, as a text-book reflecting the best of the work accomplished in its several departments by European pathologists, it was disappointing. We are glad to find that Dr. Moxon has to some extent remedied this defect. It was not to be expected that so constant an attendant at the meetings of the Pathological Society of London should refuse to avail himself of the mass of material to be found in the pages of the *Pathological Transactions*. We can only wish that Dr. Moxon had still more largely called into requisition the accumulating published observations of so many pathologists both at home and abroad; for we still feel that to a certain extent the main defect of the work as a text-book lies in what is at the same time its strongest and most refreshing feature—namely, the tone of original observation which pervades every paragraph.

One other remark as to the general character of the book may be made. It is not so elementary as text-books usually are. On the contrary, a certain amount of elementary knowledge of morbid anatomy seems to be assumed throughout on the part of the reader. This is perhaps a commendable feature. It certainly renders the work far more interesting to advanced students, and to those whose pupilage is past, and comparatively few students read a volume of this kind until a year or two of attendance in the post-mortem-room has rendered them familiar with the outlines of the subject.

In referring briefly to some of the portions of the book, we naturally turn to those parts which have received the greatest editorial attention. The important section on the morbid anatomy of the lung has been still left entirely in Dr. Wilks's hands, and although free additions have been made in some places, as under the headings "phthisis" and "pneumonia," it certainly shows far less evidence of revision than the rest of the volume. That this should be so, shows what complete confidence the author feels in the accuracy of his older work. That sixteen years of investigation by yearly multiplying observers, and constantly improving methods of research, have rendered so little alteration necessary in this section, speaks well for the care exercised in its original compilation.

The difficult subject of bone-inflammation and its results is introduced by a very happy sketch of what living bone really

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is. "The bone of the skeleton is but the skeleton of the bone. In a living bone the hard osseous tissue, or *tela ossea* proper, is covered outside with periosteum; the cavities or cancelli within it are filled with medulla; vessels, either arteries or veins, permeate the substance running in the Haversian canals; even the lacunæ are occupied by cells, whose processes stretch in the canaliculi to communicate with the contents of the lacunæ around. A living bone contains all these soft parts, and its life is maintained by them. . . . The most important connexion of the hard *tela ossea* is not this anatomical connexion with the parts around for the purpose of supply; it is rather the historic or physiological connexion which it has with the soft parts, in that the bone arises from the cartilage, periosteum, or medullary tissue (ultimately nearly all from the medullary tissue), and it is always ready to return into the soft state again. The dry bones we are familiar with all our life impress us with a natural but false idea that the bone is a permanent and passive sort of thing, having no proper vitality or versatility."

It is surprising to find how comparatively easy it becomes to follow the accounts of the various morbid processes in bone after this graphic sketch of its natural condition.

The sound common-sense practical view taken of even those subjects on which the writers might claim to speak with high scientific authority is well seen in such passages as the following. Speaking (p. 95) of the several tumours of muscle which are all apt to be called "medullary cancer," the editor says, "From a practical point of view this is of no importance whatever, and, indeed, the lines of distinction between the forms of growth we have named reach their vanishing-point in the vague histology of such tumours as these soft, swiftly formed malignant tumours of muscle, whose structure does not offer particulars enough for useful distinction." And again, a little further on, "It is important to notice the free spread of cancer in muscular tissue. We recently examined the line of section of a cancer removed by galvanic cautery from the tongue, and found cancer-cells present close up to the surface of excision, so that no doubt could be entertained that cancer-cells had been left; though the part had, to the naked eye, all the appearance of being perfectly healthy."

We might multiply indefinitely such passages in which the valuable undercurrent of original observation carries home to the reader the real worth of all this laborious examination of morbid conditions, and its bearing on daily practice, but we have no space for long quotations. The reader will find the whole work so attractive that he will be more disposed to thank us for calling his attention to it in general terms, than for giving him many imperfect specimens of its excellence in detail. And he will not fail to notice how admirably the recent views and terminology of the difficult subject of new growths is here blended with, and grafted on to, the accurate but old-fashioned statements in the earlier edition. He will see that views set forth in the last Medical Reports of the Privy Council, as the results of the most recent experimental researches, have long been held by the writers (as indeed by many other pathologists); for, when treating of diseases of the liver, it is said, "From what we have seen we have no doubt that, as a rule, the cancer-cells are developed by direct transformation of the hepatic cells."

And it will not escape the modern student that such more recently investigated affections, as Duchenne's paralysis with apparent hypertrophy, diphtheria, tubercle, and the like, receive their full meed of editorial attention (we could wish, indeed, that the first named had been more fully described), and that, although both authors are physicians, the surgeon finds his wants fully provided for.

But we must not extend this notice. We can only warmly commend the book to those who wish to keep up their knowledge of the more scientific aspect of medicine on a level with the more directly clinical aspect which we all appreciate, and who will find in this present edition all which some of them learnt to value years ago, and a great deal more besides.

The Student's Guide to Human Osteology. By W. W. Wagstaffe, B.A., F.R.C.S., Assistant-Surgeon to, and Lecturer on Anatomy at, St. Thomas's Hospital. London: J. and A. Churchill, New Burlington-street.

The present is a particularly opportune moment for the introduction of a new work on osteology. Not only have we arrived at the commencement of a winter session, when such works are a prime necessity of first year's students, but just now one or two osteological works which have been very popular with students happen to be out of print. To take the place of these a work of a very high order was needed, and we cordially welcome Mr. Wagstaffe's manual as a work that may be fully and freely recommended to students.

The main object of the author, he tells us in his preface, has been to describe the bones of the skeleton without wordiness; and the secondary object, to interest the student in the mechanical wonders of his framework. In carrying out these objects, the author has not copied any previously existing method, but has followed a plan of his own devising, and has executed his task with so much care and skill, that the result is a work surpassing in clearness and accuracy of description the best of the numerous text-books hitherto offered to the student of osteology. The simplest bones are first taken for examination, beginning with those of the extremities, before proceeding to the more difficult bones of the skull. Each bone has been examined in a definite manner, first as regards its situation; secondly, as to its shape; thirdly, its various parts; fourthly, its articulations; fifthly, development; sixthly, mechanism and structure; and, lastly, the points of chief importance about the bone. The mechanical structure of bones, which is often only glanced at in the most superficial manner, has been here very fully considered, and the author gives in a most interesting manner the result of his recent investigations on this point, and which clearly show the wonderful resources of nature in order to secure strength and elasticity combined with lightness.

The work is illustrated by a number of woodcuts and a series of plates, twenty-three in number, which, with two exceptions, are drawn from well-marked bones selected by the author. The manner in which these plates are executed reflects the highest credit on the artists, being true to nature, and marvellously clear in outline and definition. The plan of indicating the attachments of muscles by coloured lines, as originally adopted by Mr. Holden, has been followed, the origins being indicated by continuous, the insertions by interrupted lines. There are two or three errors of spelling in the names of the muscles and bony points marked on the plates, but they are too obvious to mislead. A very valuable chapter is added at the end of the work on the bony landmarks which can be felt or seen through the skin in the living body, a thorough knowledge of which is of the first importance to the surgeon in determining the nature of injuries and of certain diseases and deformities.

In concluding this brief notice we would congratulate the author on the original manner in which he has treated the subject, and the success of the work as a whole; and we have no doubt but that it will gain a high position in the estimation of students as a good and cheap handbook of osteology.

A Handbook of Hydrometry. Intended to Simplify the Principles of the Science, and Popularise the Use of the Instrument. Containing Descriptions of the most Important Forms of the Instrument, and some Improvements by the Author. By James Boddely Keene, Hydrometer Office, Custom-house, London, Author of "The Handbook of Gauging." London: Pitman, 20, Paternoster-row. 1875. Pp. 60.

Although not originally intended for medical readers, Mr. Keene's little book contains a great deal of very valuable information on the principles of hydrometry, the methods used for taking specific gravities, and the instruments used for that purpose, not only in our own, but in past days—information which cannot fail to be of service to both practitioners and students of medicine. Those of us who are busy practical men, if we do not happen to be experimental chemists, use only one form of hydrometer, generally known as the urinometer.

Our readers may not perhaps know, but we can assure them from personal experience, that hardly one in ten of the instruments sold for this purpose is accurately graduated—the price at which they are sold being, we suppose, too small to allow of the necessary care, trouble, and time being taken. We have not seen Mr. Keene's improved hydrometer; but, if not too bulky, it would seem admirably suited to chemists and medical men who make syrups, and are constantly using spirit and other fluids, of which they wish to know the strength. It is an improvement on Sykes' hydrometer, which has gradually displaced nearly all the others. It

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is adapted for fluids lighter and heavier than water, thus combining in one instrument the advantages of both kinds of Beaumé's. We specially mention bulk, because in both pharmacy and the practice of medicine the quantities of fluids operated on are usually small. Even in the case of urine, especially in children, and very often in adults at a first consultation, the amount of urine obtainable is often very small, which has induced us to make some experiments, not yet concluded, on a simpler form of balance sufficiently accurate for medical purposes. But whether or no Mr. Keene's invention be of practical use to our profession, there can be no doubt of the value of the information on these subjects collected by him. The work is accompanied with tables of various kinds, which add greatly to its value. It is very modestly, clearly, and pleasantly written, remarkably so considering that the subject is a dry one, although it deals with liquids. Whilst fully agreeing with the author as to the untrustworthiness of both Beaumé's and Cartier's instruments, it would, we think, much increase the value of the book to give some further details or tables of the ordinary values of their degrees. Both instruments are still largely used on the Continent, and scientific books are full of references to them. Two such tables for Beaumé's instruments are given in the appendix to Fowne's Chemistry, on the authority of Francœur, taken from the "Handwörterbuch der Chemie" of Liebig, Poggendorf, and Wöhler. Cartier's degrees differ little from these—10° Cartier = 1000, or specific gravity of water; 44' = anhydrous alcohol; 34° = rectified spirit; whilst 20° to 23° are about equivalent to good brandy. We think also that a page or so on urinometers would be likely to render the work more acceptable to medical readers, whilst the addition of a few tables of the specific gravities of mixtures of acetic acid and water, of syrups, alkaline solutions, of mixtures of mineral acids and water, and saline solutions, would render it still more acceptable both to them and to pharmaceutical chemists and manufacturers. Solutions of common salt are now frequently used to ascertain the density of brain and other nervous matter, and as evaporation affects these, it is very desirable to have an easy and sufficient means of ascertaining their density and percentage of salt. Mr. Keene's hydrometer, and a table of the specific gravity of solutions of common salt, would thus be found highly useful in the post-mortem room.

Homes of the London Poor. By Octavia Hill. London: Macmillan and Co. 1875.

This volume comprises a series of articles reprinted from the *Fortnightly Review*, *Macmillan's Magazine*, etc., having for their object the ventilation of the most practical method for improving the dwellings of the poor. The gist of the very close observations which the writer appears to have made in a long course of *personal* communication with the dwellers in some of the lowest neighbourhoods of the metropolis, is that legislation alone will never do much to improve the dirty and careless habits of the poorer classes. The people's homes, she says, are bad, partly because they are badly built and arranged, but they are tenfold worse because their habits and lives are what they are. Transplant them to-morrow to healthy and commodious houses, and, unless they can be trained by unceasing kindness and perseverance to feel a respect for themselves, they would pollute and destroy such dwellings without compunction. The authoress hopes much from the Artisans' Dwellings Bill, which, since her articles were written, has become law. Through this legislation, she confidently asserts that many of the foulest courts and alleys in London may be removed or remodelled, which are now kept in their wretched condition through the greed of owners of property, who, whilst reaping large profits from their houses, simply refuse to part with their interests for the amelioration of the localities. We are bound to listen with much respect to the views of a lady who has so clearly and so modestly given the results of her experience on the subject, more especially when we remember that she has not written of these things from books or from hearsay, but has bravely and philanthropically given her time and labour to personal intercourse and inquiry amongst that class of the population which recent legislation has sought to benefit, and from the improvement of whom the sanitary condition of the metropolis may be expected to become so much more perfect. This book should be carefully read by all those whose duties under Mr. Cross's recent Bill are just now commencing.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, September 26.

Sir Richard Wallace's Benefactions—Drinking Fountains—M. Claude Bernard on Restoration of Sensibility after Section of Nerves—M. Gautier on Arsenical Poisoning—The Use of the Ophthalmoscope in Concussion and Compression of the Brain—M. Glénard on Coagulation of the Blood—The Marching Capabilities of the French Soldier—A Pair of Dwarfs.

If there is any man in this world who deserves the title of public benefactor, it is assuredly Sir Richard Wallace, for his works are well known. In previous letters I had occasion to speak of this gentleman's many acts of charity and benevolence in Paris, and among others referred particularly to the Hertford British Hospital he had founded at his own expense for the benefit of the British poor, and to the drinking-fountains he had established, also at his own expense, in different parts of this city. To my mind, both are the happiest ideas one can conceive; for what can afford more real satisfaction to a well-meaning man than to be instrumental in relieving the sufferings of the sick, and quenching the thirst of his fellow-creatures, whether in sickness or in health, thus following the example of our own Great Master, who went about doing good?

During the tropical weather we have just had, the fountains alluded to above were very much appreciated by the Parisians; for I have seen them literally invaded, and in the hottest time of the day so surrounded that in some instances the police had to interfere to maintain order. These fountains have certainly rendered the greatest service to the Parisians; and Sir Richard Wallace may well be proud of the fact that in no period of French history has it been known that so much pure and unadulterated water has been drunk by this eminently wine-drinking population as since the establishment of these fountains; for the French are beginning to find out that pure water is not such a bad thing after all, particularly when it is filtered, and that the addition of wine is not absolutely necessary to render it wholesome. But, as with all good intentions, do what you will, it is hard to please everybody. So it has been with these drinking-fountains; for while they were welcomed by the general public, they were looked upon with an evil eye by the *marchands de vin* (publicans), as they offered a serious competition to their trade, and one of them went so far as to give effect to his wrath by pulling down one of these fountains, for which he was taken up, and heavily fined. One *marchand de vin*, however, has had the keen sense to dedicate his shop to the illustrious founder of these fountains, and it is to this circumstance he attributes in great part the success of his trade, although, as he owns, he does not serve out a drop of water himself, yet owing to one of these fountains being placed in front of his door it forms a source of attraction to his shop.

In a report recently submitted to the Academy of Sciences by M. Claude Bernard, on the occasion of the distribution of prizes, and with reference to the prize for physiology, the learned physiologist expressed himself in the following terms:—"It has often happened that, in man, when the median nerve has been accidentally divided, union has been effected by sutures, and that it has been observed, the sensibility of the parts to which the nerve is distributed has been restored soon after the operation. Several authors have attempted to explain this phenomenon by the simple restoration of sensibility resulting from immediate union of the cut ends of the nerve. MM. Arloin and Tripier, however, have shown that the sensibility is due to the anastomoses of the peripheral nerves." But Professor Richet, demurring to this, offers another explanation, which would seem to accord with certain observations made in morbid histology. He accordingly sent in another report to the Academy, in which he has shown that the sensitive nerves of the hand do not terminate in the same manner as the other nerves. The terminal branches of the median nerve, and those of the radial and ulnar nerves, unite at their extremity to form loops, whence arise other smaller filaments, which are ultimately lost in the tactile papillæ. Thus it is seen that each of these papillæ receives filaments from the loops resulting from the inosculations of the ulnar and radial nerves with the median. This anatomical disposition has been perfectly shown

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by Professor Robin, and would explain how it is that, notwithstanding the section of the median nerve, sensibility is preserved in the essential organs of touch. As regards the sensibility of the peripheral nerve itself, "it must be admitted," added M. Richet, "that a certain number of sensitive fibres, arising either from the radial or the ulnar nerve, restore, by a recurrent course, the sensibility of the nervous trunk situated below the section, unless the sensibility depends on the *nervi nervorum* discovered by Professor Sappey, which, however, is scarcely probable. The nerves of both surfaces of the hand (the dorsal and palmar), and those of the wrist, receive filaments which terminate in integuments, independent of the inosculations of the median with the ulnar nerve. Hence it may be said that in the hand, the special organ of touch, the distribution of general and special sensibility is as complete in its way as is the arrangement of the arterial circulation of this member."

To trace the presence of arsenic in the tissues of the body, even after putrefaction has set in, in cases of poisoning or otherwise, has been justly considered a great triumph of chemistry, and is of the utmost importance in a medico-legal point of view, as many crimes have been discovered, even a long time after inhumation; and but few culprits can hope to escape the researches of toxicologists of the present day. But if chemical analysis has succeeded in detecting the existence of arsenic in the tissues, it has failed to determine the exact quantity. M. Armand Gautier, director of the chemical laboratory at the School of Medicine, has undertaken the task, and he believes he has succeeded in meeting the desideratum. He sent in a paper on the subject to the Academy of Sciences, in which he gives the results of his experiments. His method consists in totally destroying the animal tissues, so as to isolate the arsenic. This is done with pure nitric acid, followed by the addition of sulphuric acid, and then the destruction is completed by again having recourse to nitric acid. To the liquid thus obtained, a few drops of the bisulphite of soda are added, and the sulphuret of arsenic is then precipitated in the ordinary way by sulphuretted hydrogen. M. Gautier has in this way completely isolated the entire quantity of arsenic he had himself introduced into the bodies of different animals. In the course of his experiments M. Gautier made one very important discovery, viz.—that the arsenic is first localised in the nervous system, and then passes on to the liver and the muscles.

M. Bouchut, so well known for his researches in differentiating, by ophthalmoscopic signs, the various cerebral affections, has recently submitted a note to the Academy of Sciences on the differential ophthalmoscopic signs between concussion and compression of the brain. According to the learned doctor, in simple concussion the optic nerve and retina remain unaltered; but in compression of the brain, with or without consecutive inflammation, or attended by extravasation of blood or serum, with or without fracture of the skull, the optic nerve and retina are more or less altered. The former is swollen, appears flattened, of a uniform rose colour, sometimes vascular, attended by serous suffusion which extends to the retina. Sometimes the arteries are reduced in size, if the suffusion extends to the sheath of the optic nerve, and the veins of the retina are more or less dilated, which conditions would indicate a similar alteration in the circulation in the cranial cavity.

While at the Academy of Sciences I may note that a paper from M. Glénard, of Lyons, was read. According to this gentleman, the coagulation of the blood in the bleeding-cup is caused by its contact with the foreign body, and not by any inherent property of its own. In illustration of this he removed a portion of an artery from a living animal without emptying its contents, and he noticed that the blood did not coagulate, although it was exposed to the air. After a certain time the blood became dry, and formed a pulverulent mass. Treated with water in this state the mass becomes dissolved, and the solution then coagulates spontaneously, even after filtration. Blood thus preserved, whether in a fluid or dry state, loses none of its vitality, provided it is not removed from the segment of artery or vein, and may be thus employed for the purposes of transfusion. When dry, however, the blood must be previously dissolved in water; and M. Glénard compares this condition to what takes place in rotifers and tardigrades, in which all manifestations of vitality are suspended by desiccation, and which become revivified, as it were, on the application of moisture. M. Glénard used liquid blood from an ox thus preserved—that is, before desiccation took place—seven hours after its removal, in a case of transfusion in a dog which he had previously bled to death's door, and with perfect success.

From the late war the French have learned that time is a very important element for the success of belligerents, and that in this respect their adversaries had the advantage over them, owing not only to the rapidity of their movements, but, being taller men, they got over leagues of ground in a much shorter time than could the French. To bring themselves up to the mark, the French Government have issued new regulations respecting the soldiers' step, and the pace at which they should march for the future. But whatever may be the intentions of the authorities, the carrying out of the regulations would be simply impracticable—at least, in a general way; and it seems absurd to expect a French soldier to make as long strides as a Prussian, or even an Englishman or Russian. Previously to the new regulations, the French soldier's step measured sixty-five centimetres, and the rate at which he marched was reckoned at 110 steps in a minute; he thus went over seventy-one and a half metres in a minute. The step is now increased to seventy-five centimetres, and the rate to 115 a minute; in this way he is expected to get over eighty-six and a quarter metres in the same space of time. This may do for an ordinary parade-ground, but I doubt whether any infantry soldier in the French army would be able to keep up this pace on a long march. The framers of these new regulations seem to have lost sight of one essential condition in regulating the soldiers' step, and that is the length of the legs. Now, it is well known that the soldiers in the French army are very short men, and they are now even shorter than they used to be, as their standard height had been gradually reduced from one metre sixty centimetres, to one metre fifty-five centimetres; but since the last war this minimum height has been still further reduced by one centimetre; so that the French infantry soldier now stands only one metre fifty-four centimetres, or five feet 1·635 inches of English measure. A man well proportioned ought to have his legs half the length of his entire height; this being the case, the length of a French soldier's legs may be put down at seventy-seven centimetres, which at each step would nearly form the sides of an equilateral triangle—a mode of progression evidently contrary to all laws of locomotion, not only in man, but in all animals. But it has been argued that as the length of each stride is in inverse proportion to speed, the French soldier, in a given time, ought to do the same distance as the Prussian, as his strides, though shorter, are greater in number, and would make up for what he lacks in the length of his legs. This may hold good for short distances, but for long marches the French soldier must break down, as he would have to employ a greater amount of energy to enable him to keep up with the Prussian, as, indeed, was proved by the experiences of the last war. Under these circumstances, the French must make up by other means for what they are deficient in physical powers if they wish to cope with their taller adversaries; and it is the opinion of most French officers that it would be advisable to retain the old pace of 120 metres a minute, or even to extend it to 125, but certainly not beyond, as it would involve unnecessary fatigue, and consequently loss of time, particularly on a long march and with knapsacks on the soldiers' backs.

A pair of dwarfs (brother and sister), named Mouche, are being exhibited on the boulevards, and the bill posted up over the door states that they are the smallest "personages" the world ever produced! They are of Belgian origin, and the gentleman, aged eighteen, is seventy-seven centimetres in height, and weighs seven kilogrammes, or about fourteen pounds. The young lady is nineteen years of age, eighty-three centimetres in height, and weighs about ten kilogrammes. They are perfectly well made, being well proportioned, and they struck me as possessing the average amount of intelligence of persons of their age.

L'ACADÉMIE DE MÉDECINE.—Two new and important legacies have just been left to the Académie—one by M. Desportes, of 30,000 fr., for the foundation of a prize in therapeutics; and another by M. Demarquay, of 100,000 fr., to aid it in providing a much-wanted new habitation. In case the Government undertakes to do this, the money is to be employed in founding an annual prize, to be adjudged by the Académie for the best work in anatomy, pathological anatomy, histology, internal or external pathology, or hygiene.

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GENERAL CORRESPONDENCE.

THE HEALTH OF YOUNG MEN ENTERING THE PROFESSION.

[To the Editor of the Medical Times and Gazette.]

SIR,—Your very valuable remarks upon the health of the young men intended for the medical profession were made none too soon. No one can doubt that very many who enter the schools fail through ill-health to obtain a diploma, and many of those who are so far successful are so at the loss of health and strength. Few men can go through their hospital career in London without ailing in some degree. Is there no remedy for such a state of things? I think so. Is it so necessary that men should gain the whole of their knowledge in the great centres of education? Could not the hospitals of the provinces be made of some use? I will illustrate it by one with which I have the honour to be connected—one containing 200 beds, situated in a healthy part of the country, and always well filled, giving relief to some 1200 in-patients, and some 5000 out-patients in the year. Those who know the amount of work done in many of these provincial hospitals will not venture to deny how much more actual knowledge could be gained by students by attending to the cases themselves in these wards than by following in a crowd a surgeon of the highest reputation through the wards of a London hospital. But why should they not do both? As it is, the provincial hospitals regarded as educational establishments are worth absolutely nothing, which I hold to be a standing disgrace to those who regulate the medical education of this country. With regard to one of the most important subjects of medical education for the great mass of practitioners—midwifery. I maintain that we could give the student as good and practical a knowledge of it in the provinces, without creating in him, as it often does, a dislike, and I may even say disgust, owing to the filthy dens in which he has to obtain his experience in London; and as most of the honorary surgeons of the provincial hospitals attend midwifery, the instruction would be more direct between teacher and student. In the hospital above alluded to there has not been a pupil for years, yet I respectfully submit that three, six, or even twelve months spent there would yield as good results as the same time spent in any of the London hospitals, apart from the benefits which would accrue to the health of the student.

I am, &c., COUNTRY DOCTOR.

OBITUARY.

GEORGE ROSS, M.D., L.R.C.P. EDIN., M.R.C.S. ENG., ETC.

IT is our painful duty to announce the death of Dr. Ross, at the comparatively early age of fifty-eight, after only a few days' illness. The deceased has for some years past occupied the position of Medical Officer of Health for the St. Giles's district. He displayed literary talents of a very high order, and was an honest and uncompromising opponent of every species of quackery, whether in or out of the profession, and many little schemes of puffery and charlatanism were exposed and nipped in the bud by the aid of his pen. Dr. Ross was a graduate of the University of St. Andrews, M.D., L.R.C.P. Edin., M.R.C.S. Eng., etc., and the author of several works and papers to the medical journals, chiefly of a hygienic character.

THE EXPENSES OF THE ENCOURAGEMENT OF LEARNING AND OF THE BREED OF HORSES.—Do you know how much the State spends on *l'enseignement supérieur?* Eight millions three hundred and fifty thousand francs. With this sum it maintains the Normal School, the Faculties, the University Library, the École des Hautes Etudes, the Institute of France, the Académie de Médecine, the Collége de France, the Muséum d'Histoire Naturelle, the Astronomical Establishments, the Ecole des Langues Orientales, the École des Chartes, and l'École d'Athènes. On the other hand, the receipts from the universities amount to half or more of this sum; so this is what may be called not a bad bargain. Four millions only devoted to the *hautes études!* Why, our studs (*haras*) cost us far more than this, for we spend on them more than seven and a half millions—the State considering it of more utility to breed horses than to educate men.—*Révue Politique et Littéraire.*

MEDICAL NEWS.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 23:—

Jackson, Ernest Carr, 91, Harley-street, W.
Scott, William Edward, 7, Robert-street, Hampstead-road.

The following gentlemen also on the same day passed their primary professional examination:—

Dell, Joseph Francis, Guy's Hospital.
Harvey, Thomas Prickard, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

BOWER, DAVID, L.F.P. & S., &c.—Resident Medical Superintendent of Langton Hall Asylum, near Edinburgh.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Alfred Patterson, Surgeon to the *Sultan*.

BIRTHS.

CLOUSTON.—On September 25, at Tipperlinn House, Morningside-place, Edinburgh, the wife of T. S. Clouston, M.D., Physician-Superintendent Royal Edinburgh Asylum, of a son.

FOX.—On September 19, at Widford, near Chelmsford, Essex, the wife of Cornelius Fox, M.D., Medical Officer of Health of East Central and South Essex, of a daughter.

GREEN.—On September 19, at Neath, the wife of W. E. Green, M.R.C.S. Eng., L.S.A., of a daughter.

NEWSTEAD.—On September 23, at 9, York-place, Clifton, Bristol, the wife of James Newstead, M.R.C.S. Eng., L.S.A., of a son.

NIALL.—On September 24, at Railton-road, Brixton, S.W., the wife of Eugene Niall, L.R.C.P. Edin., of a daughter.

ROBB.—On August 16, at the British Consulate, Zanzibar, East Africa, the wife of Dr. John Robb, Civil Surgeon, of a son.

MARRIAGES.

BRYANS—BURN-MURDOCH.—On September 15, at St. Thomas's Church, Edinburgh, Arthur Bryans, of Shillong, to Annie Jessie, daughter of W. Burn-Murdoch, M.D., of Edinburgh.

FRANKLIN—BATTERS.—On September 28, at St. John's, Clay-hill, Enfield, Percival Francis Palmer Franklin, only son of W. H. Franklin, M.D., Leitrim Rifles, to Theresa Augusta, second daughter of George Batters, Esq., of Brigadier House, Enfield, Middlesex.

GOULD—WILSON.—On September 21, at St. Matthew's Church, Brixton, Henry Gould, M.R.C.S., of Northfleet, to Emily Florence Wilson, daughter of Charles Wilson, Esq., of Bexley-heath.

MACKWOOD—TATHAM.—On September 23, at the parish church of All Saints, Poplar, Thomas Watson, eldest son of the late T. Mackwood, of Falsgrave, Scarborough, to Jane, daughter of the late Christopher Tatham, M.R.C.S., of Newby-place, Poplar.

MACKEY—DAVIS.—On September 21, at St. John's Church, Croydon, Surrey, Alexander M. P. Mackey, Captain R.N., to Emily Sophia, younger daughter of the late R. W. Davis, M.R.C.S., L.S.A., of Finsbury.

PLOWMAN—LAW.—On September 22, at the Church of St. Denis, Sleaford, C. F. M. M. Plowman, M.D., Argyll House, Forest-hill, S.E., to Sarah Emmala, only daughter of Elston Law, Esq., The Villa, Sleaford, Lincolnshire, youngest son of R. McC. Plowman, Esq., Upper Bear Forest, Mallow, co. Cork.

ROBERTS—NICHOLSON.—On September 22, at the parish church, Harefield, Middlesex, Charles Roberts, M.R.C.S., Uxbridge, to Caroline, eldest daughter of John F. Nicholson, F.R.C.S., of Woodlands, Harefield, late of Stratford Green, Essex.

SMYTH—BEAUMONT.—On September 21, at St. John's Church, Lowestoft, Edward Spencer, eldest son of Spencer T. Smyth, M.D., late of Great Yarmouth, to Susan, second daughter of the Rev. M. H. Beaumont, M.A., St. John's Vicarage, Lowestoft.

SMITH-CRAMPTON.—On September 25, at Christ Church, Highbury, W. J. Smith, M.B., to Louisa, younger daughter of Thomas Hill Crampton, Esq., of Highbury, London.

DEATHS.

BENNETT, JOHN HUGHES, M.D., F.K.Q.C.P.I., F.R.S. Edin., late Professor of the Institutes of Medicine at the University of Edinburgh, at The Wilderness, Bracondale, Norwich, on September 25.

CLARKE, W. H., M.R.C.S. Eng., L.A.H., Staff Surgeon R.N., at Trincomalee, on September 5, aged 52.

LAWTON, HANNAH ELIZABETH, only daughter of J. R. Symm, and beloved wife of Joseph Lawton, M.B., L.R.C.S.I., at her father's residence, 34, St. Giles's-street, Oxford.

LEECH, EDWARD, M.R.C.S. Eng., L.S.A., at West-street, Chichester, on September 22, in his 76th year.

MCNALTY, GEORGINA LUCY, infant daughter of George William McNalty, M.D., Surgeon-Major, at 45, Sutherland-gardens, London, W., on September 15.

PHILLIPS, ELIZABETH, widow of the late James Phillips, M.R.C.S., at her residence, 8, Earl's-terrace, Kensington, on September 23, aged 64.

RIACH, JOHN ARMSTRONG, eldest son of the late John Riach, M.D., Perth, late of the 67th Regiment, at Liverpool, on September 21.

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ROBBS, WILLIAM, M.D., at Cheltenham, on September 24, aged 65.

ROSS, GEORGE, M.D., Medical Officer of Health for St. Giles's and Bloomsbury, at his residence, 11, Hart-street, Bloomsbury, on September 26, aged 58.

SWAINE, JOHN ARTHUR, youngest son of the late Dr. Swaine, of York, and Lieutenant in the 101st Royal Bengal Fusileers, at Malta, of typhoid fever, on September 26, aged 22.

TRENT, MARY ANNE (ANNIE), wife of Thomas Trent, M.R.C.S., at Maldon House, Lower Tooting, on September 24, aged 27.

WALKER, JOSEPH, M.R.C.S. Eng., L.S.A., at Burslem, on September 28, in his 78th year.

WITHECOMBE, MARY PAUL, elder daughter of J. R. Withecombe, M.D., H.M. Indian Army (Retired List), late of Richmond, at Clewer, of enteritis, on September 18.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ATKINSON-MORLEY'S CONVALESCENT HOME, COPSE-HILL, WIMBLEDON.—Resident Medical Officer. Candidates must be M.R.C.S. Eng. Applications, with testimonials, to the Secretary of St. George's Hospital, Hyde-park-corner, before October 8.

BRISTOL HOSPITAL FOR SICK CHILDREN.—House-Surgeon. Applications, with testimonials, to the Committee of the Hospital, Royal Fort, St. Michael's Hill, Bristol, on or before October 7.

DONCASTER INFIRMARY.—House-Surgeon. Applications, with testimonials, to the Honorary Secretary, Doncaster, on or before October 10.

ESSEX AND COLCHESTER HOSPITAL.—House-Surgeon and Apothecary. Candidates must be duly qualified, and unmarried. Applications, with testimonials, to the Secretary, on or before October 7.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 16, Coleman-street, London, E.C.

RICHMOND INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, at the Infirmary, Richmond, Surrey, on or before October 25.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, CITY-ROAD, E.C.—House-Physician. Candidates must be duly qualified. Applications, with testimonials, to C. Lowther Kemp, on or before October 2.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, Ece Villa, Tiverton.

WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to Mr. A. P. Watkins, 50, Foregate-street, Worcester, on or before October 23.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bellingham Union.—Mr. W. Sutherland has resigned the Second District; area 9912; population 1689; salary £20 per annum. Mr. M. Brodie has resigned the Sixth District; area 19,504; population 680; salary £15 per annum.

Clifton Union.—The St. Philip and Jacob District is vacant; area 360; population 20,851; salary £50 per annum.

East Retford Union.—Mr. Rossiter has resigned the Leverton District; area 17,046; population 2768; salary £50 per annum.

Keighley Union.—Mr. Thomas H. Cockcroft has resigned the North Keighley District; area 7840; population 13,376; salary £55 per annum.

Rugby Union.—Mr. Thomas O. Walker has resigned the Crick District; area 9675; population 1987; salary £40 per annum.

APPOINTMENTS.

St. Giles and St. George, Bloomsbury, Parishes.—John F. Staines, L.R.C.P. Edin., L.F.P. and S. Glasg., L.S.A. Lond., for the District.

West Ward Union.—George Dale, B.M. and M.C. Glasg., to the Patterdale District.

WE understand that Dr. Van Buren, of New York, has undertaken to bring under the notice of the American public Mr. W. Donald Napier's instruments for the detection and removal of vesical calculi, together with his new self-retaining catheter. As soon as the principal medical society begins to hold its meetings he will show and explain their action on a special evening.

QUEEN'S COLLEGE, BIRMINGHAM.—PRIZE LIST.—Medicine: Medal and First Certificate, Charles James Devis; Second Certificate, Richard Hill Norris. Surgery: Medal not awarded; Second Certificate, William Moxon. Anatomy: Senior Division—Medals and First Certificates, William John Cant and Alfred Pratt, *equal;* Second Certificate, Cordley Bradford; Junior Division—Medal and First Certificate, George Jordan Lloyd; Second Certificate, Alfred Swann. Practical Anatomy: Senior Division—Medal and First Certificate, William John Cant; Second Certificate, William Leah; Junior Division—Medal and First Certificate, Alfred Harvey; Second Certificate, Alfred Swann. Physiology: Medal and First Certificate, Henry Charles Crewe; Second Certificates, William John Cant and Alfred Pratt, *equal.* Practical Physiology: Medal and First Certificate, John Hinks Vinrace; Second Certificates, Henry Charles Crewe and William John Cant, *equal.* Chemistry: Medals and First Certificates, Alfred Harvey and William Henry Osborn; Second Certificate, Walter James Clarke. Midwifery: Medal and First Certificate, Richard Hill Norris; Second Certificate, Isaiah James Baker. Forensic Medicine: Medal and First Certificate, Alfred Bostock Hill; Second Certificate, no award. Botany: Medal and First Certificate, Alfred Harvey; Second Certificate, Walter James Clarke. Materia Medica: Medal and First Certificate, William Henry Osborn; Second Certificate, George Jordan Lloyd. Practical Chemistry: Medal and First Certificate, William Henry Osborn; Second Certificates, Alfred Harvey, Edward Cocks Johnston, and George Jordan Lloyd, *equal.* Warden's Prize, Alfred Harvey.

A NEW METAL.—Great interest was excited at the last meeting of the Académie des Sciences by the announcement, on the part of M. Lecoq de Boisbaudran, confirmed by M. Dumas, that he had discovered in some Spanish blend at the mines of Pierrefite, in the Valley d'Argelès, a new metal, which he proposed to call *gallium.* It is analogous to zinc in its properties, but is chemically, physically, and spectroscopically distinct from that metal.—*L'Institut*, September 22.

FRACTURES OF THE THIGH.—Readers who are interested in the subject of statistics of this accident will find in the *New York Medical Record* for July 31 a valuable paper by Dr. Hyde, entitled "Analysis of 322 cases of Fracture of the Femur at Bellevue Hospital from 1865 to 1873 inclusive." There are several elaborate tables, being, the author believes, the largest number of cases that have hitherto been so tabulated.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN SEPT., 1875.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction .	19·00	0·064	0·147	0·001	15·2	3·4
West Middlesex .	18·87	0·032	0·137	0·000	14·0	3·3
Southwark & Vauxhall* . . .	...	...	...	...	...	...
Chelsea . . .	18·83	0·073	0·115	0·001	14·9	3·5
Lambeth . . .	19·07	0·072	0·137	0·000	15·3	3·5
Other Companies.						
Kent	28·30	0·003	0·344	0·000	21·2	6·0
New River . .	17·57	0·028	0·118	0·000	13·8	3·3
East London . .	18·97	0·048	0·169	0·001	14·9	3·7

* The return of the Southwark and Vauxhall Company has not been received.

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was very slightly turbid—namely, in those of the Grand Junction, the Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 125,186,742 gallons; and the number of houses supplied was 519,569. This is at the rate of 36·3 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 31·4 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

THE PARIS FACULTY OF MEDICINE FOR THE SESSION 1875-76.—The following courses of lectures will be delivered during the ensuing session, commencing on November 3:—M. Gavarret on Medical Physics (general physics, heat, light, electricity) twice, and Biological Physics (the physical phenomena of phonation and audition) once a week; M. Duguet, Medical Pathology (diseases of the genito-urinary organs in man and woman) three times a week; M. Sappey, Anatomy three times a week; M. Chauffard, General Pathology and Therapeutics (acute and chronic disease, giving a general idea of the symptomatology and etiology of these two orders of diseases) three times; M. Wurtz, Biological Chemistry (chemical study of the blood, and chemical phenomena of respiration and nutrition) once a week, and Medical Chemistry twice a week; M. Dolbeau, General Surgical Pathology three times a week; M. Le Fort, Operations and Apparatus (the therapeutics of affections of the circulatory apparatus and special operations) three times; M. Robin, Histology (properly so-called) three times; M. Lorain, the History of Medicine and Surgery (history of certain epidemic and contagious dis

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cases, variola, syphilis, etc.) three times; Clinical Medicine, MM. G. Sée, Béhier, Lasègue (M. Bouillaud's chair being vacant) daily; Clinical Surgery, MM. Richet, Gosselin, Verneuil, and Broca, daily; Clinical Obstetrics, M. Depaul daily; Diseases of Children, M. Blachez three times a week.

PRIMEVAL WOODEN LEGS.—We have another story from the other side of the Atlantic. Some remains are stated to have been found on an island in the Mississippi, from which it may be gathered that the aborigines of America were not wholly unacquainted with mechanical surgery, but that they occasionally wore wooden legs when deprived of their natural limbs. In a subterranean cave, we are told, hewn out of a huge solid rock, which, from its formation, must have existed for thousands of years, amongst other things a skull was found, as brown as a polished walnut, perfect in every respect, and of extraordinary size; also an almost complete skeleton, with a wooden leg. The fastenings of the artificial limb consisted of petrified leather and bronze buckles. The original leg appears to have been removed half-way between the hip and the knee. The particulars of this discovery, which have only recently reached us, afford another proof of the endless wonders which are always turning up amongst our American cousins.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Comegys.—Letter received. The matter shall receive attention.

Francis Payne, Asst. Sec.—Mr. Payne and his employers are kindly welcome to all benefits already received or to be received. As to the rest, let him look to the files of the *Daily News*.

Vaccine.—We fear not, though we have long contended that it is the duty of the Health Department to secure a constant supply.

L.R.C.P. Lond., Southsea.—Apply to the Dean of the Faculty.

Dido.— "The smallest hurts sometimes increase and rage
More than all art of physic can assuage:
Sometimes the fury of the worst disease
The hand by gentle stroking will appease."

Gus.—Ideation, now so commonly used, was first employed by Mr. James Mill, in his "Analysis of the Human Mind."

Siberia is to be provided with a university. It is to be established at Tomsk. From the great want of medical men in the scattered townships of Siberia, the university will, for the first at least, promote the study of medicine.

Vel., N. Wales.—Guy's Hospital, named after its founder, was built and endowed by him at a cost of £238,292. It was opened for the admission of patients in January, 1725.

Nemo.—No, it is not necessary.

A. D.— "A man so various, that he seemed to be
Not one, but all mankind's epitome."

Ralph F.—The Radcliffe Library, Oxford, was originally called the Physic Library. The books which it contains are principally confined to works on medicine and natural science.

C. H. G.—Joshua Ward was a drysalter, in Thames-street. He was famous for his "drop and pill"; was no chemist—only a quack. Pope says of him—

"Ward tried on puppies and the poor his 'drop.'"

Dr. H.—See the account of a very rare defect of the falx cerebri, exhibited by Mr. Shaw, in the Reports of the Pathological Society, 1847 and 1848, p. 178.

W. C. J.—A paper by Dr. Reginald Southey in vol. i. of the *St. Bartholomew's Hospital Reports*.

Z., Hants.—In the Lunacy Act, 16 and 17 Vict., cap. 96, secs. 9 and 36, provision is made for any abuse, ill-treatment, or wilful neglect by any attendant having charge of a patient. It is an offence liable to be indicted for misdemeanour.

T., Yorkshire.—In the *Philosophical Transactions* for 1691 there is an account by "the experienced and learned Frederick Slare, M.D.," of a ruminating man living at Bristol. Copland published a full account of a case of rumination in the *London Medical and Physical Journal*, 1819-20, and observes in his "Medical Dictionary," published in 1858, "Since the publication of that case, two others, one of them in a medical man, have been treated by me, and I have reason to believe that instances of partial or occasional rumination are not so rare in the human subject as is generally supposed."

Wallace.—Vincenz Priesnitz, the founder of hydropathy, or water cure, died of dropsy on the chest, on November 28, 1851, at Gräfenberg, in Austrian Silesia, his native place.

THE MAUNSELL MEMORIAL FUND.

	£	s.	d.
Amount already acknowledged	79	3	6
Rev. James Baxter, C.C.	1	0	0
Dr. Benson, Sheffield	1	1	0
B. Banks, Esq., Sec. Local Government Board, Ire.	2	0	0
Dr. Burnside, M.O. Clondalkin	1	0	0
Dr. Cahill, Ballynacargy	0	5	0
Dr. Chapman, M.O. Donnybrook	2	2	0
W. Colles, F.R.C.S.I.	1	1	0
Dr. Connolly, Multyfarnham	1	0	0
Mr. Henry Coulter	1	1	0
E. W. Collins, M.D.	1	1	0
Dr. Davey, M.O. Terenure	1	0	0
Dr. Davys, Swords	1	1	0
R. Donnell, Esq.	1	0	0
Dr. Dwyer, Camden-street	0	10	0
Dr. Denham	1	0	0
John Ferguson, M.B., North City Dispensary	1	1	0
Dr. Finegan, M.O. Glasnevin and Finglas Dispensary	1	1	0
Edward Gibson, Esq., Q.C., M.P.	2	0	0
E. Dwyer Gray, Esq., *Freeman's Journal*	1	1	0
Rev. S. Haughton, M.D., F.T.C.D.	1	1	0
J. S. Hughes, F.R.C.S.I.	1	1	0
Mr. James Hynes	1	0	0
Patrick J. Hayes, M.H.	1	1	0
Dr. Hayden	2	2	0
Dr. L.	0	5	0
Dr. Lalor, R.D.L. Asylum	1	1	0
Francis Mayberry, M.B., M.O. Kenmare	0	10	6
George Mayberry, M.D., Kenmare	0	10	6
Dr. Charles Maunsell, R.A.	35	0	0
J. W. Moore, M.D.	1	1	0
Dr. Hyman Marks, Resident M.O. South City Dispensary	2	2	0
Dr. Murphy, Camden-st	0	10	0
Dr. Neary, M.O. Howth	1	0	0
Dr. Newland, Richmond-st.	1	0	0
Dr. Nicolls, Longford	0	10	6
W. H. O'Leary, F.R.C.S.I., M.P.	3	3	0
Dr. Purcell, South City Dispensary	2	0	0
Dr. Seward	1	1	0
Dr. Strahan, Castletown-Geoghegan	0	5	0
H. R. Swanzy, M.B.	1	1	0
Henry H. Stewart, M.D.	5	5	0
Dr. Stock, Camden-street	0	10	0
L. M. Tabuteau, M.B., M.O. Portarlington	1	1	0
S. G. Wilmot, F.R.C.S.I.	1	1	0
Albert Walshe, F.R.C.S.I.	2	2	0

Jason.—The first lying-in hospital instituted was opened in a private house at Dublin by Dr. Bartholomew Mosse, March 25, 1745. The first institution of this kind in London was the British Lying-in Hospital, founded in 1749.

Isaac B.—The forty-eighth meeting of the German Naturalists began at Gratz, on the 18th ult.

Primus.—Some interesting experiments by M. Guichard are described in the current number of the *Journal d'Anatomie*, on the effect of vitiated and condensed air on respiration.

Bibliopole and H. M.—The Library of the College of Surgeons will be re-opened this day (Friday), and the Museum on Monday next.

H. F. S.—As a rule, ladies dislike smoking. Miss Edwards, in one of her novels, says, "He was one of those men whom Nature seems to have run up by contract, whose understanding the very smallest weight of knowledge would have at any moment broken down, while his little ornaments of manner were all in the flimsiest modern taste, who played croquet well and billiards badly, and was *saturated through with smoke*," etc.

In Memoriam.—The late Dr. F. C. Webb was interred at Highgate Cemetery.

Vivisection.—It was Bell who said that "the secrets of nature are not to be discovered by means of cruelty"; and the late Sir Philip Crampton observed that "torturing experiments on animals exercise a corrupting influence on the minds of those who practise them."

St. Bartholomew's.—Sir James Paget, Bart., who was elected President of the College of Surgeons in July last, was admitted a Member on May 13, 1836, a Fellow on December 11, 1843, and a Member of the Council in July, 1865, with the late Mr. Thomas Turner, of Manchester.

Perplexed Student.—Our contemporary is in error: the regulations state that "candidates who commenced their professional education on or after the 1st of January, 1861, only, will have to undergo a preliminary examination." Having been apprenticed three years before, you are exempt. See the Students' Number of the *Medical Times and Gazette*.

A Metropolitan Teacher.—The election of Examiners will take place on the 13th inst. Candidates must be Fellows of the College.

Mr. Matthews.—There is in the possession of the College of Surgeons a portrait of a young man, painted by Mr. George Dawe, R.A., who, having had his lower lip destroyed by a venereal ulcer, had a new lip formed out of a portion of the skin from beneath the chin, which was dissected off, turned up, and united after the manner of hare-lip by Mr. Wm. Lynn, at the Westminster Hospital.

Rustic.—1. Yes. 2. June 25, 1847.

Dermatologist.—The new edition of the Catalogue of Dermatological Specimens in the Museum of the College of Surgeons, by Professor Erasmus Wilson, has just been published.

Argus, Stockwell.—The late Mr. Wakley, M.P., was a member of the College of Surgeons, as are two of his three sons.

Dr. Thompson.—Messrs. Cline, Vincent, Stanley, Holthouse, and Mr. (now Sir) James Paget resided in Lincoln's-inn-fields; the three former on the north, and the last two on the south side.

C. Williams is referred to Dr. Sharpey's descriptions in Quain's "Anatomy."

Percy.—The next election of Lord Rector of Aberdeen University will be held on November 13.

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S. S., Essex.—Mr. Banting published a narrative of his mode of living in 1863.

M.R.C.S., Bucks.—The hospital about to be erected at Aldershot is to be on the plan of the Military Hospital at Woolwich.

Amicus.—Prescott, in his "History of the Conquest of Mexico," says, "I must not omit to notice here an institution, the introduction of which, in the old world, is ranked among the beneficent fruits of Christianity. Hospitals were established in the principal cities for the cure of the sick and the permanent refuge of the disabled soldier, and surgeons were placed over them, 'who were so far better than those in Europe,' says an old chronicler, 'that they did not protract the cure in order to increase the pay.'"

Sigma.—Medical statistics may be said to be the application of numbers to show the history of persons in health and disease. The word "statistics" is of modern origin; it was first introduced in 1749 by Achenwall, a professor of Göttingen.

COMMUNICATIONS have been received from—

Mr. H. E. Hutchinson, Dover; Mr. J. Roberts, Aberystwith; Dr. E. Greaves, Wansford; Dr. Bower, Arbroath; Mr. C. Orton, Newcastle; Mr. M. Sullivan, London; Dr. Hardwicke, Sheffield; Dr. Sparks, Weymouth; Dr. Randall, London; Mr. Becher, London; Mr. Hemming, London; Dr. Stevenson, London; Dr. Manson, Amoy; Mr. Pick, London; Mr. Lowne, London; Mr. Napier, London; L.R.C.P. Lond.; Mr. Lawson Tait, Birmingham; Dr. Speedy, Dublin; Dr. J. W. Moore, Dublin; Dr. Eustace Smith, London; Dr. J. Perrot Prince, London; Mr. W. Spencer Watson, London; Mr. Jonathan Hutchinson, London; Mr. J. Chatto, London; The Secretary of the British and Foreign Anti-Slavery Society.

BOOKS AND PAMPHLETS RECEIVED—

Black on the Functional Diseases of the Urinary Organs, second edition—Travis on Effectual Reform in Man and Society.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Medical Temperance Journal—Melbourne Argus—Geelong News of the Week—Le Figaro.

APPOINTMENTS FOR THE WEEK.

October 2. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

4. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

5. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

6. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Dr. George Roper, "On Prolapse of the Funis during Labour." Dr. Galabin, "On the Occurrence in Normal Labour of Lateral Obliquity of the Fœtal Head." Dr. Heywood Smith, "Notes of a Case of Ruptured Vagina during Labour, with Recovery." Mr. F. H. Gervis, "Report of a Case of Inversio Uteri." And other communications.

Royal Microscopical Society, 8 p.m. Dr. C. T. Hudson, "On a New Species of Melicerta."

7. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

8. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

Clinical Society, 8½ p.m. Mr. Brudenell Carter, "On the Operation of Iridectomy as performed for Optical Purposes." Dr. Southey, "On a Case of Idiopathic Tetanus."

VITAL STATISTICS OF LONDON.

Week ending Saturday, September 25.

BIRTHS.

Births of Boys, 1101; Girls, 1026; Total, 2127.
Average of 10 corresponding years 1865-74, 2147·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	680	639	1319
Average of the ten years 1865-74	635·6	592·6	1231·2
Average corrected to increased population	...	...	1317
Deaths of people aged 80 and upwards	...	...	41

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	11	2	6	..	3	2	18
North	751729	...	3	29	4	14	...	1	...	21
Central ...	334369	...	...	...	...	6	...	1	...	12
East	639111	...	2	14	1	10	1	2	1	31
South	967692	...	6	32	5	15	...	5	2	33
Total	3254260	...	13	90	12	49	1	12	5	125

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·602 in.
Mean temperature	60·1°
Highest point of thermometer	80·0°
Lowest point of thermometer	51·5°
Mean dew-point temperature	55·4°
General direction of wind	S.W. & S.E.
Whole amount of rain in the week	2·25 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, September 25, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Sept. 25.	Deaths Registered during the week ending Sept. 25.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2127	1319	83·0	51·5	60·1	15·62	2·35	5·71
Portsmouth ...	122832	27·3	69	53	...	...	...	...	...	...
Norwich	82842	11·1	48	41	77·8	51·6	60·1	15·62	1·54	3·91
Bristol	196186	44·1	95	76	73·0	51·5	59·8	14·89	2·14	5·44
Wolverhampton ...	71718	21·1	50	27	75·3	48·9	58·7	13·72	3·12	7·92
Birmingham ...	366325	43·6	268	165	76·6	49·2	57·5	14·17	2·37	6·02
Leicester	109830	34·3	67	52	81·0	48·5	57·3	14·06	2·09	5·31
Nottingham ...	92251	46·2	55	51	79·3	48·7	58·8	14·89	1·99	5·05
Liverpool	516063	99·1	323	272	71·0	49·9	56·1	13·39	1·98	5·03
Manchester ...	356626	83·1	260	186	77·0	50·8	58·4	14·66	1·79	4·55
Salford	135720	26·3	140	98	76·6	48·1	57·0	13·89	1·94	4·93
Oldham	87437	18·7	67	56	...	...	...	...	...	...
Bradford	168305	23·3	125	112	69·8	48·0	55·8	13·12	1·42	3·61
Leeds	285118	13·2	183	156	73·0	47·0	56·4	13·55	1·35	3·43
Sheffield	267881	13·6	186	117	72·5	48·0	56·7	13·72	2·51	6·38
Hull	133932	36·8	84	78	69·0	42·0	56·8	13·78	1·72	4·37
Sunderland ...	106342	32·2	77	51	67·0	48·0	55·5	13·06	1·23	3·12
Newcastle-on-Tyne	137665	25·6	64	69	...	40·0	...	...	1·20	3·05
Edinburgh	211626	50·5	115	69	...	...	...	...	...	...
Glasgow	534564	88·6	345	257	62·7	39·4	50·8	10·50	1·43	3·63
Dublin	314666	81·3	134	143	66·4	45·0	57·4	14·11	1·30	3·30
Total of 21 Towns in United Kingdm	7742889	87·0	4874	3448	81·0	39·4	57·1	13·95	1·85	4·72

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·80 in. The highest was 29·99 in. on Thursday evening, and the lowest 29·54 in. on Wednesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

INTRODUCTORY LECTURE

DELIVERED AT ST. THOMAS'S HOSPITAL

By JOSEPH FRANK PAYNE, M.B., F.R.C.P.,
Assistant-Physician to the Hospital.

MR. TREASURER AND GENTLEMEN,—That member of the staff of this Hospital on whom devolves the duty with which I am this year entrusted has before him a task not without difficulty or responsibility. He has not only to take care that whatever he says may be as little as possible unworthy the attention of so considerable an audience; nor is it only that he must feel the impossibility of emulating those eminent men, his seniors and superiors, who have before now occupied this position, but he has to remember that his words derive increased importance from the position and the occasion on which they are delivered. This might be of itself a reason for not attempting to discuss many questions on which there is great difference of opinion. The politics of the profession—how it is to be governed, how it is to be recruited, the "One-Portal Scheme," the "Conjoint Scheme," and the rest are matters which, though very important, I do not feel specially called upon to discuss just now. They are very appropriate to the President of the British Medical Association, and to meetings like that over which he presides. But here to-day the audience is of a different character. I have to address myself ostensibly, and I think should really, to you, the younger portion of my audience, and as it is impossible that you have any share in effecting such important changes as those which I spoke of just now, I cannot imagine that they will very greatly interest you. I shall, therefore, leave those high themes to other years and more ambitious lecturers, and confine myself to the humbler task of addressing you on the subject of your own profession.

But lest you should think that this promises even less novelty than is usually found in such productions, I must add that I mean not the profession on which you hope one day to enter, but that in which you are already engaged—viz., *the profession of a student*.

For the next three or four years those of you who are now entering for the first time will be students. I hope you will be proud of the name. It denotes one of the most honourable, and, to many persons, one of the most attractive of all pursuits. It has been the pride of some of the best and wisest of mankind to call themselves students; it is the delight of some of the busiest to be students as far as they are able. In fact, while you can find no higher name for a Newton or a Bacon, in another sense it ought to apply to every one in our profession, and does actually apply to a very large number who are always in some sense students.

But it is a different thing to be as you are, in a position where you are able to be students and nothing else. This, gentlemen, is a great privilege. Perhaps we do not always think enough about it. You will be, most of you, for some years, relieved from any necessity of earning your living, freed from any responsibility except that of making the most of your time, and exempted to a very great extent from formal authority. The latter exemption is of itself, I know, to many who may come to us fresh from the restraints of school, a delightful novelty; and, even when this is not the case, it will often be an extremely pleasant change to come from the narrow bounds of a country home, or the monotony of provincial society, to the freedom and variety of London life. These features of student-life—its freedom from care and exemption from authority—are what have given in other countries and in many places of education a certain romantic interest to this attractive phase of European society. To be a student is surely to be among the most fortunate of men. We have not in London, it is true, all the attractions of more favoured seats of learning. We have not the picturesque surroundings or the gay social life of Oxford and Cambridge, nor yet the brilliancy of Continental capitals; we are almost lost in this sombre metropolis—

> "As up and down we pace this London,
> Where scarce twenty know our name."

But yet, gentlemen, the magnificent associations of our quarter of London, its stately architecture, and its historical memories—that view from Westminster Bridge of which Wordsworth wrote, "Earth hath not anything to show more fair,"—these would be enough to prove that the associations of the London student may be noble and dignified.

I am quite sure of one thing—that as you have very likely looked foward to this period of your life with eager expectation, so, I am sure, you will look back upon it in after years as the happiest time in your lives—"*Nunc formosissimus annus*,"—as Mr. Clough so happily quotes, "Now is the year at its fairest." This is the very golden age of life. Let us make the most of it while it lasts.

There is one point in student-life which forms, as I have said, one of its chief attractions—that is the exemption from authority;—and as this is carried further in the case of medical students in London than in the case of almost any other body of students that I know of (there is, in fact, scarcely any discipline in the ordinary sense), I mention this at once, because I think it well to speak of, and even to insist upon it. There are scarcely any punishments here short of the very extreme step of refusing to complete the education of a disorderly student, which, of course, since it leads to something like ruin, is so serious an event as not very often to happen. Indeed, for my own part, I do not, in my short experience, remember a case at this hospital; but I have known it acted upon elsewhere, and of course it always might be, and the law undoubtedly supports the hospital authorities in such a step. For small offences we have nothing of the machinery of fines, impositions, or punishments which exists in other places. Now, strangers sometimes wonder how discipline is maintained without these aids. I generally point out to anyone who asks, that, in the first place, we have a body of students whose interest, generally speaking, it is to learn something. Next, that the very absence of penalties deprives insubordination of half its interest. At school it requires courage, independence, and originality to defy the masters, for they can punish you. One can understand the spice of heroism about it, which makes insubordination, to a certain extent, attractive. But where insubordination or disorder of any kind incurs no risk, it requires neither courage, nor independence, nor originality. It may be a cheap form of amusement, but it is nothing more important. This is a consideration which appeals to generous minds.

I am quite aware that the somewhat ideal way of looking at the life of a medical student which I have suggested will not be familiar. Even the name is not always used. We still hear sometimes of the *pupils of the hospital* instead of "*students of medicine*." For my own part I much prefer the more modern appellation. I think it desirable that we should make more of this position, which people in most countries are, and ought to be, proud of. But it is true that only lately has there been a body of students deserving the name. The history of medical education in England is very curious and instructive, and though it is impossible to enter upon it now, I would just point out that what has made the history of the medical profession so different here from what it has been in other countries of Europe, is chiefly the fact that medicine has been divorced from the other branches of learning taught at the universities. The reason of this, I suppose, we must seek chiefly in local considerations, and the blame must chiefly be assigned to our ancestors, who planted universities in small towns by distant rivers, and did not found one here on the banks of the Thames. This is the ostensible reason why the studies of medicine and law fell away from the old universities and took up an independent position in London; while in other European countries they have remained united with the faculties of arts and theology. This has put a gap between the medical and university students, which is much to be deplored, though attempts are, no doubt, being made to remedy the evil.

The medical schools and medical scholars should be regarded as portions of the national universities which have become detached, and, even if they never become reunited, they ought never to lose altogether the national character and high aims of the ancient seats of learning. If we cannot have the name and form, let us at least cultivate the spirit of academical life.

You will give me credit, I hope, for not having introduced this long digression without some object. My object is a very definite one, whether wise and practical or not. It is to remind you that, in this utilitarian age, and in the learning of a bread-winning profession, you are not bound to regard yourselves as already embarked on the sea of practical life; nor is your student-life necessarily a part of the laborious

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pursuit in which you have to discharge the plain and obvious duty of earning a living.

"*Noblesse oblige*," as the proverb is; and if there is the smallest truth in what I ventured to say just now about the dignity of the student's vocation, we may be very sure that the student has some obligations corresponding to it.

What are these obligations? It seems to me that two duties very clearly devolve upon the modern student—one is, to educate himself as thoroughly as possible, not only professionally, but generally; and another is, to keep clearly in mind the absolute value of truth, not merely its relative value in relation to his own pursuits. If we fail to recognise these obligations, we may still be highly respectable members of society, and even useful workmen; but we shall have no claim to, and shall not receive, the special respect due to a liberal profession.

Now, with regard to the cultivation of one's own mind, I can quite understand that it may seem a very Utopian scheme for a medical student. This, you may say, is the object of a liberal education, which, however much we may desire, we have no time for now; and I may say at once that what I advocate is not the attempt on the part of a hard-working student to continue the general education which has been carried on, we may hope, up to the present time. We hear a great deal about the importance of general education to the medical student, which appears to be very true, but not precisely applicable. The time must come for all of us when systematic study of general subjects must cease, and all professional arrangements seem to point to the age at which you enter as being the suitable one. Since I find that, in all countries in Europe, general education ceases, and professional commences, at about that time, I conclude that the age is fixed by important economical considerations which we cannot easily alter.

My advice, then, is distinctly—Not to seek liberal education by going back to school studies, or even by trying to keep them up; but to seek it by going forward. I know that students are sometimes urged to keep up their classical studies, and I remember an excellent physician, now dead, urging that this was the real passport to social consideration. But I cannot regard it as a hopeful scheme, with a view to mental cultivation, unless you have reached already more than ordinary proficiency, so that reading is a pleasure and not a task. Classical literature is a grand thing if you can get to the kernel of it, but somewhat dry if you get no further than the husk; and school-classics seldom, unfortunately, lead the pupil much deeper than this. Spelling out a few lines of Virgil in the evening, with a dictionary, is not, I confess, at all my idea of mental cultivation. But is there no place to be left for literature? Certainly, a considerable place; but as a recreation and an accomplishment. I have no doubt reading will make you happier, and probably wiser; but the amount which you are likely to get through cannot possibly have an effect on the mind comparable to that which is necessarily exercised by your own studies. It is, then, most important to consider what this effect of the latter is likely to be. Is it, as commonly supposed, entirely different from that produced by what is called "liberal education"? To answer this question we must consider the meaning of the words.

You may have heard a great deal about the contrast between liberal and professional education—how different their aims and tendencies are—how universities and such-like bodies have to do with the one, and cannot condescend to take care of the other,—all of which, though not precisely untrue, is altogether misleading if it makes us suppose that there is any necessary opposition between the two.

To give weight to those views to which I refer, let me quote the dictum of a great authority in such matters—Sir William Hamilton. A liberal education, he says, is "an education in which the individual is cultivated not as an instrument towards some ulterior end, but as an end unto himself alone; in other words, an education in which his absolute perfection as a man, and not merely his relative dexterity as a professional man, is the scope immediately in view." Than which nothing can be more entirely satisfactory: but not equally so is the implied corollary that what helps the dexterity of the professional man will be of no use to the absolute perfection of the man; that certain studies only are to be called liberal, and that all which have any practical bearing are unworthy of that name.

The truth will, I believe, be gradually recognised, that it is of far less consequence what you learn than how you learn it. Any study may be made liberal, any may be made merely technical. The same acquirements will either train or distort the mind, will make it fruitful in ideas or leave it barren, according as they are rightly or wrongly taught and learnt.

To come to our own subject: The study of medicine and its allied sciences supplies, I believe, an admirable discipline for the mind, and, if gone through in the right spirit, will furnish at least an approximation to a complete liberal education—nearer than *literæ humaniores*, mathematics, or whatever it is customary to call liberal, studied in the wrong spirit.

Now, by the right spirit I mean with freshness, interest, mental activity, and a generous determination to grudge no pains in acquiring knowledge; no amount of thought necessary for really understanding it; to study with perfect candour towards yourself and others—never persuading yourself you understand what you do not understand, you see what you do not see, or hear what you do not hear. This is the vital point of intellectual sincerity, which is a great part of moral sincerity. Once play tricks with your own senses, and you are lost. The man who when he is asked to look at or listen to any particular thing, and says, or even says to himself, that he has seen or heard it when he has not, has taken the first step in the road to intellectual ruin. The noble words of Shakespeare may be applied here—

> "To thine own self be true,
> And it will follow, as the night the day,
> Thou canst not then be false to any man."

Now, if this is the right spirit of learning, what is the wrong? It is to study without interest, as a matter of routine, spending the minimum of pains, economising thought, driving a hard bargain for knowledge, and trying to get it as cheap as you can, pretending to understand a thing to save the trouble of having it explained, learning up tips and pieces of cram in order to impose on the teacher or examiner and make him believe you know what you do not know.

This manner of learning is base and mechanical, and may be called even *professional*, if that word is to be taken as one of reproach.

But can it be said that either of these modes of learning belongs exclusively to what is called liberal, or to what is called professional education? Clearly not; the candidate for a civil service examination runs considerable risk of falling into the second method of learning. A man who goes up to a university to get a mathematical degree for the sake of teaching mathematics in a school, is also very likely to take a decidedly professional view of his work. So again, anyone who takes up the study of medicine and its collateral sciences with a genuine aspiration after the highest truth in each subject, may find, as some of the best of our profession have done, his faculties growing, his mind expanding year by year, and so grow old with his interest in things unabated, his sympathies unchilled, and his power still ready to do in the best way whatever nature leaves them force to attempt.

If I am right, what chiefly makes medical study valuable as a mental discipline is its connexion with physical science. This connexion is very intimate, and is becoming more so every day.

It appears to me to be a two-fold relation. In the first place, the physical sciences have contributed an enormous number of facts to the service of medicine; and hence we have to learn a great deal of these sciences. Secondly, science has conferred upon medicine the still more important gift of a scientific method. It is this method which is the most important thing in studying the sciences themselves. In studying the simplest truths of nature we have just found out how all truth ought to be studied. Hence physical investigation is become the type of all investigation; and the scientific spirit is gradually subduing all knowledge to itself. When all studies conform, as they will do in time, and as some—even the most removed from physical nature—are doing already, to the same method, it is possible that physical science will lose its present immense predominance; but till the transformation is complete, the influence of physical science is not likely to diminish.

I must confess to a very strong private opinion on this point. We hear a great deal about railways, submarine cables, and what not, as the triumphs of science; but all these obvious and tangible results, though they are changing the face of the visible globe, are as nothing compared with the revolution which science is effecting, and will effect, in men's minds and ways of thinking. The face of the intel-

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lectual world will be changed, and with far more important results.

It has been the peculiar merit of Medicine, and in the end her salvation, to have frankly and comparatively early accepted the supremacy of science, while other ancient disciplines resisted or hung back. Medicine must be regarded as almost, though not quite, completely imbued with the scientific spirit; and this has been, as it always will be, of immense advantage to the profession. If professional men only clearly recognised the importance of this fact, their scientific education might give them the same influence in society as the other professions long enjoyed through their almost exclusive possession of classical learning. To students the benefit is equally great. Their education brings them in contact with the very fountain-head of new ideas, and there is, I am persuaded, nothing so intellectually stimulating as this. This merit once belonged in a very real sense to the study of the ancient languages, and especially of Greek. For in this language were enshrined the ideas which, at the epoch of the revival of learning, were moving the world. But the sceptre has passed to another hand, and what Greek was in the age of Erasmus, that is Physiology in the age of Darwin.

Having spoken of the scientific method and the scientific spirit, I must be prepared for the question, What is the scientific spirit? can it be expressed in words? how can we know when we have got it? To which I must reply that the question is a very large one—too large for the present occasion. But perhaps, without risking a definition, we may get some notion of what is meant by looking at the history of any discipline which has lasted for a long time, and so passed through many phases of thought. We shall see in all a gradual substitution of one method for another, and knowledge placed gradually on a different basis. Medicine is, in fact, one of the best instances for this purpose, for, being older than modern sciences, it has seen the rise and fall of many systems. Now, if we look into the ways people thought and reasoned about medicine at different times, we find very great differences.

In the earliest period which it is worth while now to consider we find authority or tradition the chief basis of the science. In the middle ages in Europe, and even for some time after the middle ages, there was very little investigation or original thought in medical subjects, and there were very few medical books produced. There were, however, certain authors whose works had been handed down from remote antiquity, especially those of Galen and Aristotle, in which an immense amount of medical lore was contained. These being so far beyond anything that could be produced at the time, must have seemed like the products of another world, and were regarded with extraordinary veneration. It is perhaps difficult for us to realise the intensity of this feeling. The only thing at all like it—and that is, after all, very different—is the manner in which sculptors at the present day look upon the finest remains of Greek art, knowing how inimitable they are. Hence arose the habit of taking everything on trust. Not only were the statements of the ancients accepted with regard to matters on which they were the only source of information, but about matters which were under men's very eyes, such as the simplest details of anatomy or natural history. Even as late as the seventeenth century we find that Galen was quoted in such matters, as is bitterly complained of by Nicholas Culpepper, well known for his famous "Herbal." Culpepper wrote also a book called the "New Method of Physic," where he describes, among other things, the human body. Here he speaks of the muscles of the ear, and finds a difference of opinion among authors. His opponents refer to Galen, or, as Culpepper puts it, "They thought Galen was a famous man (and so he was); and rather than they would make a famous man infamous, they would be infamous themselves. Then they run to the old argument, 'Galen hath said it.'" This was nearly a century after the great work of Vesalius, the starting-point of modern anatomy, had been published. In fact, it seemed as though any statement in a book—at least, by one of the great authors—had a fascination far beyond that of the objects themselves. It is an interesting question for us, Are there no remains of this error still among us? Gentlemen, I must confess that I think it is frequently met with; and it is astonishing what almost magical force still seems to reside in the printed page, so that not only half-educated persons, but even instructed students, seem to prefer this evidence to that of their senses. I remember well a really clever man, very well read, who had passed through many examinations, whom I met once in the British Museum Library. He asked me where I thought he could find a figure representing the epithelium of the mouth, which he wanted to compare with some object he had got. When it was suggested to him that as he had got a mouth and a microscope he might find the object itself nearer at hand without running all over London for a book about it, he seemed surprised, but still contended that it would be much more satisfactory to him to see a figure than the actual object. I have since found that the same preference, in a less extreme form, is by no means uncommon.

Now, what has the scientific spirit to say to this? Clearly that evidence should only be received when the object is inaccessible. I will ask a member of the Alpine Club to tell me about the top of Mont Blanc, if he has been there; but if I want to know the geography of Primrose-hill it would be absurd not to go there myself. As for authority, the modern spirit of course knows in medicine no authority whatever that cannot be substantiated by reason and fact. As Professor Huxley has put it, every scientific truth simply holds its position by being continually challenged, and by being ready to accept any challenge.

Authority and tradition in medicine received rude shocks. Such was the audacious revolt of the eccentric genius Paracelsus, who publicly burned the works of Avicenna and Galen, and solaced himself with the vision which, he said, magic had revealed to him, of Galen tortured in the infernal regions, and adorned, by way of insult, with a fox's tail. Such also the more formidable and orderly attack which was led by the genius of Francis Bacon.

But there was another error, not less formidable than mere assent or blind submission, which became, perhaps, more apparent as authority decayed, though never absent. It is what has been called the metaphysical stage of science, or may be described as the error of *à priori* reasoning. We form a conception of how a thing ought to be, frame a theory of what appears to us reasonable, and then proceed to argue from it as if it were certainly established. This is so extremely insidious and natural an error, that we must be all of us continually falling into it, if we do not specially guard against it. But examples may be taken from medical or scientific literature which will show its absurdity. For instance, it was a great controversy between the Galenists and Aristotelians—*i.e.*, between those who took the side of Galen and those who took the side of Aristotle in anatomical questions—as to whether the heart was formed before the rest of the organs. This question is discussed at great length by Alexander Ross, a very learned person and voluminous writer of the seventeenth century, who, among other things, wrote a tract against Harvey's work on Generation. He gives eleven reasons why the heart is formed before the rest of the body, of which the following may be taken as a fair sample:—"What the heart is in animals, that the root is in vegetables; but the root is the first thing the plant thrusts out, therefore the heart is first formed."

Or again, take this:—"The Galenists affirm that the heart hath but two ventricles, yet the Aristotelians, in affirming three in bigger creatures, seem to speak with more reason. For if in bigger animals there is greater store of spirits than in the lesser, it stands with reason that their hearts being bigger should have also more receptacles for containing the vital heat and spirits than the lesser."

Notice—in the first, no hint of *observing* the formation of the heart, but only a faint analogy; in the second, an altogether gratuitous assumption introduced with the usual phrase, "it stands with reason,"—no attempt to show, or even suggest, that anyone *had observed* a heart with three ventricles.

Now, the scientific method of dealing with such arguments or assumptions as these is certainly not to contradict them,—that was the error which led to the false method prevailing so long,—but simply to leave them alone. They must only be rigidly excluded from the foundations of science, as you reject a bit of unsound timber in building a house.

But such errors as this, you will say, are surely quite exploded to-day. Well, if they are to-day, they were certainly not so a very short time ago. Chemistry seems to be a science likely to be as free as any from metaphysics, yet I remember a text-book of chemistry in my student-days which contained a perfect example of the groundless assumption or metaphysical error. Water, my text-book says, is composed of oxygen and hydrogen, and, since it is the most permanent and apparently simplest compound of these elements, *it is reasonable to suppose*

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that it consists of one atom of each; its formula is therefore HO. Now, we are all agreed that the meaning expressed by these symbols requires the formula H_2O, and the other was a perfectly arbitrary assumption.

But in medicine, errors such as these actually abound. Did time permit, we might undertake to show that many current medical doctrines are based on some underlying assumption of this kind. Let one be enough.

The old principle, "Symptoms are an effort of Nature to cure the disease," applied in recent times to cholera.

Starting with the idea that Nature intends or desires to cure the patient, which is a purely metaphysical formula from beginning to end, we then pick out some symptom or symptoms, and say that this is the instrument by which Nature cures. But how are we to know (as Professor Haughton has put it) that Nature does not want to put the patient in his coffin?—in which case we might as well say that this symptom is the instrument by which Nature kills. The only scientific way of stating the question would be this: whether or not a particular symptom contributes to recovery; and this might conceivably be ascertained by collecting a sufficiently large number of cases in which the symptom occurred, and another series in which it did not, and comparing the recoveries in each. But we need not introduce any hypothesis concerning the intentions or efforts of Nature.

In this way we come to see that the scientific method consists to a great extent in a very rigid scrutiny of all the materials which are brought in to assist in solving the question. Facts are not to be admitted on any authority, however imposing; hypotheses are not to be introduced unless they have a clear reference to the matter in hand, and can be either clearly proved or clearly disproved. Very attractive and plausible reasons have thus often to be ruthlessly discarded. Not that hypotheses are forbidden by the scientific method—they are a necessary part of it,—but they must be such as are denoted by the definition of a French logical writer: "A hypothesis is only a reason for examining one fact rather than another."

We must now consider for a moment the chief scientific studies which are introduced into your course as auxiliary to the study of medicine.

Although, as I have said, medicine itself is to a large extent an example of the scientific method, this will be still more clearly shown in the physical sciences. Among the studies of the first year we have an excellent example of the sciences of observation in anatomy; of the experimental sciences in chemistry and physics. The former all are obliged to attend; the latter is voluntary. At the same time, I cannot but most strongly urge you not to lose the opportunity here afforded you of gaining some knowledge of this most instructive and, indeed, typical science. This you may do by attending Dr. Stone's lectures.

You will find that a very considerable portion of your time is devoted, and very worthily, to the study of anatomy. It is easy to see why anatomy must be important to the medical student, but we may often be tempted to think that something less than the minute knowledge now expected from candidates might be sufficient. This objection is one that we often hear, either from the impatient student who fancies that his studies are not practical, and even, as I feel sometimes, from the scientifically trained student who is disgusted with the large amount of apparently arbitrary details which appear to be united by no law.

Now, with respect to the objection of the would-be-practical student, it is of a piece with the standing controversy between the scientific and the so-called practical view of things; but we have to remember that if "practical" means anything, it means "useful," and the most useful knowledge of anything can only be that which is most complete. Do not imagine, then, that there is any rough, "practical" kind of anatomy which will serve your purpose, and relieve you from the labour of learning the science precisely—that is, as precisely as time will permit. Practical indeed, in one sense, all knowledge of anatomy ought to be, as being a knowledge derived from things, and not from books. It is so much easier to learn something from the printed page than from the dissected subject, that the constant temptation of the anatomical student is to substitute the former for the latter, forgetting that the thing learned is by no means the same. We meet with students who can rattle off the relations of arteries or the branches of nerves as rapidly as the sailor boxes the compass, or some even who can repeat whole pages of a text-book by heart. No knowledge can possibly be more futile and contemptible. This is not anatomy at all; and the string of verbal associations which takes its place, though it may possess sufficient coherence to last through an examination, will inevitably fall to pieces when it has to bear the strain of practice.

To know anatomy is not to pile together names, but to have in your minds a distinct visual image of the object described, not in one aspect only, but in its solidity, colour, and consistence—such an image of the object as an artist must have before he could draw or model it. To the making of such an image as this there go dissections, descriptions, and figures, views from various aspects, cross sections, longitudinal sections, diagrams, and descriptions. But the one important, the one *practical* thing, is to fuse these together in our minds to one clear definite representation. To do this requires a little imagination—something of the faculty of the artist,—the power of forming out of many ideas one. But we need not all be artists; everyone possesses sufficient imaginative power, if it is only cultivated. To this end the attempt to draw or model anatomical structures is most useful; and, indeed, some teachers of anatomy declare that no one can really know what he cannot draw. You will say this is an ideal. True, but we must aim at an ideal in order to get a valuable reality.

But the objection may be made that we leave no place for books, and that reading, if this be true, is of no use at all. To this I answer that reading has its place, and a very important one. In fact, for anatomy, as for all descriptive sciences, books are indispensable, unless each student could have the undivided attention of an infallible teacher.

It would take long to discuss the use and abuse of books in the descriptive sciences, but a few points I must briefly touch upon.

Scientific text-books must, it appears to me, have one of three objects. Either they must be like books of travel, intended to describe what the reader has not seen and is never likely to see; or, again, they may be like maps, which give a general outline of a number of objects, too many or too large to be easily embraced in one field of view; or, finally, they may be like handbooks for travellers, which draw attention to what the reader can observe for himself. Now, there can be no question about the utility of all these classes of books. No one can see for himself a tenth part, or even, in some sciences, a thousandth part, of the facts upon which any science rests. Hence a great part of our knowledge must always rest upon testimony. This is unavoidable; but still we should endeavour to test such books by our own experience whenever we are able, and at least to gain a direct knowledge of a sufficient number of facts to form a sample of the rest. Without these correctives, feeding on other people's experience—or, as Professor Huxley tersely put it, "getting up hearsay"—has a very demoralising effect on the mind. The examination system has much to answer for in requiring so much of it. Original and inventive genius instinctively revolts from second-hand learning. Faraday used to say that he could never understand a description of anything,—he required to see and handle it. I remember a very able and original chemist, now dead, who declared—and I believe truly—that he never read a book in chemistry till he had to lecture to students; and, indeed, to the last he was quite incapable of getting up a text-book, and would have cut, I am afraid, a very poor figure in an examination.

Of all kinds of books, doubtless the most valuable, especially for beginners, are those of the last class to which I alluded—books which may be compared to the guide-books for travellers; useless without the objects before you. It seems a paradox that such books should be needed; but they certainly are so. The most refined observation would not enable us to see a tenth part of what there is to see in a single bone, unless the anatomists of former generations had been over the ground before, and marked the salient points. Remember the metaphor of guide-books. I once read, by a French writer, the remark that the chief occupation of English travellers on the Continent appeared to be "to verify the assertions of their Murray." You will do well, gentlemen, to spend a large proportion of your time in verifying the assertions of your text-books.

In studies such as these, which I cannot further particularise, your first year will be spent. Do not slur over these preliminary labours, or be over-anxious to anticipate what you may think strictly professional work; for as you begin,

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so you are likely to end; and if you neglect these studies, it is very probable you will neglect the later ones also.

Nor need you be at all afraid of learning too much science. The foolish remark you sometimes hear, that scientific men are not practical, might be left to answer itself; or I might quote the opinion, not of a mere man of science, but of a distinguished lawyer, a judge, a man of the world—Mr. Justice Grove—who said, speaking to medical students: "There is no more mischievous cant at the present day than that which eulogises the practical at the expense of the scientific man." True science is, as I said in speaking of anatomy, the only really practical thing. But if it were said that a man whose knowledge of science is derived from books is not practical, the assertion, thus modified, might have a great deal of truth in it.

Well, gentlemen, when the studies are concluded, there will come for all of you the inevitable hour of examination—the one terror of our happy years.

There might be many things said about examinations, some against, some for them; but I will only now say that the evils of examinations are not such as we here can remedy. There must be examinations in a practical profession. The public requires them, and we ourselves should not be satisfied without them.

One or two precepts I may be allowed to enforce upon you.

Do not, for your own sake, try and get through examinations by a system of hasty cram, learning by heart, studying the peculiarities of examiners, and dodges of this kind. I say for your own sake, because if a man does succeed in getting through in this way, and thinks he has succeeded in driving a very good bargain, in getting through cheaply, or even in taking-in the examiners, he has not really made a good bargain; he has got through at a great cost, and the person taken-in is really himself.

One more word and I have done. Do not let anyone who is so unfortunate as not to get through look upon himself as the victim of injustice, or as suffering for the good of others, or as sacrificed to maintain a system. Rather let him accept the judgment of the examiners as an impartial opinion that he was not, though he thought he was, fit to exercise his profession; and rather be glad that the opinion was expressed in time, instead of having the same verdict pronounced too late by his own failure or the misfortunes of his patients.

COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond., F.R.C.P.,
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Physician to the East London Children's Hospital,
Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest.

Lecture IX.—Fibroid Induration of the Lung (Cirrhosis).

(*Continued from page 382.*)

In the following case the contraction of the lung, consequent upon fibroid induration, had reached an extreme degree. The case, indeed, presents a typical instance of the most advanced form of cirrhosis of the lung.

Elizabeth W., six years and a half old, had enjoyed good health until the age of four years, when she had an attack of whooping-cough. This was shortly afterwards followed by measles and varicella. The cough continued altogether for five or six months, and then disappeared completely, the child becoming again apparently perfectly well. Some time after the cessation of the cough, she was sent into Essex for several months, and while there had an attack of scarlatina, which was followed by suppuration of glands of the neck, but not by dropsy. She was ill altogether for three weeks.

In December, 1871, five months after the attack of scarlatina, the child began to cough again, and to expectorate large quantities of phlegm. Her body also began generally to swell. She became a patient at the Victoria-park Hospital, under the care of Dr. Baümler, who treated her for "chronic pneumonia secondary to scarlatina." At that time the physical signs, as reported by Dr. Baümler, were—"Tubular resonance over right front from apex to below nipple, at back from apex to spine of scapula. Within this area expiration prolonged, but no bronchial breathing. At right base, in front and at back, dulness, bronchial breathing, and râles. Some œdema of eyelids, especially of the right. Urine contains no albumen." Dr. Baümler did not remember that there was at that time any particular contraction of the right side of the chest.

On September 30, 1872, the child was admitted into the East London Children's Hospital, under the care of Dr. Bruce. Her condition was then as follows:—Child very short for her age and excessively anæmic. Skin of face thin and delicate; eyelashes very long; veins of forehead and of temples very full. Can stand, but limbs are very weak and thighs thin; the legs are œdematous, and the right arm (the side on which she always lies) is slightly so. Ends of fingers clubbed. The skin of chest is dry and harsh—in fact, the skin generally acts imperfectly, for the child only perspires about the head and neck. Abdomen full, but does not fluctuate. The cervical glands are enlarged, freely movable, and painless, and one or two small glands are to be felt in the left axilla, but those of groins are hardly perceptible. Scars of old abscesses seen in neck. Liver and spleen large and resistant, and can be felt on each side about three inches below the false ribs. Urine scanty, seldom more than a pint in the four-and-twenty hours. It is straw-coloured, and contains about a third of albumen; specific gravity 1024.

The cough is of a peculiar character; it occurs in paroxysms at comparatively rare intervals. For hours together the child will not cough at all; then a fit of coughing will begin, which lasts for five or more minutes, and ends in retching efforts and the expectoration of several ounces of frothy, purulent, offensive mucus.

The right side of the chest is generally contracted, and is very much flattened at the upper part under the clavicle. The right shoulder and scapula are lower than the left, and the right nipple very much lower. Spine curved laterally, with convexity to the left. During inspiration there is little or no movement of the right side. Measurement, an inch above level of nipple on the right side, nine inches and fifteen-sixteenths; on the left, eleven inches and a quarter. The heart's apex beats one inch below nipple in nipple-line; sounds healthy. Vocal fremitus is stronger at the right supra-spinous fossa than at the left; below it is weaker, although still perceptible as far as the angle of the scapula.

On percussion there is dulness of the whole right side of the chest from apex to base, both before and behind; the note has a tubular quality in front from the clavicle as far as the level of the nipple, and behind at the supra-spinous fossa. In the axillary region there is tolerably good resonance as far as the level of the nipple. The resistance is nowhere much increased. Respiration is everywhere cavernous on the right side, with metallic bubbling rhonchus, and the vocal resonance is bronchophonic. The left side of chest is rather hyper-resonant, with loud, harsh breathing, and the resonance passes across the sternum to the right side, about the distance of one finger's breadth beyond the middle line. At the left back the respiration has rather a hollow quality, which appears to be conducted from the opposite side.

The child remained several months in the hospital, but without much alteration in her condition. The œdema varied in amount, and the physical signs underwent only slight changes, which appeared to be dependent upon the varying amount of purulent secretion in the tubes. Thus, if no expectoration had taken place for several hours, the respiration at the right base would be merely faint and bronchial, with vocal resonance weak or annulled. If now the child had a paroxysm of coughing and brought up a large quantity of sputa, the respiration at once became loud and cavernous, and the vocal resonance again became bronchophonic. The temperature was seldom materially elevated, and ranged usually from 99° in the morning to 100° in the evening; the pulse varied from 115 to 125, and the respirations from 38 to 48.

In this case there were evident signs of contraction of the right lung. The diameter of the chest was very much diminished on that side; the spine was curved, with the concavity to the right; and the mediastinum was drawn in the same direction, as was shown by the resonance of the left lung passing across the middle line of the sternum. The heart, however, was not displaced, owing, no doubt, to the existence of adhesions between the pericardium and left pleura. The falling of the shoulder, and lowering of the nipple on the right side, with the curvature of the spine, might have suggested pleurisy with retraction; but there were many symptoms which pointed to a different conclusion. The contraction was not limited to the lower part of the chest, as in pleurisy, but was general over the whole side, and was indeed especially well marked above. On listening to the chest, loud cavernous

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breathing, with bronchophonic resonance of the voice, was everywhere audible, and the large metallic bubbling rhonchus, which accompanied the breath-sound, furnished by itself a strong presumption of the presence of bronchiectasis. Again, the offensive character of the sputa was very characteristic of bronchial dilatation, and the method in which this was expectorated—viz., at rare intervals, after a paroxysm of violent cough, ending in retching efforts—was a symptom very significant of fibroid induration of the lung, with great rigidity of the tubes.

The lung affection was not, however, the only disease from which the child was suffering. The size and firmness of the liver and spleen, the enlargement of the lymphatic glands in many situations, the albuminuria, and the marked anæmia, indicated the existence of amyloid degeneration. To this constitutional disease the emaciation, which was a prominent feature in the case, must no doubt be attributed, for in children fibroid induration of the lung is not necessarily accompanied by any loss of flesh. There was no history of syphilis, and the duration of the hepatic and splenic enlargement, as it had been unnoticed by the parents, could not be ascertained; but no mention of any such disease occurs in the short note with which Dr. Baümler kindly supplied me, and the absence of albuminuria is especially remarked. The enlargement must, therefore, have occurred subsequently to the child's attendance at the Victoria-park Hospital, in December, 1871. It is probable that the profuse purulent expectoration from which the patient had suffered since that date may have been a determining cause of the disease in these organs. In early life there is a special tendency to amyloid degenerations, for the frequency with which such a result follows any suppurative drain upon the system, if the drain be at all prolonged, is a matter of common observation in a children's hospital.

The three preceding cases have been accompanied by falling in of the chest-wall; contraction of the lung is not, however, a necessary consequence of fibroid induration, even where the disease is of considerable standing, as will be seen in the following case:—

Jacob P., aged five years, was admitted into the East London Children's Hospital on February 20, 1874. The boy was said to have been healthy up to the age of sixteen months, when he had an attack of whooping-cough. Since that time he had been subject to a cough, and frequently expectorated thick yellow phlegm. He had never had measles. A week before admission he began to complain of pain in the right side, and in the front of his chest. His cough became severe. Still his appetite remained fair, and he did not seem to lose flesh. Until the night before admission he slept well.

State on Admission.—Boy stoutly built, and rather short for age. In fair condition, rather fat than thin. Features coarse and thick. Complexion rather sallow; face a little congested, and resembles that of an old sufferer from winter cough. Chest well shaped. The right side moves little in inspiration; the intercostal spaces of both sides sink in. The nares act, but respiration is not at all laborious, and there is no recession of the lower part of the chest-walls during inspiration. The heart's impulse can be felt in the epigastrium, and, faintly, immediately below left nipple. A systolic murmur is heard all over præcordial region, and also in left axilla, and at the angle of left scapula. The percussion-note is dull all over the right side of the chest, both front and back, from apex to base. The note is not, however, completely toneless, and above the clavicle, although high-pitched, it is still somewhat resonant; about the nipple the note becomes "cracked-pot" in quality. Resistance, although increased, is not markedly so, especially at back. The respiration is intensely cavernous everywhere on the right side, both before and behind. Vocal resonance is much stronger than natural, and a fine bubbling rhonchus, very loud, metallic, and ringing, is heard with both inspiration and expiration. About the middle of the right back the respiration is almost amphoric, with intense bronchophonic resonance of the voice. All over this side of the chest the vocal fremitus is very strong; on the left side it is weak, the percussion-note is natural, and the respiration has a slight hollow quality, no doubt conducted from the opposite side. Measurement with the cyrtometer shows that the right side is rather larger than the left, measuring eleven inches and a half to eleven inches and three-eighths on the left side. Its outline also, as drawn by the cyrtometer, is less completely semicircular, being slightly flattened posteriorly and at the junction of the lateral and anterior thirds. Temperature at 6 p.m. 101·6°.

On February 21, 8 a.m., temperature 101°; pulse 120; respirations 48. At 7 p.m., temperature 101·6°.

On February 24 the percussion-note had become less dull in front; at the third interspace a cracked-pot sound could still be elicited. The respiration all over the right front of the chest was amphoric, and was accompanied by gurgling rhonchus of an intensely metallic and ringing, almost musical, quality. It was more intense and metallic at the base than above, and appeared to be seated immediately at the end of the stethoscope. Vocal resonance all over the right front pectoriloquous. At the right back the percussion-note was tubular, and nowhere completely dull except at the extreme base, where the resistance was notably increased. Elsewhere resistance, although greater than natural, was not extreme. The vocal fremitus was stronger at right than at left back. Respiration at the supra-spinous fossa was cavernous; below, as far as the base, it was amphoric, and was accompanied by the same ringing, almost tinkling, rhonchus as in front. This was appreciably altered in amount by coughing, although its character remained the same. Vocal resonance at the back was intensely bronchophonic, the faintest whisper appearing to pass straight up the stethoscope. The cough was very violent, and during the paroxysms the jugular veins became much distended. Elsewhere the superficial veins were not unusually prominent. Since last report the temperature had varied from 102° to 103° in the evening, with a fall to 101° in the morning. The pulse had been slightly over 100, and the respirations 30 to 40. The boy's appetite was poor; his bowels were regular, and he slept well at night. No albumen was found in the urine.

After this date the case went on with little alteration in the symptoms for some weeks. The temperature continued high, being seldom less than 102° in the evening until March 11, when for the first time it was as low as 99° in the morning and 100·6° at 7 p.m. The boy was found to have gained two pounds since March 2, his weight being 2 st. 10 lbs. His appetite, too, had begun greatly to improve. The physical signs, however, had altered little. The dulness persisted over all the right side of the chest, and the note was tubular at the apex both before and behind. The vocal fremitus continued strong, and the resonance of the voice intensely bronchophonic. The respiration was still amphoric, but less markedly so than before, except at the base in front, where it was very loud. The same metallic gurgling rhonchus accompanied both inspiration and expiration. The condition of the heart was unaltered. The murmur was still heard over the whole of the præcordial region but faintly at the base, and the apex was one inch and a half below the nipple and slightly to the outer side of the nipple-line.

On March 17 the dulness was found to be the same, but it was noted that the respiration had lost its amphoric quality and had become cavernous all over the right side of the chest. The bubbling rhonchus was still metallic, but without the musical tone before noticed, and the vocal resonance, although stronger than natural, was not bronchophonic. The vocal vibration still remained more marked than on the opposite side. The temperature was usually 99°, occasionally rising in the evening to 100°. Pulse generally 120; respirations 30 to 40.

On March 24 there were signs of clearing at the right apex. The percussion-note, although high-pitched, was tolerably resonant at the supra-spinous and supra-clavicular regions, and the respiration there was merely bronchial. The whole right back, indeed, was less dull than before, but the respiration was still cavernous, with the same metallic bubbling rhonchus. Over the front of the chest the percussion-note was dull below the clavicle, but resistance was almost natural. Respiration weak, and almost covered by the bubbling rhonchus. Vocal resonance was natural, except at base, where it was increased. In the axilla, percussion was resonant, with slight tubular quality; in the infra-axillary region it was still dull, with cavernous breathing.

After this date the physical signs gradually improved, and on April 10 the dulness was limited to the base, both before and behind, although over the whole side the percussion-note remained more or less high-pitched. At the base the respiration was still cavernous, with crisp, large-sized bubbling rhonchus and increased vocal resonance. Elsewhere the breathing was bronchial, with the same rhonchus. Over the dull area the vocal fremitus was stronger than natural. The boy was now looking very well, and he coughed but little. His spine was quite straight, and the shoulders and angles of the scapulæ were on the same level. His chest measured on the right

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side ten inches and seven-eighths, and on the left eleven inches and three-eighths, one inch below the level of the nipple. His usual temperature was now 99° to 100°, pulse 108 to 120, respirations 34 to 40. He left the hospital on April 10.

On October 20 the boy was again admitted with a return of his symptoms. On this occasion there was noticed to be a little depression of the right shoulder, and the spine was very slightly curved, with concavity to the right. The circumference of the chest was now equal on the two sides. At the level of the ensiform cartilage, each side measured eleven inches and three-quarters. Enlargement of the liver was now noticed for the first time; the edge could be felt three fingers' breadth below the false ribs. The boy was fat and sturdy-looking. The ends of fingers markedly clubbed. His cough was violent, and often ended in retching, during which he expectorated large quantities of thin, offensive, purulent sputa. The breath was very offensive with the same putrescent odour as the expectoration. The physical signs were much the same as before. There was dulness at the lower half of the right side of the chest, both before and behind, but vocal fremitus was excessively faint over the dull area, although distinct elsewhere. Respiration was loud and cavernous, and was accompanied by large metallic bubbling rhonchus, and dry creaking sounds. Vocal resonance was intensely bronchophonic. Over the upper part of the chest, respiration was faintly bronchial, with non-metallic bubbling rhonchus. All over the left side of the chest, respiration was loud and coarse, and was accompanied by faint and distant metallic bubbling rhonchus—conducted, probably, from the diseased side. There was little movement of right side during inspiration. Heart's apex an inch and a quarter below left nipple, and half an inch to inner side. Soft systolic murmur heard as before at apex; heard also at angle of left scapula, and, faintly, at base of heart. Temperature, 7 p.m., 100·8°.

During the boy's stay in the hospital on this second occasion his temperature was habitually over 100° both morning and evening, and his respirations varied from 30 to 40, or even higher. His breath was always very offensive, and his sputa retained their putrescent odour, and were expectorated in large quantities at rare intervals. Occasional streaks of blood were noticed in the expectoration.

The boy left the hospital shortly before Christmas. At that time the dulness was only complete at the extreme right base, but the percussion-note was high-pitched, with increased resistance as high up as the nipple in front, and one inch above the angle of the scapula behind. Laterally, there was dulness in the infra-axillary region. Faint vocal fremitus was felt over the area of dulness. The respiration behind was cavernous, with gurgling rhonchus and bronchophony from the spine of scapula to the base; and in the supra-spinous fossa was bronchial with the same rhonchus. In front the respiration was bronchial, with large bubbling râles at the upper part, but towards the base it became very weak and blowing, with crisp metallic bubbles. In the infra-axillary region the breath-sound was intensely cavernous, with gurgling rhonchus, and in the arm-pit it was blowing, with large metallic bubbles. There was some hypertrophy of the right ventricle, for the heart's impulse could be felt from below the left nipple to the right of the ensiform cartilage. The patient improved in flesh during his stay, and when he left weighed three stone within six ounces.

On February 5 he was brought again to the hospital. Immediately before the examination he had coughed violently, and expectorated about an ounce of frothy, greenish, purulent mucus. His breath was still offensive. The fingers were much clubbed. There was only slight deformity of the chest. As the boy stood up, the angle of the right scapula was a very little (about half an inch) below the level of the left, and there was a scarcely noticeable curving of the spine, with concavity to the right side. The chest measured, one inch below nipple, on the right side eleven inches and three-eighths, on the left eleven inches and three-quarters. The base of the chest had now become nearly resonant; the percussion-note was dull on the right side, above the clavicle in front, and from the supra-spinous fossa to midway between the spine and angle of scapula behind. Below these points to the base it was resonant, but rather wooden in quality. The same wooden or tubular note was found in the arm-pit and infra-axillary region. Everywhere on the right side the respiration was loud and cavernous, and was accompanied by large resonant clicking bubbles, which were more numerous and smaller at the base. Vocal resonance was everywhere intensely bronchophonic, and vocal fremitus was stronger than on the left side. All over the left lung the percussion-note was drum-like, and the resonance passed across the middle line, reaching to half an inch beyond the right edge of the sternum. Heart's apex as before.

On May 1, 1875, the boy was admitted for the third time. He was now excessively ill with very rapid breathing, high fever, and great prostration. The rare paroxysms of cough ended in retching and the ejection of large quantities of fetid purulent matter. Temperature on the first evening, 104·4°; on May 2, 103·2° both morning and evening, pulse 132, respirations 52.

May 3.—Was found lying on right side, propped up in the bed. Expression anxious; nares acting very widely; complexion dusky, purple on cheeks, lips, and end of nose, the rest of face and the neck had a peculiar earthy tint; eyes getting hollow. Had lost flesh considerably since his former visit. Seemed tender all over, and although generally very patient, cried if touched. Seemed to be drowsy, but was very restless, and could not sleep long at a time. At the back the right side was wanting in resonance all over, and was completely dull from the angle of scapula to the base. The respiration for the lower two-thirds was cavernous, with a peculiar high-pitched, ringing, stridulous quality, almost like the sound of a saw. At the angle of scapula a high-pitched ringing crepitation was heard towards the end of inspiration. The stridulous quality of breath-sound was heard over the right front of the chest, and also faintly on the left side, as if by conduction. Everywhere in front the breath-sound was accompanied by a large metallic bubbling. Pulse excessively small, feeble, and rapid; temperature at 8 a.m. 104·2°, at 6 p.m. 104·6°. The boy gradually sank, and died on May 5.

On examination of the body the bronchial glands were found to be much enlarged; they were soft in consistence, and were not at all cheesy. The right lung was adherent over the upper half to the chest-wall, but the adhesions were not of long standing, and were broken down without difficulty. The lung itself was extensively indurated. The upper lobe still crepitated slightly on pressure, but the two lower lobes were very dense and solid. On section of the lung, white thick bands of fibroid tissue were seen radiating from the root of the lung towards the circumference. The bands were separated by purplish hollows or cavities, which on close examination were seen in each case to be continuous in the direct line with bronchial tubes. They were for the most part perfectly smooth in the interior, and were evidently dilatations of the bronchi. Here and there, however, some ulcerations in the walls were discovered, and one or two of the cavities appeared to be the result of ulcerative destruction of tissue. The larger bronchi were very much thickened as well as dilated. In the case of the smaller air-tubes the walls were not especially thickened, but the tissue between them was very dense, and appeared to consist of fibroid tissue interspersed with emphysematous air-cells. This dense tissue was honeycombed in all directions by the dilated bronchi, which ended in spacious *cul-de-sacs* almost immediately under the pleura. The left lung was extensively emphysematous, and presented large patches of collapsed tissue. It was the seat of bronchitis, otherwise its structure appeared to be unaltered. No cheesy deposits were found in either lung, nor were there any grey granulations either there or in any other organs. The liver was enlarged, reaching to level of umbilicus; its substance was dense, its edge firm and sharp, and its section was stained by a watery solution of iodine, showing the presence of amyloid degeneration. The spleen was slightly enlarged, and had a waxy look.

This boy had suffered for three years and a half from cough, with the expectoration of yellow phlegm. The attack, however, for which he was first admitted into the hospital had begun a week before, with pain in the side. On examination there was found to be general dulness on percussion over the right half of the chest, both before and behind. As has been often before remarked in the course of these papers, dulness coming on suddenly, and occupying the front as well as the back of the chest, is due, in the large majority of cases, to pleurisy with effusion; but, in the present instance, the other physical signs failed to support this view. The loud cavernous breathing and bronchophony were indeed, in a child, quite compatible with the existence of even a large effusion, but the presence of vocal fremitus, which was throughout stronger on the diseased than on the opposite

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side; the character of the percussion-note, which was not completely toneless, and was not accompanied by much increase of resistance; the non-displacement of the heart, and the shape of the chest, which, as drawn by the cyrtometer, had not the square outline which it invariably assumes when the fluid is at all considerable in amount,—seemed to imply that if pleurisy were present, it was accompanied by little effusion, and that the dulness must therefore be principally due to another cause. Besides, the abundant fine bubbling rhonchus heard all over the affected side of the chest was evidently intra-pulmonary, and was very different in character from the superficial pseudo-crepitation of an inflamed pleura.

The physical signs, therefore, taken altogether, pointed to consolidation of the lung, and tended directly to disprove the theory of liquid effusion. The next question, then, was to determine the nature of the consolidation. The history showed the existence of a lung affection dating from an attack of pertussis three years and a half before. Superadded to this was some recent acute attack, which was accompanied by a considerable elevation of temperature. The cavernous breathing, large metallic gurgling, and bronchophony indicated the presence of cavities in the lung; but were these cavities the result of breaking down of lung-tissue, or were they merely dilatations of the bronchi? The well-nourished state of the patient seemed to imply that excavation so extensive could not in this case be the consequence of ulcerative destruction of lung, for so serious a lesion must necessarily have been attended by a very considerable degree of emaciation. Besides, there was no evidence of deposits in the apex of the opposite lung. The signs in question must therefore have resulted from the presence of dilatations in the bronchi. Bronchiectasis may be either an acute or a chronic condition. It is acutely produced in many cases of catarrhal pneumonia, more especially in those cases where the disease assumes a subacute form. The dilatations are seldom noticed until the disease has lasted two or three weeks; and after the subsidence of the inflammatory attack the air-tubes may gradually assume their normal calibre. Sometimes, however, and usually in cases where the lung has been the seat of repeated attacks of catarrhal pneumonia, the bronchi become permanently dilated. There is then always considerable thickening of the air-tubes, and the fibrous tissue of the lungs is in great excess. Such cases are, in fact, cases of fibroid induration of the lung. In the present instance the disease had lasted too short a time to give rise to acute bronchiectasis; and therefore we must conclude that the right lung had suffered from several attacks of catarrhal pneumonia, which had led to fibroid induration of the lung-tissue and permanent dilatation of the bronchi. The present was evidently a similar attack, and during its progress further dilatation of the air-tubes appears to have taken place; for the respiration, which at first had been cavernous, became completely amphoric, and the bubbling rhonchus assumed an almost musical tone, approaching somewhat to the tinkling sounds generated in a case of pneumothorax. This extreme dilatation was, however, only temporary. As the inflammation subsided, the bronchi contracted again to a certain extent, except at the base of the chest, where cavernous breathing appeared to be a constant phenomenon.

When the child left the hospital on April 10 there was no contraction of the side; but on his readmission, after an interval of six months, this was noticed to a very slight extent. The physical signs on his second visit were little altered, with the exception that the dulness was perhaps more extensive at the right base than was noted at the last report before his discharge, and that the vocal vibration of the chest-wall, which before had been strong, could now scarcely be detected. The disappearance of vocal fremitus over the seat of dulness is not an uncommon feature in fibroid induration, and is, indeed, the rule in cases where the disease is extensive. Sometimes, however, vibration of the chest-wall appears to vary according to the amount of fluid retained in the tubes. Where this is large, vibration is suppressed, but when the air-tubes have been recently emptied, the fremitus becomes more perceptible. There was in this boy very little contraction of the chest-wall. This may be, no doubt, accounted for by the great dilatation of the bronchi; for when the amount of bronchiectasis is sufficient to compensate for the loss of space by contraction of the lung, the chest-wall is prevented from falling in. The lung itself, however, was much diminished in size, as was shown by the resonance of the left lung passing across the middle line of the chest in front, and reaching, indeed, as far as half an inch to the right of the edge of the sternum. The pyrexia, which continued all through the child's second residence at the hospital, was symptomatic of a certain amount of subacute catarrhal pneumonia, kept up probably by the continued presence in the air-tubes of putrescent pus, which acted as a source of constant irritation.

Shortly before his final admission to the hospital the child caught a further cold and had a severe attack of bronchitis, under which he quickly died. Post-mortem examination showed a very marked degree of fibroid induration of the lung, with extreme and extensive bronchiectasis.

(*To be continued.*)

ABSTRACTS OF THE INTRODUCTORY ADDRESSES AT THE OPENING OF THE MEDICAL SCHOOLS.

CHARING-CROSS HOSPITAL.

The Introductory Lecture was delivered by Mr. Fairlie Clarke, who, after alluding to the recent death of Dr. Headland, to the improvements which had been made in the school premises and the enlargement of the Hospital, went on to address himself specially to the different classes of medical students. He said that he was particularly anxious to welcome those who were joining the school for the first time that day, and to give them some encouragement and counsel. He congratulated them upon entering the medical profession at such an auspicious moment, when medical science was making such rapid advances. He mentioned the subjects which would occupy their attention during the next six months, and gave them advice as to the best way of laying out their time. He said:—"You are just taking the important step whereby you pass from boyhood to manhood, and it is not too much to say that everything depends upon the use which you make of the hours that are under your own control. Temptation rarely comes in busy, working hours; it is in his leisure time that a man is made or marred. Make up your mind firmly to your line of conduct, and, having done so, follow your own course with decision and resolution. It is oftentimes more really manly and courageous to dare to say 'No' than it is to fall in with the suggestions of those who may be older than yourself in years or in academical standing." He recommended a certain amount of reserve in the first instance in the choice of friends, but assured them that they would find among their fellow-students not a few whom they might well be happy to gain as life-long friends. He pointed out that at Charing-cross Hospital a diligent student may always obtain one practical appointment after another as long as he remains in *statu pupillari*, whilst the students of the larger hospitals are often obliged to enter on the practice of their profession furnished with little more than the information derived from lectures and books.

To the second year's students, who would now be beginning to visit the wards regularly, Mr. Fairlie Clarke pointed out the greater interest which attaches to in-patient practice, both on account of the severity of the cases and the more personal relations which are established between the doctor and his patients; and these personal relations cannot fail to draw out our sympathies. He said, "We seem to tread upon sacred ground while we accompany the hopeless sufferers to the very verge of this world, to 'that bourne from which no traveller returns'; and this invests our profession with an interest and a solemnity entirely its own." He specially urged upon those students who held in-patient appointments to cultivate a thoughtful and considerate way of going about their work, saying that it was quite compatible with a keen interest in the study of disease, and would be more likely to win the confidence of the patient.

To the senior students Mr. Fairlie Clarke said: To you more than to any other group among us is the welfare of this medical school committed. I do not under-estimate the influence of your teachers; but more a great deal than what we can do is what you can do. Our influence is only exercised occasionally, yours is exercised constantly. We are placed here in authority, and we are all of us less disposed to accept the advice of those who are set over us than we are

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that of our equals. It is scarcely too much to say that what you are, the younger students will be. Suffer me, therefore, to impress upon you one or two pieces of advice. Remember the weight that your example must of necessity have, and let no light word thoughtlessly spoken sully the purity of the young minds that are joining us for the first time to-day. Let no word or act of yours cast ridicule upon the principles that have been learnt at a mother's knee, and fostered under a father's roof. Let nothing induce you to suppose that idleness and dissipation are manly. There is no true manliness but in the diligent discharge of duty. If you, senior students, act in the spirit that I have endeavoured to indicate, then hard work and good order will be general among the whole body of students.

I often think as I come within sight of Charing-cross that the very situation of our hospital is a constant reminder to us to do our duty faithfully, and in a high-minded way. We are here placed at the very centre of the greatest metropolis in the world, and are surrounded by monuments of national grandeur. To say nothing of Charing-cross as a commercial centre, we are here near the Houses of Parliament, the chief offices of State, and the abodes of Royalty. The improvements which are now in progress in this neighbourhood are beautifying it, and making it more worthy of being the great centre from which the influence of England goes forth over the whole world.

Often, when I have been coming to my work here, I have bethought me of that bright morning in October, 1805, when the English fleet bore down upon the combined squadrons of France and Spain off Cape Trafalgar. It scarcely needs the inscription on the Nelson Monument to remind us of the watchword which was then signalled from the masthead of the *Victory*, and which stimulated all to do their duty so gallantly. Or I have bethought me of Sir Charles Napier, the very soul of honour and rectitude, so independent in his bearing towards his equals, so free from all time-serving and tuft-hunting, so just and considerate to those who were under his command, so kind and humane to those who were in trouble or distress. Or I have bethought me of Havelock, the very ideal of a soldier, an officer, and a Christian, doing his work diligently and cheerfully, notwithstanding straitened circumstances and professional disappointments. Though late in life he was called to a high command, and conducted a brilliant campaign, yet he did not live to receive the highest rewards which the Queen and the country bestowed upon him. It was not the stimulus of early success, nor the favour of princes, nor any lower motive, which carried him through the disappointing years which formed so large a portion of his military career. It was nothing short of a strong Christian principle which sustained him.

The monuments of these great men have been erected in our immediate neighbourhood, not merely to do honour to individuals, but also to keep alive in the hearts of each succeeding generation the virtues for which these heroes were distinguished. And if there is any class of the community who are likely to be influenced by the recollection of their noble deeds, it is surely the young men of England, before whom life is just opening. Duty, honour, and the fear of God were the mainsprings in the characters of the three great men to whom I have alluded. If you, students of Charing-cross Hospital, are fired with the same principles, we need have no fears for the success of the session that opens to-day. It cannot fail to be a happy and a prosperous one; and we may leave in your hands the interests of this medical school, feeling confident that they are safe in your keeping.

LONDON HOSPITAL.

The Introductory Lecture was delivered by Dr. Bathurst Woodman. After some introductory remarks on the mingled feelings with which such a meeting of old and new students must be regarded, the lecturer remarked that the history of eminent medical men refutes the common notion that the study of medicine has a tendency to create sceptics. Such is not the case. Celsus the medical writer, and Celsus who was answered by Origen, were separated by a whole century. Nor is it true that the medicine of antiquity was all a farrago of nonsense, or a collection of quaint conceits. A careful study of Hippocrates and other ancient writers disproves this, just as the metrical precepts of the school of Salerno, or a view of the lavatory of Gloucester Cathedral, disproves the popular lecturer's notion that people never washed in the Middle Ages!

Vivisection was next alluded to, and whilst its abuses and the needless barbarities of Alfort (twenty years ago) were condemned *in toto*, the necessity for experiments on animals was insisted upon, and justified from the imperfections of our art, from the example of the wisest and best of its professors, and because human life and human happiness are so infinitely more valuable than those of other animals. If those who oppose all such experiments could witness the scenes of horror often met with in our hospitals, surely their opposition would be less keen. The late Sir Robert Peel's life had, in all likelihood, been saved had chloroform only been more known when he met his accident; and such substances as chloroform must be first tested upon animals. We must look to a healthy public opinion to regulate these experiments, rather than to any sensational cries or legal enactments.

Dr. Woodman next insisted on the necessity of students earnestly resolving to train themselves for the practice of their profession. It is no longer possible to learn our art from any manual, however excellent, or from any one teacher, however eminent. Every day increases our difficulties in the diagnosis of disease. For example, a few years ago only wall-papers of a peculiar bright green contained arsenic in any quantity. Many people think so now. But what is the fact? Since the general introduction of aniline colours, no paper, however sober its hue, can be trusted as free from arsenic, till its purity be guaranteed by actual analysis. Numerous examples were given of lead and other poisons in articles of food, and in cosmetics; even in our medicines there are often dangerous adulterations. Hence the necessity that a medical man should have at least some general acquaintance with chemistry, and with arts and manufactures. A part of this should be gained before coming to a medical school. Parents and guardians were earnestly appealed to, to give their sons or wards, if about to enter the medical profession, a thorough grounding not only in English, but in Greek, Latin, and elementary Mathematics. From his experience as a teacher and as an examiner, as one who had trained some hundreds of men for medical diplomas from almost every examining body in the Three Kingdoms, he confidently affirmed that nine-tenths of the rejections and failures arose from defective preliminary education. When a student comes to the hospital and medical college, he ought not to be working at any grammars or lexicons except those of disease. The wards of the hospital should be his chief books. Let not the student be too proud to learn from any and everybody. All his teachers will not be equally eloquent or equally skilful, but much may be learnt from the practice of the worst of teachers. Much might be learnt from his fellows. Even a fisherman or the rustic ploughman may often be well read in the great book of Nature. Great men, like Linnæus and Agassiz, knew this well. If willing to be taught, the stores of knowledge in the London Hospital, now one of the largest in London, were shown to be almost inexhaustible. "If the difficulties of your profession are increased, and increasing, so are the facilities for learning. Here you will meet with every possible aid from the staff." The lecturer showed that the London Hospital has never lagged behind in the march of medical progress. Its staff and its *alumni* have not only availed themselves of every scientific improvement, but have largely added to the general store. They were truly practical men, but their practicality was not that of ignorance but of science.

Students were encouraged to work for the prizes which are offered by the London Hospital. This year some nine prizes, whose money value alone is over £300, were to be given away. The prize-system was defended. It had once been abolished at the London Hospital, but the results were not encouraging. He earnestly begged the students not to waste their first year as too many have done. Let them remember, and never forget, that the great end and aim of their art is to cure and relieve. In the eloquent words of Lamartine, "La médecine guérit quelquefois, soulage souvent, console toujours." Let their aim be to multiply the cures. Depend upon it, the public will never tolerate us, or pay us fees, merely to stand by the bedsides of those they love as scientific observers, or as a sort of Greek chorus. For although there are times when the highest wisdom is to hold our hand, lest we rudely dout the struggling spark of life, it far more often happens that we can do much either to cure or to relieve pain. But to do so we must learn all we can, and must be

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learning ever. Examples of successful treatment on scientific principles were given. Hopes were held out that even cancer and tubercle, those malevolent twins, might in time be conquered and disarmed, by careful studies and experiments upon animals.

The influence of fashion in medicine was deprecated, and the lecturer concluded by warning against the baleful influence of a dogmatic scepticism, which is often as injurious to the progress of the healing art as it is to the spiritual and eternal welfare of the man.

UNIVERSITY COLLEGE.

The Introductory Address was delivered by Professor Corfield, who, after saying that most medical addresses nowadays treated of sanitary matters, and that, therefore, the audience would not be surprised if his did, went on to point out the importance of sanitary science as a part of the education of every medical man. As it is not, like most of the subjects in the medical curriculum, made a compulsory subject of study for medical students, most of them not unnaturally think that it is not necessary for them to learn it, and so they pass it by; nay, more, their object in coming to a medical school is, they conceive, to learn to cure disease, and it may seem to them that it is not their business to try and prevent disease.

Let us consider this for a moment. Medical men know more of diseases than other people do; they not only know much about the remedies that have to be employed, but they of necessity know much about the ways in which diseases spread, and much, therefore, about the ways in which they may be prevented. Are they not, then, bound to use their knowledge for the good of mankind? Are they not bound to make that knowledge as perfect as they can? And have not medical men always recognised this from the time of Hippocrates to the present day? Hear what our own Sir William Jenner says:—"No one acquainted with the present state of the science and art of medicine will for a moment question that to prevent disease is its first and most important aim." Weigh well these words of your great master and mine, and place beside them those of Sir William Gull:—"It is enough for us that diseases prevail, to stimulate our best efforts for their prevention, without one asking a question beyond,"—words worthy to be remembered by every medical student. And have not medical men been the discoverers of the methods at present known for the prevention of diseases? Look at the discovery of vaccination, the preventive of small-pox, the most terrible and fatal plague that ever appeared on the face of the earth. Who made that discovery? Who have strenuously advocated its advantages, in spite of ignorant and often interested opposition? Who have proved that the ravages of small-pox are lessened, and that the disease might be exterminated, by means of it? Who but those the hope of whose gains is gone by its practice! And why is small-pox not exterminated? It is because ignorance and prejudice prevail, and prevent the efficient carrying out of the vaccination laws and prevent the general adoption of revaccination. Germany has set us an example here, for in March of last year a law was passed making the vaccination of infants, and also the revaccination of children of riper years, compulsory throughout the whole of the German Empire. If this law be strictly enforced, we shall see the practical extermination of small-pox in that great empire, and then perhaps other countries may follow that example. You may all help in hastening the arrival of the day when a similar law will be passed in this country; and it is your duty to do so—a duty you owe to the memory of Jenner.

Let us look at some other diseases. Where are the black death, the sweating sickness, and the plague? Where is scurvy, that decimator of the armies and navies of the world? They are where typhus fever will soon be, where enteric will be some day, where every disease which we conquer will be sooner or later—they are, practically speaking, exterminated. Look at the discovery, by medical men of our own day, of the difference between the conditions under which typhus and typhoid fevers spread; or look at the discovery by an old University College man, Dr. G. Buchanan, of the connexion between phthisis—our great endemic plague—and dampness of the soil below the houses, and you will see that medical men are finding out the ways of preventing diseases.

All medical men are liable to be asked their opinion, now-a-days, upon the great sanitary questions of the day, and are expected to be generally acquainted with the works carried on, both engineering and architectural, for the well-being of the community; they are especially frequently required to give an opinion about the sanitary condition of internal household structures; but it is especially necessary that they should be acquainted with the means for preventing the spread of contagious fevers. Medical men, out of deference to the wishes of their patients, very frequently do not report cases of infectious fevers to the sanitary authority, and so it is essential that they should know how to prevent these diseases from spreading. What we really want is a law to make it compulsory on medical men to report these cases to the medical officer of health, and then patients would have no choice in the matter. Fortunately, nature does much more to check the spread of these diseases than we can do; for if a man took scarlet fever in the first week of the year, and gave it to two persons in the second week, and each of these to two others in the third week, and there were nothing to prevent this going on at the same rate, everybody giving it to two persons (and only to two) in the week after that in which he got it himself—which is not at all an unreasonable rate,—the people who would have had scarlet fever at the end of the year would be sufficient to populate four million five hundred thousand worlds with a thousand millions of people each! So you see it is fortunate that something stops the spread of infectious fevers.

Medical men are also bound to study hygiene, because it affords important aids to cure—fresh air, exercise, and a proper diet being often more important to a patient than drugs. Remember the words of Rollet of Lyons, "Medicine cures individuals, hygiene saves the masses," and the maxim of Hippocrates, "Nature is the healer of diseases."

Dr. Corfield then referred to the remarkable evidence given by Dr. Ferguson of the degeneracy of the factory population, and his opinion that want of milk was the chief reason for it. He said that the only way to get milk enough was by the utilisation of the sewage of towns, and that the solution of the sewage question would be the prevention of the degeneracy of the population of our large towns. "But it is especially essential that those who may become medical officers of health should be thoroughly acquainted with hygiene: they are consulted on all possible matters relating to the public health, and they must be thoroughly posted in all sanitary matters. Degrees and diplomas are now granted in State medicine, as it is termed, and the facilities for instruction in the various branches have now been greatly increased in the College by the establishment of a practical course under the charge of Professor Williamson and myself, and a new laboratory for hygienic analyses is being fitted up, and will soon be ready for use."

WESTMINSTER HOSPITAL.

The Introductory Address at this Hospital was delivered by Mr. Richard Davy, who said: It is my duty this year to play the part of the old hen to her chickens: to call you together, to foster you, to introduce you to your superiors and equals, and finally, to send you fully fledged into the world. Let me at once tell you that I disapprove *in toto* of introductory addresses, but have conformed to custom at the request of our Medical Council. Both students and teachers infinitely prefer one day's pheasant-shooting to hearing or giving an Introductory. As a surgeon, I shall cut down this sermon from one hour to fifteen minutes; and my successor might still further reduce the volume of these fruitless harangues. St. Bartholomew's Hospital has set a good example in discontinuing opening addresses, and neither their hospital or school has suffered by the omission.

First permit me to welcome this audience, and to refer *seriatim* to the changes that have occurred on our hospital staff; then I will draw attention to some reforms needed in the practice of medicine and surgery. Far too much stress is generally laid on the necessity of elaborate teaching. Above all, a young man should be taught *self-reliance;* his own efforts then suffice to pull him through, just as a vigorous constitution is the mainstay of recovery, independently of elegant prescriptions and repeated visits. University residence and discipline must be strongly insisted on; a healthy tone and lifelong friendships are acquired by this training, in lieu of an entire want of control now felt by hospital teachers over

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their pupils, and the acquaintance of these "young men from the country" with some interestingly repulsive specimens of shark (*squalidæ*), known as London landladies. Had I to repass my time, I would commence a course of study by graduating as a Master of Arts at Oxford or Cambridge; it is by no means waste of time so to do, and much inconvenience of preliminary examinations is got over. Let us now criticise the payment and honours conferred on medical men: their salaries are simply miserable; hospital physicians and surgeons are for the most part unpaid; poor-law officers most piteously; surgeons in the services very badly, and their treatment is even one degree worse than their pay; and young practitioners are not paid at all. For seven years' hard work at the St. Marylebone Dispensary I received one guinea—*i.e.*, 3s. per annum,—and a very distinguished London assistant-physician had found that his salary equalled that earned by the man who put the skid on the 'bus-wheels at Holborn-hill. I was taught as a "Guy's" student how dignified a profession ours was; in my opinion the British public introduced far more largely the element of impudence than dignity into practice. To become a baronet is the *Ultima Thule* of our profession; and in the nineteenth century you could not obtain nor maintain this dignity without payment. Let us hope that gratuitous work and its consequent dignity may become subjects of woman's softness and consideration, and that ladies desirous of occupying a congenial sphere in our circle may ease the men's shoulders from upholding the work and dignities of unpaid appointments. I must next quote the word "charity" as a synonym for professional imposition—a bargain between the public and the medical man for gratuitous work. Less jealousy amongst ourselves, and a far higher estimation of our own services to the public, may conduce to bring about reform. I often wish that medical men exhibited more of the Masonic and less of the Ishmaelite character in mutual intercourse. On hospital boards the medical element should invariably be directly represented; at our own hospital committee this is the case. But I must hold up the London Hospital to you as an example of miserable resignation of the medical to the lay element. These London Hospital officers (and excellent officers many of them are) must be very "lions in love"; they have tamely submitted to have their teeth drawn and claws pared, and now submit to the dictates of a committee on which the medical element is not directly seated. On hospital subjects members of the staff are veterans; many of the lay committeemen are mere amateurs. There can be small doubt as to whom the well-being and progress of a hospital might be safely entrusted.

I must now publicly challenge the authorities to show reason why ancient coroners should call upon qualified house-surgeons and physicians to give their evidence without fee. Let me remind you of the two clowns in *Hamlet*—2nd Clown: "But is this law?" 1st Clown: "Ay, marry is't! crowner's-quest law." Why should the Registrar-General or Commissioners in Lunacy expect our skilled services for nothing? I am not aware that these gentlemen are honorary officers. On sanitary reform my advocacy would be most genuine and strenuous. As convener of a committee to carry out great sanitary measures here, I must state that this Hospital has received the greatest benefit and assistance from Sir Rutherford Alcock. Preventive medicine, again, cannot be over-eulogised; how very much better to prevent a fire than to try and extinguish it. Mercury, iodide of potassium, quinine, and sulphur ointment might be good things in their way, and may be christened the very cream of a hospital drug-shop; yet syphilis, ague, and the itch are entirely preventable diseases. My late colleague Mr. Legge-Pearse spoke most eloquently at a prior Introductory on the subject of the extension of the Contagious Diseases Act; I fully endorse his opinion, and am a firm, convinced, and warm supporter of such extension. I am quite pained at the nonsense that has been let off over vivisection. Practical experiments are as important to us as to the Royal Artillery on Dartmoor. The soldier's aim in these experiments has been to do as much harm, while the physiologist's aim has been to do as much good as possible; and not only is the section of the living requisite, but also that of the dead, in obtaining our knowledge. For this reason it behoved every hospital to insist on the performance of a post-mortem examination (in case of death) as a condition of admission. In conclusion, let me firmly assure you that your early prospects in life are most disheartening; your toil and ambition may be equally great, but your pay and dignity will be equally small. You have to deal with an ignorant and proud people, and I advise everyone to resign at once any and every thought of becoming a medical man, unless he possess three qualifications—first, independence; second, an aptitude for and love of the profession; third, the readiness to pay a heavy premium in this world for his prospects of reward in the next.

LEEDS SCHOOL OF MEDICINE.

The Introductory Address was delivered on the 1st inst. by Mr. T. R. Jessop, Surgeon to the Royal Infirmary. In commencing his address, Mr. Jessop said that he had difficulty in realising the fact that it was nineteen years ago, that day, since he entered upon his student-career at that school. Short as the time seemed, how completely was all changed! The old school itself was gone, and they had in its stead the building in which they were assembled, more commodious and admirably adapted to its purpose. The old Infirmary, for many years unequal to its work, ill adapted at any time to the housing of the sick and injured, saturated with the exhalations of a hundred years, yet full withal, to a Leeds surgeon at least, of the most glorious associations, had disappeared, to be replaced by a structure of which he would only say that, although others had since been built, of all hospitals in the kingdom it was the most perfect. The lecturers themselves also, with but one or two exceptions, and every member of the hospital staff, save one, had thrown off the labour of teaching by retirement or by death, and filling their places was a phalanx of men of whom he might truly and emphatically say there was not one who was not prepared to make great exertions and frequent sacrifices for the advancement of the students and the good of the school. After noticing the changes which had taken place in the staff of lecturers during the year, and the transference of the chemical class to the newly instituted Yorkshire College of Science—a change which met with his warm approval,—Mr. Jessop referred at some length to the course of medical study, and said that in his opinion the present system was most faulty. After carefully looking through the regulations of the College of Physicians, the College of Surgeons, and the Society of Apothecaries, he had come to the conclusion that these corporate bodies, in framing their regulations, had been vieing with each other in an endeavour to obtain general incompetency in the candidates for their diplomas, by requiring an acquaintance with such a multitude of subjects, most of them of a comprehensive character, in so short a space of time as to secure that none should be effectually mastered. He wondered the failures were not more numerous. It said much for the perseverance of medical students, and not a little for the teaching in medical schools, that so large a proportion succeeded in giving evidence of having obtained such an amount of information upon so large a number of subjects as to satisfy the requirements of their examiners. One result of this too rapid learning, would, he was sure, follow—viz., that much of what was considered necessary to know at the time of examination would thenceforth, without an effort to save it, be allowed to pass away from the memory for ever. Were he advising as to how a young man should be educated for general family practice, this, briefly, was the plan he should map out for him:—Six years should be devoted to professional studies, commencing at the age of seventeen. The first two of these should be spent in the house and under the immediate superintendence of an intelligent and successful practitioner, who would undertake to teach him the art of compounding medicines, such minor medical and surgical proceedings as were daily to be seen in his consulting-room, and the general routine of his practice. He should, moreover, be permitted occasionally to visit a few patients, under the guidance, of course, of his master. And, lastly, during these two years he should, by attendance on lectures, by reading, and by study, make himself thoroughly acquainted with materia medica and botany. After the completion of his first two years, he should be entered in the usual manner as a student at a medical school, and for the next three years his whole time should be devoted to the duties of the school and the hospital. The first of these should be occupied almost exclusively with anatomy and physiology; the second should include, along with anatomy and physiology, the more advanced subjects of midwifery, surgery, medicine, etc.; while the third should be given wholly to medicine, surgery, and the whole range of clinical work. During this period there should be no obligation on his part to do anything outside the hospital and school.

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Then, finally, would come the last of the six years, perhaps the most important of all; and during this he would recommend that the student returned to the house of a well-occupied practitioner, who would be able and willing, under his own guidance, to find him employment in superintending the surgery, visiting patients, and attendance upon midwifery, leaving him at the same time ample opportunity for perfecting his observations of hospital work. Some such curriculum as this would do away with the disadvantages by which the students of former days were so heavily handicapped, and would at the same time, if wisely made use of, insure, with much greater certainty than was the case under the present system, a competent knowledge of every department of the profession. After giving the students some practical advice as to the way in which they should perform their duties at the school, Mr. Jessop spoke of the influence of the Leeds School of Surgery on the progress of operative surgery, more particularly with respect to rectangular amputations, excision of joints, and ovariotomy, operations with which the names of Teale, Hey, and Nunneley were honourably associated. On the question of anæsthetics, Mr. Jessop said the relative merits of the two greatest annihilators of pain had been discussed with warmth and interest in the medical journals within the last few months, and if at the end they were left in some uncertainty as to which of the two they should make choice of, they might console themselves with the knowledge that in each, if carefully and judiciously used, they possessed a means of producing complete insensibility, with a risk which could not be considered great when they took into consideration the enormous benefits conferred. He had become more and more convinced that carelessness, aye, and ignorance, in the administration were more frequently the causes of danger and alarm than either a diseased condition of the internal organs, or a peculiar idiosyncrasy of the patient, on the one hand, or anything specially and unavoidably incidental to anæsthetics on the other. Some degree of risk was inseparable from that condition of profound insensibility that was absolutely necessary for painless surgery; and although it was probable a better and a safer agent than either chloroform or ether would be discovered, he doubted the possibility of their ever being able to produce, at will, the total exclusion of all the senses necessary to the unconscious endurance of a severe operation, without at the same time incurring some, although it might be infinitesimal, risk. On the subject of the principles by which at the present day surgeons were guided in their endeavours to promote the direct and satisfactory healing of wounds, Mr. Jessop said it was indeed strange that towards the close of the nineteenth century they should still be engaged in the consideration of a subject apparently so elementary. After centuries of thought and patient observation, it was left to the pathologists of our own day to discover the true meaning of the pus-cell, and to demonstrate how much of real waste was implied in the process of suppuration; whilst it was only just now, in consequence of the indefatigable labours of Mr. Lister, that they were beginning to realise the fact that granulations might form, might grow, might multiply, might organise, without the formation of a single drop of pus. After a few words in praise of Professor Lister and his system of antiseptic surgery, Mr. Jessop concluded by saying that in selecting the subject-matter of his address he had been actuated chiefly by the desire to point out to those present how, by taking it upon themselves to remedy the defects in the curriculum mapped out for them by the examining bodies, they would be best consulting their own interests, and by the hope that, in impressing their minds with the ever-advancing character of the work they were all engaged in, he should be able to create in them a strong desire to keep abreast with all that was being done for the progress of their art. If he had succeeded in these it would be his happiness to have sown seed which, if carefully tended, in the future would not fail to yield an abundant harvest, to the advantage equally of the patients committed to their care and of themselves.

LIVERPOOL SCHOOL OF MEDICINE.

The Introductory Address was delivered by Dr. Dickinson, Lecturer on Comparative Anatomy and Zoology in the Medical School, who took as his text the Medicine of the Ancients. In speaking of the origin of medicines, Dr. Dickinson said we possess little, if any, authentic information. But as long as mankind has existed, so long must the bodily ills, and "the thousand natural shocks that flesh is heir to," have existed also; and we cannot but suppose that some attempt, however crude, must have been made from the first to guard against disease and alleviate suffering. A certain kind, therefore, of medical—or, at any rate, surgical—practice must have obtained in the most primitive period and in the rudest state of society; though doubtless every man in those days was literally "his own doctor," whose remedies were suggested by accident or instinct, and gathered from the vegetable world. Going back, however, as far as we have any reliable data—or rather, any data at all—and following the most orthodox traditions and best-received opinions on the subject, we may trace the origin of medicine, as of most other arts of early civilisation, and, in all probability, of man himself, to the region known to us as "the East." As far as the healing art is concerned, the first distinctive practice of it probably existed among the Egyptians; and its earliest records that we are called upon to notice are associated with the history of that ancient people. But even in Egypt, medicine could scarcely be said to exist as an independent art, being intimately connected, like all other higher branches of knowledge, with religious worship, and, accordingly, vested in the priesthood, among whom it descended from father to son. This was also the case among primitive and semi-barbarous nations, and we can easily understand it being so, seeing what a powerful instrument the healing of disease would necessarily prove in the hands of the priests, and how greatly it would tend to strengthen their influence amongst a superstitious and credulous people. He then referred to the origin of medicine among the Hebrews, Assyrians, Chaldees, Hindoos, Persians, Chinese, the early Greeks, the Arabians and Saracens.

Leaving the ancient worthies, the lecturer at length became practical, and addressed himself more particularly to students in the following language:—"I take it for granted that each one of you who is to-day commencing the study of medicine has fully assured himself of his fitness and taste for the profession he has chosen; that he is entering upon it with something of enthusiasm, and with a determination to pursue it, undeterred by the trials, anxieties, and disappointments which he must frequently and of necessity encounter. To such of you I would say, decide from the first upon the degree or qualification you intend subsequently to obtain; and in so doing let me strongly urge you to aim at the highest that is within your reach. Some of you there may be who have already a definite course marked out for you to follow, in preparing for which you must be guided by your own judgment and the advice of those most competent to be your mentors. But, addressing myself in general terms to those of my junior hearers, who, with as yet no defined prospects before them, have the required means and opportunities at their disposal, and the ability and inclination to avail themselves of the same, I would confidently reiterate my previous advice. Although the possession of a high degree, or first-rate diploma, will not necessarily constitute a man an able or even a successful practitioner, yet I would have you by no means despise, as many are apt to do, these very useful passports towards effecting a favourable start in life, or the attainment of a good ultimate status in your profession. Do not let the mere dread of what may be regarded as the higher and perhaps more severe examinations deter you from preparing for and undertaking them. Examinations are necessary tests of knowledge—necessary evils, if you choose so to regard them,—but as such they have to be encountered, and it is better to face the prospect of them boldly from the first. That a large and very varied amount of knowledge (perhaps too large, or at least too varied) is required of the medical student of the present day cannot be denied; but I know of no examination in this country, which is not competitive, and where a fixed standard only is required, that any youth of average intellectual powers, sound general education, and, above all, determined diligence, should not be able to pass with certainty and with credit. I would have each one of you remember the words of Richelieu, in Lord Lytton's drama of that name—

> "'In the lexicon of youth, which Fate reserves
> For a bright manhood, there is no such word
> As—*fail*.'

And rest assured that, if you will but do justice to yourselves by working honestly and well, you will have small need to realise the meaning of the term. There is just one more point to which I would call your attention—the necessity for note-taking. Acquire the habit of taking notes from the first—not

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in the lecture-room and laboratory only, but, later on, in the wards of the hospital. Have your note-book always at hand, to jot down the salient points, either of a systematic lecture, a physiological or chemical demonstration, or a case of disease in the wards. In the last instance, note down the chief features in the history, symptoms, and treatment, and especially the progress and result of the case, following it when possible, and if death supervene, into the post-mortem room. Lastly, when your note-book is full, treasure it carefully, for it will probably prove of great use to you some day, and afford you most valuable data for reference at, it may be, a long period hence." Addressing those who have nearly completed their curriculum, Dr. Dickinson said:—"Your time is short. Seize every possible opportunity of improving what remains of it, and of acquiring that kind of knowledge which will be of most service to you in your after career. The four years ordinarily allotted to a course of medical study are all too short, and the amount of practical knowledge gained during that brief period must of necessity be very limited. Hence the great desirability of obtaining, when possible, the post of house-physician or house-surgeon in a hospital. Of the value of such an appointment I cannot speak too strongly—as a means of acquiring not only increased experience, but also personal confidence and promptitude, and thus paving the way in the most effectual manner for undertaking the responsibilities and combating the emergencies of subsequent private practice. In closing my remarks to you, my student-friends, let me ask you to bear always in mind the great aim and object of your future vocation—the healing of disease; and, while pursuing this object with diligence and ardour, beware lest you degrade a noble science into a mere means of enhancing your own reputation, and of earning a good social or pecuniary position. With no higher or more distinctive motives than these, you will have but little chance of gaining the respect of your professional brethren or the confidence of the public at large. Above all, never forget that you are gentlemen in the best sense of the word—members of a high and liberal profession, the honour and usefulness of which rest for their vindication in your hands."

ORIGINAL COMMUNICATIONS.

CHOLERAIC COLLAPSE: ITS ANALOGY TO STOKERS' COLLAPSE.

WITH REMARKS ON THE ETIOLOGY OF MALIGNANT CHOLERA, AND ON SOME OF THE THEORIES OF CHOLERAIC COLLAPSE, ETC.

By J. TEMPERLEY GRAY, L.R.C.P. Lond.

(*Continued from page* 362.)

Though disposed to receive the opinions of Dr. George Johnson with great respect, I have never been able to accept his peculiar views regarding the pathology of cholera; and a study of the sequence of the phenomena of stokers' collapse appears to me to support, as I have before intimated, an older theory of the cause of choleraic collapse than that which he has promulgated. It shows at least that collapse, indistinguishable from that of cholera, may be induced by the excessive exudation of fluid alone, without the action of any morbid poison; though, of course, if a morbid poison should cause a great exudation of fluid, the same result might follow. I am aware that Dr. Johnson maintains that the collapse of simple cholera is different from that of malignant cholera. If difference there be, it is often quiet inappreciable; the later phenomena of a serious case of simple cholera being, so far as ordinary gifts of discernment are capable of judging, essentially the same as those of the malignant form of the disease. I have seen a good many cases of collapse in simple cholera, brought on by irritating ingesta, that, occurring during a cholera epidemic, or in India at any time, without a knowledge of their cause, would be set down unhesitatingly as cases of malignant cholera. In the early stage of malignant cholera, Dr. Goodeve (a) says, "We rely for diagnosis chiefly on the absence of any known cause for purging, the absence or slightness of pain or tormina, etc." This is the generally received opinion, but in considerably more than the half of Dr. Johnson's first cases, abdominal pain—often described as "great," "severe," or "intense"—was present as a prominent symptom. Whilst, however, only 22·22 per cent. (eight out of thirty-six) of deaths occurred among his cases stated to be attended with pain, 40 per cent. (four out of ten) died of those cases in which it was said to be absent; the remaining eight cases with two deaths being uncharacterised. The painless cases were evidently the most fatal; those attended with pain, and so far approximating in character to simple cholera, were less fatal. Singularly enough, Dr. Johnson does not mention pain among the symptoms of choleraic collapse given at page 41 in his more recent "Notes on Cholera," though it was present in 62 per cent. (twenty-three in thirty-seven) of the collapsed cases detailed in his former book. The presence or absence of pain cannot be regarded as indicating a firmly drawn diagnostic line, but no doubt, as a general rule, pain is absent or insignificant in the early stage of malignant cholera, while its presence is nearly always a marked feature of the same stage of the simple form of that disease. The symptoms of the later stages are common in a greater or less degree to both diseases. In isolated cases, the recognition of malignant disease may almost solely rest upon the negative and fallible ground of inability to discover any cognoscible cause for the attack, and the consequent assumption of a specific origin. The inability to discover a tangible cause is of course no proof of its non-existence, and the assumption may therefore be unwarranted; but difference of cause appears to be the only fixed basis for diagnosis, and being purely negative in respect of malignant cholera, the diagnosis of a solitary case of this disease cannot, in the present state of our knowledge, be positive—only presumptive. When, however, to this basis we add epidemic severity, not mere prevalence, the recognition of malignant cholera becomes more easy, since it is admitted that the specific cause of malignant cholera generally gives rise to more intense, and hence more fatal symptoms, than the many known causes of simple cholera. Still, there can be no doubt that cases of simple cholera, when severe, override in their general characters those of the malignant form, and though they may not commonly attain the severity of average cases of the latter, yet not a few may be found more typically choleraic (in the general sense) and more dangerous than mild cases, as in a waning epidemic of the malignant disease. Such cases will indeed appear more numerous if we draw the diagnostic line between the two diseases, as I have indicated, somewhat more firmly than is usually done. Leaving aside the "pain" element of diagnosis,—if we believe that the one disease is due to known irritating causes, whilst the other is due to a specific morbid poison,—we can hardly arrive at any other conclusion than that many cases of malignant cholera, which have been recorded by various authorities, were in reality severe cases of simple cholera. All choleraic cases occurring during an epidemic of malignant cholera are not necessarily due to the specific epidemic cause; neither, it will be admitted, are all deaths occurring during attacks of cholera necessarily due to that disease—for a man may die *during* an attack of cholera, but *of* something else. When many are attacked, for instance, it would not be surprising if a few died suddenly from a primarily "weak heart." Choleraic attacks coming on after eating "putrid fish" (Grainger), "spoiled oysters" (Brittan), "pears," and "the effluvia of a putrid hare" (Johnson), may have been of a specific character, but it is certainly not proved that they were. The severity of the attack is in itself no proof of its specific origin; and whether such substances as those mentioned were only predisposing or determining causes of malignant cholera, as implied, or were *ipso facto* the exciting causes of severe simple cholera, is at least undemonstrated.

The subjective predisposing causes of malignant, or, as I should prefer to call it, *specific* cholera, are mostly visionary; it would be equally rational to speak of the predisposing causes of the poisonous action of a dose of arsenic, or of a cobra-bite. Predisposition to disease is constantly confounded with liability, though the former implies an active condition or tendency, while the latter implies nothing but a passive condition of receptivity or unexemption. If a varying receptivity in the individual exist, it cannot, strictly speaking, be considered of the nature of a predisposing cause; for the fitness of the recipient is a negative position, best exemplified, perhaps, in connexion with those diseases of which one attack confers a greater or less degree of immunity from subsequent seizures—in which category malignant cholera may with great probability be included. A man who has not had small-pox cannot, in any true sense of the word, be said to be predisposed to that disease, though he is more liable to be attacked. But,

(a) "Reynolds's System of Medicine," vol. i., p. 698.

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after all, it may be asked, is it not a mere verbal quibble to make a distinction between "predisposition" and "greater liability": are they not practically the same? At the first bluah it might be thought so, but they are totally different things. A man on board ship at sea is more liable to be drowned than one on shore, yet no one would think of affirming that he is predisposed to be drowned!

By some authorities bodily fatigue has been looked upon as strongly predisposing to cholera, the opinion being based mainly upon the fact that troops in India, during and after forced marches, have been frequently attacked with cholera. In the instances given, it seems probable that the fatigue was merely coincidental, the outbreaks being sufficiently accounted for by the fact that the troops were marching on a cholera-track. In former days it was too often the custom for troops to follow each other in succession over the same ground, each succeeding detachment taking the same route, and encamping where the previous ones had been decimated. Whatever part fatigue may have had to do with the high mortality, I cannot conceive that it is in the least *inclined* or predisposed the recipient to cholera; at most it may, perhaps, have diminished that indefinite something—his "vital resistance,"—and thus made him more liable to be attacked. Certain conditions of the atmosphere, in respect of temperature, moisture, etc., are believed to favour the diffusion of cholera, but it is misusing the English language to rate favouring conditions as synonymous with predisposing causes. Impure air and impure water are often described as predisposing causes of malignant cholera, but their influence as such is extremely problematical, the fact being that they are medial exciting causes when they contain the specific morbid poison. Hence, though practically it may be as wise as it is forcible to say—"Excrement-sodden earth, excrement-reeking air, excrement-tainted water; these are for us the *causes* of cholera" (Simon),—it is obvious that the statement is only partly true, as such so-called causes, to be efficient, require the presence of an inconstant element—namely, the morbid poison. Such conditions, *minus* the inconstant element, existed in Europe for ages before cholera prevailed, and they may, and do now, exist in all parts of the world without of necessity exciting this disease; which, moreover, may prevail when none of them are apparent. Excremental matters are but the vehicles of the morbid poison, and are consequently only occasionally, and in a sense, to be called causes—that is to say, when they are cause-containing. Possibly Mr. Simon meant no more than this; but to make his eloquence convey a universal truth, it is necessary to qualify it by adding an epithet of the inconstant; it is not all excremental matters, but only *choleraic* excremental matters that cause cholera. At the same time, from a board of health point of view—as "a good working theory" (Gull)—by making a clean sweep of *all* excremental matters, the cholera-producing ones will be included; and though many times they may not be of this character, it is the safe side to err on to act as if they were—though, no doubt, the safety of *erring* on any side may be logically disputed. "La sincérité scientifique ne connait pas les mesonges prudent." With regard to the influence of fear as a predisposing cause, I believe that the idea that a man can frighten himself into cholera "is destitute of all foundation" (T. H. Barker); but it appears to me possible that fear may have some effect in precipitating or increasing the "mortal coldness" of the algide stage, and indirectly may influence the tendency to death. I have seen an amount of apparent algidity attributable to fear alone that would fairly bear comparison with that of cholera. Dr. Morehead(b) infers that because "the greater number of attacks" (in a hospital) "was in cachectic or debilitated individuals," therefore "the influence of predisposition was very apparent." Judging from the context, he appears to be rather doubtful of his own data, though firm in his conclusion; for, in another place, he has affirmed it to be a "grave etiological error" to think otherwise. I trust it will not be considered an "irrelevant use of the observations and statements of others," which Dr. Morehead so much deprecates (p. 205), if I affirm that his inference is invalidated by the fact that it is based solely upon cases occurring among the inmates of a hospital. Whilst Dr. Morehead has withheld any detailed statement of the cases, this one datum is all-sufficient to negative his inference. The Jamsetjee Jejeebhoy Hospital, Bombay, supplies no exception to the general rule, that the *greater number* of the inmates of any hospital are cachectic or debilitated individuals. Hence, if the victims of an epidemic in this or in any other hospital were selected by lot, on the common law of probabilities, a greater number of this class would be liable to be attacked, altogether irrespective of any predisposition. Evidence apparently justifying an opposite inference to that of Dr. Morehead is not wanting; at any rate, as a matter of opinion, I have no hesitation in subscribing to Dr. Parkes's statement that "general feebleness of health gives no predisposition." The strong are as liable to be attacked with cholera as the weak; and there is reason to believe that the mortality from this disease is as great, or even greater, among the former as among the latter.(c) An attack of malignant cholera may occur coincidently with the operation of an ordinary exciting cause of simple cholera, but, *cæteris paribus*, it would have occurred whether that cause was in action or not. It may, however, be granted that agents which ordinarily might give rise to simple cholera would be likely to augment the symptoms which are common to it and to the malignant form; the converse of this also being true, affording, in fact, a rational basis for treatment. Malignant cholera may supervene upon the simple form, but there is no evidence to prove that the latter predisposes to the former any more than an attack of fever does. There is evidence, on the other hand, based on a rigid application of the ordinary diagnostic rules, that simple cholera of a severe character has been and is frequently mistaken for the malignant type; it being presumed that, however great the resemblance may be, no one is so inexact in his ideas as to suppose that the one disease can pass into the other. Much of the diarrhœa which prevails during a cholera epidemic is doubtless due to a minor influence of the same poison as that which produces cholera, and the supervention of cholera in such cases is but the development of an initiatory symptom of the disease. This diarrhœa is not, therefore, "premonitory," though it may be taken as such; it is "incipient actuality," and rightly considered a stage of the disease which happily often admits of arrest.

Malignant cholera is often described as "epidemic cholera," but the designation is objectionable, for simple cholera may assume an epidemic character, and the malignant is as much endemic in some places as the simple form is in others. When we read(d) of the treatment of 300 cases of cholera in a small place in a short space of time, with a mortality of less than 5 per cent., we may not question the epidemicity of the disease, but we certainly may its malignity. Such a percentage of recoveries (after the use of Stevens's salts) necessitates the assumption that the majority of the cases must either never have passed beyond the diarrhœal stage of malignant cholera, or they were only cases of simple cholera. Again, in Bombay, we are frequently informed by semi-sensational paragraphs in the daily newspapers that certain cases (sporadic) of cholera among the natives had been discovered, treated, and rapidly cured by the police! Though a policeman's diagnosis is not reputable, the public are needlessly alarmed, for to the initiated the frequent recovery of the patients testifies sufficiently to the simplicity of the attacks. There have been great epidemics of malignant cholera in India, as in England, and the disease is also endemic in this country; but there can be no doubt that India itself is credited with more deaths from malignant cholera, and many more cases of this disease, than it deserves. The natives are often affected with simple cholera caused by indigestible and irritating articles of food, especially certain cucurbitaceous vegetables, which not infrequently induce hypercatharsis, collapse, and death. On this point I differ in opinion from Dr. Morehead,(e) who states that out of 25,190 admissions into the Jamsetjee Jejeebhoy Hospital, Bombay, in six years, only two were recorded as cases of bilious cholera, and concludes that bilious cholera is a rare disease in India. The statistics appear to me to prove too much; and I can only reconcile them with my experience in Bombay by supposing that many cases of "bilious" (simple) cholera must have been registered when slight under the name of diarrhœa, and when severe under that of "epidemic" (malignant) cholera.(f) The numberless cases we hear spoken of as unqualified "cholera" by the public, for which distinct causes are given

(b) "Disease in India," second edition, p. 205.

(c) See Walshe, *Lancet*, vol. i., 1871, pp. 260, 261.

(d) *Times of India*, September 20, 1873.

(e) *Op. cit.*, p. 214.

(f) This may be compared with Dr. Macpherson's and Dr. Stovell's observations regarding the percentage of deaths from diarrhœa and dysentery in the army medical returns, Dr. Stovell affirming (*Trans. Med. Phys. Soc.*, Bombay, 1857, p. 22) that "where the percentage of deaths from dysentery was shown to be high, that from diarrhœa would be shown to be low, and *vice versâ*."

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—such as eating unripe, rotten, or indigestible fruits and vegetables, shell-fish, etc.,—point also to the conclusion that not a few medical men, whose opinions the patients reflect, are in the habit of looking upon the real exciting causes of such seizures as merely predisposing or perhaps as determining causes.

The "determining causes" of malignant cholera are often spoken of, but either altogether vaguely or in a sense different from that in which the expression was originally used by Chomel. Agents which individually produced the *same* effect were considered by Chomel to be determining causes: thus, strangulation, drowning, or the inhalation of carbonic acid were severally, according to his phraseology, the determining causes of apnœa. Whilst maintaining that certain cases of simple cholera are not to be distinguished symptomatically from cases of malignant cholera, it may be fairly argued that since the latter is a specific disease, produced by a specific poison, it is doubtful whether any collateral agency can produce precisely identical effects; and if not, malignant cholera cannot, strictly speaking, be said to have any determining cause, in the sense of Chomel. The term is, however, somewhat wantonly used by different authorities, and not seldom what one would call a predisposing, another would designate a determining cause of disease; or a predisposing cause might be said to be also determining. Generally, the expression seems to be used to indicate a conditioning something, or agency, which, as it were, lights up a disease. Hence not unreasonably we read of the "determining exciting causes" of disease—an expression applied to certain agencies which seem to cause the outbreak of latent specific disease. It is in this latter sense that we may speak of a determining cause of malignant cholera; for, if it mean anything at all in relation to this disease, it means a something that bears the same relation to the disease that a lighted match does to a barrel of gunpowder—that is, it is a something without which the disease might or would remain dormant. That there are such diseases and such "somethings" I do not doubt, but in the case of cholera the analogy is hardly perfect—gunpowder requires a light to explode it; cholera can, at least, explode of itself. A determining cause is not necessary for its production or development, but it may act as an accelerative or precipitative agency when the specific poison is latent in the system. As, however, determining causes only act upon the already infected, and the period of latency in cholera is very short, whilst its self-explosive power is strong, I am disposed to think that the importance of the determining causes of malignant cholera has been over-estimated. Those agencies which are apt to produce emeto-catharsis have been commonly esteemed the most potent determinatives; but it should be clearly understood that they have nothing to do with determining the advent of the morbid poison in the body, they merely determine its action when already there. The advent of the poison may indeed be in conjunction with any kind of ingesta, for there is nothing that may not possibly be contaminated with the *materies morbi*, and thus become the indirect exciting cause of the disease. At the same time, there is much evidence to show that an aqueous medium is by far the most common. A dose of a saline purgative may be a bad preparation for a true choleraic seizure, or, *ex concesso*, a determining cause; but countless people take salts in cholera-seasons without any other effect than the usual, or, it may be, a smart attack of Epsom-salt cholera, which an alarmist might be guilty of magnifying into the real disease. Moreover, according to theoretical bias, what one authority may consider to be a determining cause, another may even believe to be the most efficient remedy for the disease. The determining causes of malignant cholera are virtually almost as mythical as are the predisposing causes; they are both often the immediate or exciting causes of simple cholera, and of many of them it may be safely said that the idea cannot too soon be got rid of that they are much or anything more. Looseness of thought and of expression, regarding the causation of choleraic seizures, has been, and is too prevalent; and I am convinced that a more just appreciation of the history of such cases would relegate many of them from the malignant to the simple class, and would further prevent much erroneous deduction as to the efficiency of impotent remedies.

(*To be continued.*)

SIR MICHAEL HICKS-BEACH, Chief Secretary for Ireland, has contributed £5 to the Maunsell Memorial Fund.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

ST. THOMAS'S HOSPITAL.

COMPLETE BONY ANCHYLOSIS OF BOTH KNEES—VERY TIGHT CARTILAGINOUS STRICTURE OF URETHRA TREATED BY POTASSA FUSA AFTER FAILURE OF CATHETERISM—CURE.

(Under the care of Mr. WAGSTAFFE.)

[Reported by Mr. TREDINNICK, Dresser to the Case.]

W. P., AGED thirty-eight, a clerk, was admitted on June 7, 1865. He says that some fifteen years ago he had a severe attack of gonorrhœa, which was much neglected and was followed by a gleet, which never left him. He had also at first swollen testicles. He states that he has had no distinct attacks of gonorrhœa since. A stricture came on gradually, and a No. 4 catheter was passed for retention of urine four years ago, at which time the bladder was very irritable.

Soon after the attack of gonorrhœa (*i.e.*, about fifteen years ago) patient had rheumatism, which affected him on and off until now. Five years ago he went to Guy's Hospital for what appears to have been an attack of acute rheumatism, and he remained there three months. His legs were placed in screw splints to overcome the contraction which was taking place at the knees. They were, after being in splints thirteen weeks, straightened, but the knees have been firmly anchylosed ever since. During this first attack his wrist-joints were also affected, and he had considerable rheumatic pain down the spine. Since then he has had much and increasing pain during easterly wind and damp weather.

State on Admission.—Knee-joints firmly anchylosed by bone; wrists swollen and painful; pain over region of spinal column; stricture at membranous part of urethra, so tight that No. ½ catheter could not be passed, but on August 1 it was passed about half-way through the stricture. Great pain on micturition, water only coming in drops and very cloudy.

August 23.—Potassa fusa used with a straight instrument for about one minute and a half; after this it was used twice a week. The instrument, guarded by grease, was quickly passed down to the stricture, and the length of time of retaining it was gradually increased. The bladder was always injected with oil. After passing the instrument, the urethra became less and less irritable as treatment continued. Water always gave slight pain in passing at first, and was clouded with flaky, shreddy dark stuff, but no blood.

September 13.—No. 8 catheter passed easily; urine drawn off, and a quantity of greenish oil, apparently having been retained in the bladder for some time.

16th.—No. 9 catheter passed easily, and more oil drawn off; this time not so offensive as before. Carbolised oil was injected to limit putrefaction. The treatment of his rheumatism has been by acetate and iodide of potash.

Remarks.—The main feature of interest in this case was the successful treatment of an obstinate stricture by potassa fusa; and Mr. Wagstaffe drew attention to the class of cases in which this treatment was indicated. He referred to other cases of extremely hard, undilatable strictures which had been successfully treated in this manner. The plan had been condemned by high authorities, but he had followed the example of Mr. Le Gros Clark in using it for cases of obstinate hard strictures generally where no instrument could be passed, and also where, when passed, it could not be made to dilate the indurated tissue of the stricture. He had never seen contraction or extravasation occur after using the potassa fusa. The other feature of interest was the firm bony anchylosis of both knees—which could only be looked upon, however, as a pathological curiosity.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF POISONING BY CARBOLIC ACID.

(Under the care of Dr. WOODMAN.)

ROSE S., aged seven years, was admitted an in-patient on September 15, suffering from ascites, due, probably, to chronic

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peritonitis. She was very anæmic and wasted, with occasional diarrhœa.

On the afternoon of the 18th, at 3.45, directly after the child's return from the antechamber, the attention of Mr. Burtonshaw, the House-Surgeon, was called by one of the nurses to her appearance. He saw at once that the lips were white, shining, and puckered, and, from the odour, there was no doubt that carbolic acid had been taken into the mouth. Dr. Ernest Sansom happened to be at the time in the hospital, and he was called at once to the case. It was found that during the momentary absence of the nurse, the child, whilst in the anteroom, had drunk from a gallon can of the crude acid used for disinfecting purposes. The toxic symptoms were immediately apparent: the face was of a leaden hue, and bathed with a cold sweat; the eyes were fixed, and the pupils slightly dilated; the extremities were cold, and there was complete insensibility. Antidotal treatment, as far as possible, was adopted instantly. An egg was beaten up, and, the nares being compressed, the emulsion was readily poured down the throat into the stomach. Scarcely three minutes had occurred after the ingestion of the poison when this was adopted, and shortly after the albumen of other eggs was introduced into the stomach in a similar way. Subsequently, a mixture of olive and castor oils was administered by teaspoonfuls, and it was hoped that this might excite vomiting; afterwards an emetic of vinum ipecacuanha was administered. It was soon found that the sensibility of the whole pharynx and œsophagus had been so destroyed by the local action of the poison, that it was hopeless to endeavour to excite emesis. The condition was, however, favourable for the administration of the fluid antidotes, for the channel into the stomach being so void of sensibility, fluids were poured into the stomach as through an inert-tube. The stomach-pump was then employed, and fluid with albuminous coagula, strongly smelling of the crude acid, withdrawn. There was soon a semblance of considerable improvement: the countenance, and even parts of the lips and edges of the tongue, became pink, and the leaden hue of surface was much less manifest. She was conscious, and spoke to her mother, who had been sent for (this was an hour and a half after the ingestion of the poison). The heart-sounds were extremely feeble, and the pulse at the wrist could not be counted. She complained of great pain at the epigastrium. Albumen was administered at intervals.

At 7.30 she was seen by Dr. W. B. Woodman. Respirations 40; pulse small and not to be counted. Temperature could not be taken on account of the child's restlessness. Pupils contracted; lies with palms of hands upwards, and throws her legs out of the bed; extremities cold. At 11.15 again seen by Dr. Woodman. Pulse in neck 144; respirations 36; temperature 98° Fahr.; less jactitation; takes milk freely; feels sick; pupils widely dilated; bowels relaxed; urine could not be collected.

19th.—2.45 a.m.: Face pale; breathing somewhat stertorous; slight convulsion noticed by nurse; eyelids half-closed; partially conscious; calling for her mother, and asking for milk continually; lips livid; pupils dilated; extremities very cold; respirations 50; bowels still relaxed. 3 a.m.: Quite unconscious; increasing stertor. Died at 3.5.

No post-mortem examination was allowed.

A Sensible Jury.—A rather extraordinary instance of tenacity of purpose on the part of a coroner's jury has just been exhibited in the case of a constable at Old Ford, aged seventy-two, who was taken suddenly ill whilst dining, and who died in an unconscious state the following morning. A certificate of death was given by Dr. Taynton, sen., to the effect that it was due to brain disease; but as he admitted that he had not attended deceased, and had only certified the death on the report of his son's assistant, and from the conviction that the diagnosis of the case was not a correct one, the jury insisted that the body should be exhumed; and, on further inquiry, Dr. Baxter Phillips stated that, having examined the remains, he believed that death resulted from an effusion of serum on the brain, caused by the bursting of an abscess on the spleen into the abdomen. He also reported that he had failed to find any traces of poison. After a long discussion, however, the jury still declined to give a verdict until an analytical examination of the stomach had been made; and for the fourth time the inquiry was adjourned to enable this to be done.

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Medical Times and Gazette.

SATURDAY, OCTOBER 9, 1875.

THE INTRODUCTORIES.

The passage of time again brings us round to October 1, and once more we are called upon to consider the remarks made by those who deliver the Introductory Lectures at our Medical Schools.

The practice of commencing the year of medical work by the delivery of an introductory lecture is one which time-honoured custom has sanctioned, and which our own feelings approve. Although one of our largest and most famous schools has, within the last few years, abandoned the practice, we are glad to see that the example, though emanating from so influential a quarter, has not been followed, but that, in most of our great medical educational establishments, introductories are still the order of the day.

In examining the remarks made by the different lecturers, one cannot fail to be struck with the generally high tone which characterises them. The introductory address of to-day has come to be a very different thing from what it was some years ago. Time was when the only topics on which the orator enlarged were the condition and advantages of the school to which he was attached, the extreme good fortune of those who had chosen that institution for their *Alma Mater*, a glorification of those who had preceded him in the chair he then held, an enumeration of the worthies who had been educated at his hospital, and, in fact, a general laudation of that particular establishment, finishing up with a few cut-and-dried words of advice and welcome to the new students. But "*nous avons changé tout cela;*" the introductory of the present day is in many instances a careful, scholarly composition well worth hearing and reading, whether the lecturer content himself merely with a consideration of the general aspects of medical education, or whether he take up some more special branch of medicine or science.

Though there are no addresses this year which stand out prominently from the rest, like some of those last year, there

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is a general excellence about them all which renders them well worthy of attentive perusal and consideration. The keynote of several was the necessity for a sound and thorough classical and scientific preliminary education, and great stress was laid on the assistance which such a training offers to the medical student when he commences to prosecute the more peculiarly professional portions of his course of study.

Dr. Payne delivered the lecture (which we elsewhere publish in full), at St. Thomas's Hospital. He remarked that it was "unfortunate that in this country, by a series of historical accidents, medical students are cut off to a large extent from association with the great body of learned persons who are attached to the universities and the other professions." He, however, reminded his hearers that if they did not form part of an academical body they might still cultivate an academical spirit, and he strongly advocated a greater *esprit de corps* among the medical students of London. He also dwelt upon the great importance of the alliance between medicine and the physical sciences. The principal intention of his address, however, was evidently to inculcate on his hearers the necessity for accurate and personal observation; not taking for granted anything which they could possibly prove for themselves. As he expresses it, "You will do well, gentlemen, to spend a large proportion of your time in verifying the assertions of your text-books." This advice is most excellent. There is probably no branch of knowledge in which a cultivation of the faculty of observation is of so much importance as in medicine, nor any in which mere book-knowledge, unverified by that observation, is so useless. Dr. Payne's remarks on examinations are also well worth the careful attention of students. "Do not, for your own sake, try and get through examinations by a system of hasty cram, learning by heart, studying the peculiarities of examiners, and dodges of this kind. I say for your own sake, because if a man does succeed in getting through in this way, and thinks he has succeeded in driving a very good bargain, in getting through cheaply, or even in taking-in the examiners, he has not really made a good bargain; he has got through at a great cost, and the person taken-in is really himself. . . . Do not let anyone who is so unfortunate as not to get through look upon himself as the victim of injustice, or as suffering for the good of others, or as sacrificed to maintain a system. Rather let him accept the judgment of the examiners as an impartial opinion that he was not, though he thought he was, fit to exercise his profession; and rather be glad that the opinion was expressed in time, instead of having the same verdict pronounced too late by his own failure or the misfortunes of his patients."

Professor Curnow, at King's College, who is known as an able worker and an original thinker, took for the text of his discourse the consideration of the method and spirit of medical education. He treated this subject in a very able, free, and comprehensive manner, and many of his strictures and remarks we most cordially endorse. With regard to the question of preliminary scientific education we are entirely at one with Dr. Curnow in advocating the acquisition, before commencing purely medical work, of a knowledge of the principal facts and laws of biology. The tendency also somewhat visible just now, to sneer at and decry sound classical education, cannot, we think, be too strongly condemned, and it is a satisfaction to find one of our younger professors expressing himself strongly and unreservedly on this point. A medical man should, above all things, be an educated man, and the best foundation of education lies, we are convinced, in classical study.

In considering purely medical education, Dr. Curnow laid great stress on the importance of practical and demonstrative teaching of medical subjects wherever possible, and argued that for medicine to progress as it should do, direct observation and experiment were necessary, and it was essential for these that the faculties calculated to aid them should be cultivated. The study of morbid anatomy and pathology was urged upon the student, and it was hinted that at no distant date it appeared probable that, just as anatomy and physiology are now separately taught, a division would be effected between morbid anatomy and pathology, which bear to each other the same respective relation. The task which Dr. Curnow set before himself of considering medical education in its widest aspect, was well conceived and ably carried out, and inasmuch as many of the opinions he expressed were almost identical with those which last week appeared in this journal, we can cordially and cheerfully endorse them.

Dr. Barnes's lecture treated of a very different subject—viz., the relations between law and science, more especially medical science,—in which the absurdity of many of the legal proceedings and the unfair manner in which scientific evidence is received and treated were well considered.

The many anomalies so glaringly evident in the relationship between law and science afforded Dr. Barnes a fruitful topic: the monstrous absurdity of the "jury of matrons" when pregnancy is pleaded by a female prisoner as a bar to execution, the peculiar condition of the law of murder with regard to insanity, and many other flagrant inconsistencies, were clearly pointed out. We are glad to see so able a physician as Dr. Barnes grappling with this question, and trust that his remarks may have some effect on the lawyers in showing them some of the faults of our legal system, and may lead them to treat with a little more respect than they have hitherto done the evidence of those who have made scientific investigation and the study and treatment of disease the business and pleasure of their lives.

One of the lecturers, Dr. W. Bathurst Woodman, at the London Hospital, referred, among other subjects, to the practice of vivisection, and maintained the necessity for experimentation on animals, while, at the same time, condemning warmly the cruelties which in former times had undoubtedly been perpetrated under the cloak of scientific investigation and research. This question of vivisection, however, was not so much touched upon by the lecturers as it was last year, partly, no doubt, because the subject may be considered as now *sub judice*, whereas this time last year the public mind had been inflamed by sensational and *ex parte* statements, and by accounts, in many instances grossly exaggerated, of the barbarities said to be inflicted by medical observers in the prosecution of physiological research. Now that the whole matter is under the consideration of a Royal Commission, by whom, no doubt, it will be carefully examined in all its bearings, and from every point of view, in a judicial and impartial spirit, we may hope for some satisfactory solution. We trust, therefore, that while no vexatious restrictions will be imposed on the efforts being made for the advancement of physiological knowledge, and through it for the benefit of suffering humanity, such regulations will be laid down as will reassure the public that no unnecessary refinements of cruelty will be practised on helpless animals under the pretext of scientific inquiry.

Dr. Woodman was also among those who laid special stress on the value and importance of thorough and comprehensive preliminary education, which is daily becoming more recognised, and which will, if generally adopted, do much to lighten the labours of medical students, at the same time that it will greatly assist in making the future members of the medical profession more thorough and efficient practitioners. One piece of advice which Dr. Woodman gave we would especially commend to the attention of the new students. He urged them not to neglect their first years of study, and we can only re-echo the advice. The time allotted for medical study is far from being too long—nay, we consider that it is too short; and, such being the case, not a week of it should be allowed to go by without being taken advantage of. Many students

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in their first year do but little, trusting to subsequent sessions to make up for lost time; but this they will find a most difficult task. The golden opportunity, once allowed to slip by, will never return; and inasmuch as the whole course of study is mapped out in regular order and arrangement, unless that order be maintained and that arrangement adhered to, the whole system will be disorganised, and utter confusion and discomfiture will result.

The subject chosen by Dr. Randall at St. Mary's Hospital had reference to medical jurisprudence and hygiene, and he referred to the novel methods of disposing of the dead which have lately been proposed. Cremation Dr. Randall considered as a pagan and heathen custom revolting to the ideas of a Christian country. With reference to the other plan, he said that, "without disapproving of bodies being placed in wicker baskets, so as to come in contact with the earth, he did not advocate Mr. Haden's plan of burying the dead with the known object of their being consumed and exhumed at the end of a certain time, that others might be placed in their stead. Do not our notions run counter to such expedients? Are we not imbued with the principles of inviolability of our graves and cemeteries? Is not the burial-ground 'God's acre'?—

> "'I like that ancient Saxon phrase, which calls
> The burial-ground "God's acre": it is just;
> It consecrates each grave within its walls,
> And breathes a benison o'er the sleeping dust.'

If a cemetery is filled, is it not preferable to have a new one, rather than that the ground should be disturbed and turned up? Let us remain where we have been placed; let that mould with which we are mixed, and a part of which we form, remain quiescent, and not be made to form a fresh mould to imbibe the emanations and to purify the exhalations of that putrid body which will be put in our stead."

At Guy's Hospital, Dr. Stevenson took for his topics the study of medicine and the position which the profession held in the public estimation. He combated the assertion that medicine will soon cease to be considered a liberal profession; and asserted that on the members of the profession it depends whether medicine shall be regarded as a liberal profession or not. "Should gain, greed, and applause be their aims, the worst anticipations might be expected to be fulfilled; but if knowledge of disease, culture, and an honourable professional spirit be dominant, the medical profession need not fear adverse criticism."

We commend these words to the founders of some of our "special" hospitals—institutions which cannot be said to exist because they are necessary for the relief of suffering humanity, but whose *raison d'être* will too often be found in the desire of some medical man, in whom "an honourable professional spirit" cannot be said to be "dominant," to puff himself into notoriety and secure a short cut to wealth.

Dr. Stevenson also advocated thoroughness of study in medicine, and with reference to preventive medicine and the use of statistics in determining the healthiness or unhealthiness of communities, urged "that it should no longer be possible to say that medical men, as a rule, care nothing for sanitary science, and even view it with suspicion."

The history of scientific medicine, and the relation of science to medicine, were ably commented upon by Mr. Lowne, at the Middlesex Hospital.

A history of an art like medicine, whose origin must be looked for far back in the beginnings of time, and whose progress has been so often delayed by its alliance with magic and mystery, and by the dark and unthinking opposition of blind fanaticism, must always be a most interesting topic; and the manner in which it was treated at the hands of Mr. Lowne deprived it of none of its attractions. It is a subject which had a fascination for more than one of the lecturers, Dr. Curnow especially entering upon a cursory glance at it.

Mr. Lowne also considered the very important relation which physics always have borne, and always must bear, to medicine. It is through physics that our means of investigating and discovering the causes of disease have been so much increased and improved. The stethoscope, the ophthalmoscope, and the microscope, all owe their origin to the knowledge of the laws of physics possessed by their inventors. This fact presents us with another argument, if such were needed, in favour of the importance of a scientific training for those entering the medical profession.

In addressing the students at Charing-cross Hospital, Mr. W. Fairlie Clarke divided his remarks so as to make them applicable to the different classes of those who sat before him, viz., those who were just entering upon the study of the profession, those who were in the midst of it, and those who were just about to go forth into the world to prove that knowledge which they had acquired during their student-career. The standard of conduct which should actuate them was Mr. Clarke's principal theme, and he exhorted all to uprightness, rectitude, and the fear of God. To the senior students he trusted to set good examples to those just commencing the study of the profession, and he pointed them to Nelson, Napier, and Havelock, as men actuated by noble motives, in whom duty, honour, and the fear of God were the mainsprings of life, exhorting his hearers to endeavour to emulate their virtues and be actuated by their principles.

The addresses at University College and Westminster Hospital were delivered on Monday, the 4th, instead of on the orthodox 1st of October. The former, by Professor Corfield, dealt chiefly with sanitary and hygienic matters, and urged upon medical students the great importance of preventive medicine, and the necessity, therefore, for those who are studying medicine to make themselves familiar with the principles of sanitation. The importance of a thorough enforcement of the vaccination laws was also referred to, and hopes were held out that, as the black death, the sweating sickness, and the plague had disappeared, so, by proper attention to sanitary and hygienic measures, we should in time exterminate typhus and enteric fevers and other diseases the conditions of existence of which we can discover.

At the Westminster Hospital, Mr. Davy told his hearers that, though selected to deliver an address, he did not believe in Introductories. Perhaps it might have been as well to secure the services of someone who did, for the repetition of addresses like Mr. Davy's would soon go far to make us all wish for the abolition of introductory addresses. He tells us of working for seven years with only a guinea for recompense. If his services were no more valuable to the institution with which he was connected than when delivering the introductory address at Westminster Hospital, there might be serious doubts that he had been largely overpaid.

We have now glanced at the several addresses, and have endeavoured to give those of our readers who are unable or unwilling to peruse them *in extenso* some idea of the scope and object of each lecture. We have refrained, however, from giving any lengthened quotations, though it would have been easy to have selected many extracts which would repay perusal.

In conclusion, we can only repeat what we said at the commencement of this article—that a high tone characterises all the addresses. The advice which they contain is evidently, in most instances, the outcome of the speaker's own experience, and not merely the expression of a few well-worn, stereotyped phrases; while in those instances in which scientific subjects have been treated, they have been handled in a manner worthy of those who occupy positions as teachers in our medical schools—institutions which, in regard to reputation and standing, are second to none in the world.

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THE FEMALE MEDICAL MOVEMENT IN BIRMINGHAM.

The agitation which has been going on for the last two or three weeks in Birmingham, in reference to the medical education of women, has greatly exercised the minds of the medical profession in that town and neighbourhood. The discussion of the General Medical Council, and the weak resolutions at which it arrived on this subject, evidently gave a new impulse to the ambition and desire of the powerful organisation which is intent on securing this innovation into Birmingham, with the ostensible object of making that town the central English emporium for female medical education. This campaign was inaugurated by an influential deputation headed by the Mayor of Birmingham waiting on the Council of Queen's College, with a view to ascertain on what terms the College would undertake the medical eduation of women. It was in effect stated by the deputation that any reasonable demands would be complied with. The Council of Queen's College acted with great fairness and prudence in determining to refer the question to the Professors for their advice and opinion on so momentous a question. The Professors, after receiving this request from the Council, at their first meeting showed their loyal feelings to the physicians and surgeons of the General and Queen's Hospitals, by requesting a conference with those gentlemen before reporting to the Council on the question. It will be manifest that this was a very generous movement on the part of the Professors, when we state that by the charter of incorporation of the Queen's Hospital that institution is compelled at all times to admit the students of Queen's College to the clinical instruction of the Hospital. To have forced the female students on the Queen's Hospital without a conference would have been an arbitrary act on the part of the Professors and Council which could not have been tolerated with equanimity, and would have destroyed the good feeling which at present exists between the officers of the several institutions. The conference met in the Midland Institute on September 29, and after a vigorous and prolonged debate a resolution was carried to the effect that the medical officers of the two hospitals were not prepared to give clinical instruction to women. This resolution was reported to a meeting of the Professors on September 30, when by a large majority the Professors agreed to report to the Council that they were not prepared to undertake the medical education of women in the College. On October 2, the Council met to receive these several reports, and after a lengthened discussion they *unanimously* passed a resolution similar in effect to that of the Professors, and submitted in addition certain reasons which induced them to come to that determination.

It will be seen that this question has been thoroughly, and we may say exhaustively, discussed by the authorities in Birmingham, which renders the settlement an authoritative and decisive one, and we must heartily congratulate the Council and Professors on their wise decision. We learn, however, that the medical officers of the two hospitals are so equally divided in opinion on the question, that, if a separate school were established for the education of women, a little pressure would remove any difficulty as to the women receiving clinical instruction at each of those institutions. Nevertheless, the decision has given much satisfaction to the majority of the profession of the town and neighbourhood. It would have been disastrous to the existence of the Queen's College as a school for male students to have decided otherwise. The College has had a long series of vicissitudes; it is now in a fairly prosperous condition, with a steady yearly increase of students, and it could not well have withstood so perilous a change as the medical education of women on any plan would have introduced.

We regret to observe that the "Senior Surgeon to the Queen's Hospital" has thought it necessary to publish a letter on the conference above referred to, in which most of the names are given of those voting at the conference on either side. The letter is in very bad taste, and we leave it without further comment.

THE WEEK.

TOPICS OF THE DAY.

No further fatal consequences have resulted from the singular case of poisoning at Rotherham through eating sheep's-head broth. The nine survivors are now regarded as out of all danger, although two of them suffered very severely. A post-mortem examination of the body of the deceased child Jenkinson was made by Mr. J. Branson, of Masbrough, who decided that the poison in the broth, of which all the persons affected partook, was arsenic. At the coroner's inquiry it was elicited that a neighbour of the persons to whom the disaster occurred worked at the Rotherham Glass Works, where a large quantity of arsenic is used. This man obtained an empty barrel which had contained arsenic, and it was afterwards used as a washing-tub; the persons at the house where the poisoning occurred had their washing done at this man's house; they took thither a pan into which hot water was often poured from the tub, and this pan was used next day for boiling the broth. The jury returned a verdict that the deceased child Jenkinson died from being poisoned with arsenic inadvertently administered in broth, and they appended to their verdict an opinion that the indiscriminate sale of casks which have contained arsenic is dangerous, and ought to be discontinued. The professional evidence showed that the broth contained enough of the poison to kill twenty people.

There has lately been published a full account of life as it is in the "Black Country." This account is the work of no amateur investigator, but is the official report of one of the Government Inspectors of Factories. A more degrading exposition of affairs it would be difficult to imagine. The men, as a rule, indulge in drunkenness and idleness, whilst their wives labour at nail-making, and even at chain-making. It is stated to be the custom of idle, lazy young lads to look out for skilled, industrious wives, in order to obtain an easy life. Things go on smoothly with them for a time, until children come, or perhaps sickness, and then, the out-of-practice hand of the legitimate bread-winner having lost its craft or become useless through a long course of drunkenness and dissipation, there is nothing left but parish relief or starvation. The question which presses is this: Should not Government interfere to interdict the employment of women in these masculine operations? We will trace the subject a step further than even the moral consideration of the question, What must be the effect upon the future generation, of pregnant women undertaking such heavy manual labour? The report alluded to mentions the circumstance of a manager in a brickyard near Bilston, who recently noticed a girl carrying clay; she seemed weak and ill; and he, thinking she had been drinking overnight, remarked to her, "Why, Clara, you don't look up to much this morning." "No more would you," was the retort, "if you had had a child during the night!" It is a sorry fact that the education and morals of the "Black Country" are a disgrace to an enlightened and Christian country, and the sooner strict legislation is brought to bear on the subject, the better it will be in all respects for the welfare of the nation.

In corroboration of the recent account of wholesale poisoning which occurred amongst the boys of the Forest-gate Industrial School, through chewing the roots of laburnum trees, on account of their similarity to what is known as stick-

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liquorice, Mr. Henry Willis, of Old Broad-street, has communicated to the *Times* that a horse was lately brought out of one of his meadows, seemingly in great pain attended by vomiting. Feeling sure that the horse must have eaten something poisonous, Mr. Willis consulted a book on the poisonous plants of this country, and found that the laburnum was included amongst the number. He then cut down all the branches of laburnum within reach of the horse, and no return of the symptoms noted has since taken place.

Another instance has occurred of the danger of allowing such bigoted idiots as the "Peculiar People" to indulge in their suicidal mania. The wife and one of the children of a mariner at Chelmsford recently died of fever, and not being able to produce a medical certificate to the registrar he was summoned to the Petty Sessions for refusing to provide medical aid for his children, who were suffering from fever. The accused said that both his wife and child, when asked if they would see a doctor, replied in the negative; he himself considered that the only doctors they required were the butchers and the bakers. The Bench informed him that the law required that he should call in medical assistance when necessary; and he was bound over in the sum of £5 to come up for judgment when called upon. Meanwhile this man's house is left to become a centre for the propagation of fever, and a plague-spot in the neighbourhood which is unfortunate enough to possess a resident with such "peculiar" notions.

On the 30th ult., the remains of Professor John Hughes Bennett, Professor of the Institutes of Medicine in Edinburgh University, were interred in the Dean Cemetery of that city—a burying-ground which, perhaps, contains the bones of more eminent Scotchmen than any other. The funeral was attended by the relatives of the deceased, a number of his fellow-professors, and a large gathering of the medical profession.

From the Registrar-General's report for the week ending September 25 last, it appears that 2127 births were registered in London, being no less than 170 below the average number of the corresponding week for the last ten years, allowance being made for increase of population. During the same period 1319 deaths were recorded, showing an excess of 2 over the average of the similar period for the last ten years; of these 13 were attributed to measles, 90 to scarlet fever, 12 to diphtheria (of which one in Islington was certified from "blood-poisoning, diphtheritic sore-throat," due to defective drains), 49 to whooping-cough, 18 to different forms of fever, 125 to diarrhœa, but not one to small-pox. The fatal cases of measles were below the average, whilst those of whooping-cough, although below the numbers returned in recent weeks, were again excessive. The 18 deaths referred to fevers were considerably fewer than those in any of the four preceding weeks, and were 27 below the corrected average weekly number; 1 was certified as typhus, 12 as enteric or typhoid, and 5 as simple continued fever. The Asylum District Fever and Small-pox Hospitals at Homerton and Stockwell (which are certified for 576 beds) contained 281 patients only on the 25th ult., of which number 39 were under treatment for fever, and 211 for scarlet fever; the Asylum District Hospitals did not contain a single small-pox patient on the 1st inst.

It is reported that Mr. Thomas Jessop, an ex-Mayor of Sheffield, who is extensively engaged in the steel trade, has offered to build a new hospital for women for his native town at a cost of £22,000, and that tenders for the edifice have already been sent in and accepted.

A singular application was made to the magistrate at the Clerkenwell Police-court this week. On Sunday last a man named James Hiley, who had been living at 16, Argyle-street, St. Pancras, expired, and on his friends, including the widow, appearing to take away the body in order that it might be conveyed to Peterborough for interment in the family grave, the landlord of the house refused to give it up unless the sum of £9, which he alleged was owing to him, was first paid. The magistrate said that the body could not be legally detained for debt, and that it ought at once to be given up, or the sanitary authorities would be called upon to step in and interfere. At the same time, if the deceased really owed money it ought to be paid. The widow explained that the sum at first demanded was £6, but that this rapidly rose to £9. The magistrate said the body must be given up at once, and directed one of the officers of the court to accompany the friends of the deceased to see that this was quietly done, and subsequently the landlord gave up the strange security which he had thought fit to appropriate for his debt.

From the Registrar-General's report on the health of Scotland for the month of August last, it appears that the deaths registered in the eight principal towns were 2394, or 104 below the average of the August mortality of the last ten years, allowing for increase of population. The annual mortality shown was at the rate of 18 deaths per 1000 in Aberdeen, 21 in Edinburgh and Dundee, 23 in Paisley, Leith, and Perth, 27 in Glasgow, and 36 in Greenock. Half the deaths registered were of children under five years of age. The zymotic (epidemic and contagious) class of diseases proved fatal to 663 persons, thus constituting 27·7 per cent. of the mortality of the eight towns. The simultaneous prevalence of whooping-cough and diarrhœa in Greenock, and of measles and diarrhœa in Paisley, caused this rate to be exceeded in each of these towns. Diarrhœa was the most fatal of the epidemics, 253, or 10·6 per cent., of the whole deaths being ascribed thereto. The deaths from inflammatory affections of the respiratory organs (not including consumption, whooping-cough, or croup) amounted to 300, or 12·5 per cent. of the whole mortality. Those from consumption alone numbered 273, or 11·4 per cent. Two deaths were caused by delirium tremens, and 5 by intemperance. Two males and 1 female had passed the ninetieth year of life, the eldest being a labourer aged ninety-three years. The births for the month in question were 3440 (of which number 306 were illegitimate, being in the proportion of 1 illegitimate in every 11·2 births), showing an increase of exactly 100 over the August return of last year. In the eight towns 696 marriages were recorded, which number, allowing for the annual increase of population, and also for the increase consequent on the extension of the Glasgow registration area, is 40 under the average for the corresponding month of the last ten years.

THE FACTORY AND WORKSHOPS ACTS COMMISSION: THE DUBLIN INQUIRY.

On the second day of this inquiry much important evidence respecting the trades in Dublin, and the insanitary condition of that city, was laid before the Commissioners. We regret that the limited space at our disposal will not permit us to do more than give the following excerpts from the evidence as reported in the *Daily Express*:—

Dr. Mapother, consulting medical officer to the Dublin sanitary authorities, was examined, and stated that he had been for the last eleven or twelve years medical officer of health in Dublin. He was not a certifying surgeon under the Factories Act. It was a very general custom for master tailors to give out work to small work-places to be done by the poorer class of workmen. These places were generally in a very bad sanitary condition, one room being used in many cases as both workshop and sleeping apartment. This unsanitary condition of workshops applied to other trades in Dublin also. He had known a few instances of work being carried on in houses in which disease existed, but medical men had not discovered any case in which disease had been spread by such means. The disease most likely to be conveyed by such means would be scarlatina. The enforcement of the law for the regulation of the hours of labour would tend to prevent overwork, and

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would promote the amelioration of the condition of the workers. Bakehouses were now inspected by the sanitary officers. The most flagrant case of unwholesome occupation noticed was the trade of making mirrors by the mercury process. In Paris, mirrors were made by the nitrate of silver process, which was perfectly harmless; but in Dublin and other British towns the process by mercury was employed, which invariably shortened the lives of those who worked at it, and in some cases rapidly killed them. Another extremely unwholesome occupation was the making of millstones from a French stone. The chipping of the stone produced an impalpable powder which injured the lungs. The mischief might be prevented by the use of a respirator, but the workmen were careless about doing so, although urged by their employers. The pursuit was followed by adults, whose lives were extremely short.

Mr. James Boyle, C.E., Secretary of the Public Health Committee, stated that out of 24,000 houses in Dublin, there were 9300 let in tenements. The Public Health Committee has the Artisans' Dwellings Act under consideration, but *he did not think they would put it into force in consequence of difficulties in the way of doing so.* No youths under eighteen years of age worked at night in bakehouses in Dublin, but during the day lads of between fifteen and eighteen years of age were employed. No attempts to enforce regularity as to hours of labour in bakehouses had been made.

Dr. Charles Cameron, Medical Officer and Analyst of the Corporation, stated, in reply to Sir James Fergusson, that certain industries were carried on in Dublin in the homes of the workers under much less favourable conditions than in the cases in which the artisans were employed in workshops. The bootmaking and tailoring trades afforded examples of this. He had examined the houses of artisans in those trades, and anything more unsanitary than their condition it would be impossible to describe. Bootmaking was generally carried on at the homes of the artisans. They did not work on Mondays, and sometimes not even on Tuesdays. They commenced on Wednesday, and the length of time they worked increased each day afterwards until Saturday, when they generally worked until two or three on Sunday morning. The result was that where not only a family but one or two lodgers also worked in the same room, the atmosphere of the room about eleven o'clock at night became extremely bad and prejudicial to breathe. The workshops for tailors and bootmakers were incomparably better than their homes. It was the same with dressmakers. He had examined the workshops of many milliners' establishments in Dublin, and had found that as regards cubic space they were tolerably good, though not always what he should like to see. The position of the houses, however, often rendered it difficult to obtain the desired quantity of space. As a rule they generally left off work at six or seven o'clock in the evening in the workshops; whereas, at their own homes, in most cases, they worked extremely late, and had not adequate space, besides being irregular in their meals. Tailoring and bootmaking families almost invariably slept in the same room in which the work was done. He knew one instance in which a man, his wife, and four children, and two lodgers, working all at the same trade, had only two rooms.

We have only one remark to make on the foregoing, and it is this—that in the face of the evidence given by Mr. MacMahon (see *Medical Times and Gazette*, September 25, p. 370), and by Drs. Mapother and Cameron, and by Mr. Boyle, we are at a loss what to think of the last-named gentleman's astounding statement that in his opinion the Public Health Committee of Dublin were likely not to enforce the Artisans' Dwellings Act.

THE ALLEGED DEGENERACY OF THE FACTORY POPULATION.

A BLUE-BOOK which has just been issued contains a very interesting report by Mr. A. Redgrave, Factory Inspector, on the condition of factories and workshops, and the persons employed therein, for the half-year ending April 30 last. In his report Mr. Redgrave deals very fully with the question of the alleged degeneracy of the factory population, and refers especially to the evidence of Mr. Ferguson, Certifying Factory Surgeon, Bolton, before the Factory Acts Commissioners, which has been already alluded to in our columns. Mr. Redgrave says:—"Although the factory operatives in some of our densely populated factory towns may not compare favourably with the operatives who worked in the country districts under what I have called the patriarchal system, yet the factory operatives in the smaller textile towns and the villages of Lancashire and Yorkshire are as well grown, as well developed, and as healthy as the working classes in any county in the kingdom. I admit that in some of our towns the factory children may not be as to physical condition altogether what I should like to see them. But if the experience of a layman is worth anything, I can vouch that generally there has been a material improvement in their physical condition, even in these cases, since 1848. It is admitted that the arrangements of factories have been improved, that the conditions of labour are more favourable to health than formerly; and it is stated that the alleged deterioration has been caused by the improper habits of the operatives, by the substitution of tea for milk for children, and by the abuse of tobacco and tea and alcohol by both young and old. Into the cogency of these reasons I will not further enter than to express a doubt whether the consumption of alcoholic liquors has increased to so great an extent as to affect the health of the operative class of our population. I am very loth to attribute a deterioration of race to a cause which does not appear to me to exist—viz., the increase of immoral habits. By all the testimony that can be gathered it is made clear to us that the physical evils brought so prominently forward by the medical evidence in the report of the Factory Commissioners in 1833-34 have ceased to exist. The breaking down of the health, the curved spine, the deformity of the extremities, are not now to be met with; but we are confronted by a new evil which has come upon us in the development of the factory system, which improved sanitary arrangements of dwellings, better water-supply, purer air, and more satisfactory drainage, are not sufficient to eradicate." This, he asserts, is the increased and increasing employment of women in factories, and he shows that in some branches of industry the number of women employed has quadrupled since 1835. The evil consequences to child-life and infant development of the mothers working in factories are now generally acknowledged. It is also admitted that these evils cannot be expected to subside of themselves as long as the demand for female labour is so great. The abstention from factory labour of women for a month or six weeks would to a small extent, says Mr. Redgrave, mitigate the evil as regards their immediate restoration to health, but it would not touch the evils of the loss to the infant of its natural food and of maternal care and love, while abandoned to the indifference of a sordid nurse and the baneful influence of a soothing cordial. In this matter legislation is sorely needed with a view to secure the health of the mother, and well-being and physical development of the infant during the first few months of its existence, and thus to some extent promote the health and happiness of our factory operatives.

DISTRIBUTION OF PRIZES AT THE LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

THE distribution of prizes to the successful students of the Liverpool Royal Infirmary School of Medicine took place on the 2nd inst. in the large theatre of the Liverpool Institute. For the past few years the largest of the lecture-theatres at the School itself has been so inconveniently crowded by, and, indeed, so inadequate to accommodate, the constantly increasing numbers who took an interest in the proceedings, that the Council has been compelled to have the proceedings carried out elsewhere. Last year the large theatre of the Medical Institution was chosen, but even this proving scarcely spacious enough, the use of one of the largest in the town was obtained, and the numbers who attended fully justified the wisdom of the change. Professor Humphry, F.R.S., presided, and, at the conclusion of the usual introductory address, which was

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delivered by Dr. Dickinson, himself gave an address to the students, full of wise and weighty words, preparatory to handing the prizes to the successful competitors for them. The following is a list of these:—*Winter Session.*—Exhibitioners: Messrs. H. Gorst, G. H. Jackson, S. F. Bigger, W. G. Miskelly. Third Year Subjects (Medicine, Surgery, and Pathology): Mr. John Twinem, Silver Medal; Mr. W. H. Wright, Bronze Medal. Second Year Subjects (Advanced Anatomy and Physiology): Mr. J. Wiglesworth, Torr Gold Medal; Mr. W. Gillibrand, Bronze Medal; Mr. R. H. Jones, First Honorary Certificate; Mr. D. Harrison, Second Honorary Certificate. First Year Subjects (Elementary Anatomy and Physiology, and Chemistry): Mr. T. W. O. Pughe, Bligh Gold Medal; Mr. T. M. Porter, Bronze Medal; Mr. C. E. Steele, First Honorary Certificate; Mr. W. O. Beckitt, Second Honorary Certificate. *Summer Session.*—Second Year Subjects (Obstetric Medicine, Medical Jurisprudence and Toxicology): Mr. W. B. Hadden, Honorary Certificate. First Year Subjects (Botany, Materia Medica, and Practical Chemistry): Mr. R. Bredin, Silver Medal; Mr. Chas. E. Steele, Bronze Medal. Comparative Anatomy and Zoology: Mr. R. Bredin, Prize; Mr. T. W. O. Pughe, Honorary Certificate; Mr. A. Meeson, Honorary Certificate; Mr. A. C. Rich, Honorary Certificate. Students' Debating Society's Prize, Mr. W. B. Hadden. In the evening the usual annual dinner was held at the Adelphi Hotel under the presidency of Mr. Reginald Harrison, Surgeon to the Royal Infirmary, and Chairman of the Council of the School; between seventy and eighty members of the profession and students attended.

DEATH FROM CHLOROFORM.

ANOTHER unfortunate death is reported as having resulted from the administration of chloroform. Apart from the question of anæsthetics, there are one or two points about the case deserving of notice. It appears from the reports which have been published in the daily papers that on the 28th ult. the deceased, who resided at Pimlico, applied at St. George's Hospital to have an injury to the arm attended to. Here the surgeon on duty did what he thought was necessary in the case, but as the arm was no better on the following day, the wife of deceased took him to St. Thomas's Hospital, where he was told that the arm was dislocated, and that he must take chloroform in order that it might be reduced. According to the wife's statement, this was done, and shortly afterwards she and her husband left the Hospital. On the way home, deceased said the arm was no better, and, as the pain increased in intensity, Mr. McHardy, Medical Officer to the Royal Pimlico Dispensary, and Dr. Jones, of Beaufort-gardens (by the way, if we mistake not, the latter is a homœopathic practitioner), were called in, who said that the arm was dislocated at the shoulder, and suggested that it should be reduced under chloroform. Deceased consented, and chloroform was administered, but before the completion of the operation the pulse and respiration ceased, and all attempts to restore animation proved fruitless. An inquest has been held, and a verdict returned exonerating Mr. McHardy and Dr. Jones from blame. This is satisfactory as far as it goes, but we should like to know how it was that after the deceased had applied at two of our large hospitals it was found necessary to call in the aid of two private practitioners.

"THE BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW."

WE would direct attention to an unusually able and excellent number of this old-standing periodical. The articles are very varied, but they are all very good. One, on the teaching of histology, is able beyond ordinary, and shows a skilled teacher. In the latter part there are unfortunately a good many press errors, which a little more care and time in revising proof-sheets would have obviated.

LEEDS MEDICAL SCHOOL DINNER.

AFTER the delivery of the Introductory Address by Mr. Jessop (an abstract of which appears in another column), the lecturers at the Medical School and their friends, including most of the leading medical men in Leeds and several gentlemen of the town and neighbourhood, dined together at the Great Northern Station Hotel. The usual loyal and patriotic toasts having been drunk and duly responded to, Dr. Chadwick proposed the toast of the evening, "Success to the Leeds School of Medicine." Dr. Heaton, the Dean, responded, and in the course of his remarks stated that he had that day entered thirteen new students, and he was not aware that in any previous year a larger number had joined the School on the first day of the session. To show the progress the School was making, he mentioned that in 1863 he entered in all seventeen students, and in 1873 no fewer than thirty. The teachers never were so numerous, and amongst them he was happy to say they could include the able Professor of Chemistry in the Yorkshire College of Science. Several others toasts followed, including, of course, the health of the President, by Mr. Jessop.

ABORTION-MONGERING.

A SHEFFIELD herbalist has been apprehended on a charge of procuring abortion on a widow. The stipendiary magistrate has attended the bedside of the woman, and taken what may prove to be her dying depositions. This description of crime is, we fear, on the increase among certain classes in England, which is perhaps scarcely to be wondered at when we consider the character of the advertisements that appear in many newspapers. In a high-class journal devoted to subjects connected with sanitary science, an advertisement addressed "To Ladies" recently appeared, directing attention to the virtues of a certain nostrum called "Bannen's Patent Female Pill—the Woman's Friend!" Why the woman's friend? Are these pills similar to some which we have seen advertised in American journals, which "must not be taken by ladies in an interesting condition, as they are certain to cause abortion"?

"THE JOURNAL OF ANATOMY AND PHYSIOLOGY."

WITH the present number this Journal enters on a quarterly appearance. The conductors are Professor Humphry, Professor Turner, Dr. Michael Foster, and Professor Rutherford. The work is good. There are two papers on Cartilage, by Dr. A. Ogston and Mr. Baber. A very good article on the Condition of the Bloodvessels in the Early Stages of Inflammation, by Dr. Francis Darwin. A very valuable paper by Professor Turner on the Structure of different kinds of Placenta. Somewhat allied to this is another on the Urino-Genital Organs of Vertebrates, by Mr. F. M. Balfour. Dr. Rutherford sharply and well defends his Freezing Microtome against the insidious attacks of Mr. Lawson Tait. There are also certain notes on the Brain and Nerves of the Echinorhinus, notes on Cells of the Cornea, and the Action of Jaborandi on the Heart. Dr. Stirling gives a new method of preparing skin for microscopic examination, and, what is more important, a most valuable report on the advance of physiology.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THE annual meeting of this Society was held in the library of the Newcastle-on-Tyne Infirmary on September 30. The report of the committee shows that the Society is in a flourishing condition. The number of members is 141. The work done during the session 1874-75 compares favourably with that of previous years. The following is a list of officers for the year 1875-76:—*President:* Mr. S. W. Broadbent. *Vice-President:* Dr. Arnison, Dr. Denham, Dr. Page, and Dr. Philipson. *Secretary:* Dr. Byrom Bramwell. *Committee:* Mr. H. E. Armstrong, Dr. L. Armstrong, Dr. G. T. Beatson, Dr. Burnup, Mr. Carr, Dr. Frain, Mr. G. B. Morgan, Mr. J. Hawthorn, Mr. Russell.

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ISLINGTON AND THE ARTISANS' DWELLINGS ACT.

On Monday, Dr. Tidy, Medical Officer of Health for the parish of Islington, submitted to the Sanitary Committee of the parish vestry a list of places in his district to which the Artisans' Dwellings Improvement Act may be beneficially applied. There is no doubt that the Vestry will adopt some of the suggestions of Dr. Tidy, and immediately put the Act in force in those parts of the parish where healthful dwellings are most urgently needed.

UNIVERSITY OF CAMBRIDGE.

Professor Humphry gives notice that his course of lectures on Practical Anatomy will commence on Monday, October 11, and be continued daily till October 19; after which they will be continued on Mondays, Wednesdays, and Fridays. The course on Anatomy and Physiology will commence on Thursday, October 21, at 1 p.m., and be continued on Tuesdays, Thursdays, and Saturdays. This course is intended for students of natural science, as well as for medical students.

WORCESTER INFIRMARY.

We learn by the local papers that, at a meeting to elect a Physician to the Worcester Infirmary, a Dr. Hunt, from Birmingham, had applied, but had withdrawn his application. It is to be hoped that no one will consent to fill this office until the obnoxious rules are amended. The spirit of opposition shown by the governors to the proposed alterations does not indicate the likelihood of much peace or independence under their sway.

SOCIAL SCIENCE ASSOCIATION.

The nineteenth annual Congress of the above Association is now being held at Brighton. Lord Aberdare gave the inaugural address on Wednesday in the Dome. We publish next week a full report, from our Special Correspondent, of the Health Department and Sanitary Exhibition.

THE DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.

The annual distribution of prizes to the students at the Dental Hospital of London took place at Willis's Rooms on Monday last; Sir James Paget, F.R.S., President of the Royal College of Surgeons, in the chair. It had originally been intended to hold the meeting at the Hospital, in Leicester-square, but the number of acceptances to the invitations issued by the medical officers was so large, that the Dean of the School, knowing that all could not have been accommodated in the largest room of the Hospital, very prudently changed the place of meeting to Willis's Rooms. Precisely at the hour appointed, the President commenced the business of the meeting by calling on the Dean to read the report for the past year. In his report the Dean alluded to the great and increased prosperity which had attended the London School of Dental Surgery since the removal of the Hospital from Soho to Leicester-square. The number of students had largely increased, and they had been successful in passing nearly all the candidates they had sent to the College of Surgeons for the Licentiateship in Dental Surgery. At the conclusion of the reading of the report, the Dean introduced the successful competitors for the prizes offered by him for the best reports of cases of treatment of the exposed dental pulp. The prizemen in this section were Messrs. Whatford, Tod, and Harding, and their prizes were delivered to them by Mr. Luther Holden, who addressed a few appropriate remarks to each. In the Metallurgy Class Mr. F. J. Bennett was the only prizeman; and in this case the presentation was made by Sir Benjamin Brodie, F.R.S., who seized the opportunity to impress on his hearers the importance of studying other branches of chemistry in association with that of metallurgy, and suggested the possibility of chemistry affording the means of preventing caries of the teeth. The prizemen in Mr. Turner's class on Dental Mechanics were Mr. Mason, first; Mr. Whatford, second; and Mr. Pearman, third. In Mr. C. S. Tomes's class on Dental Anatomy and Physiology, the prizemen were Messrs. Mason, Whatford, and W. H. Fox. These gentlemen received their prizes from Dr. Carpenter, F.R.S., who, after congratulating them on their success, alluded to the great impetus that had been given to the study of the histology of the teeth since the discovery of the achromatic microscope. The remaining prizemen were those who distinguished themselves in Mr. S. H. Cartwright's class of Dental Surgery and Pathology, viz.:—Mr. Mason, first; Mr. W. C. S. Bennett, second; Mr. Whatford, and Mr. W. H. Fox. The prizes were presented to these gentlemen by Mr. Cartwright, senior; after which Sir James Paget delivered a brief but forcible address to the students, in which, having congratulated those who had been successful in winning prizes, he urged them all to prepare themselves for the examinations they would each have to undergo after their student-days were over, so that they might secure for themselves the prize we all so much covet—viz., success in life. By success in life he did not mean the acquisition of money. The amount of yearly income of a professional man gave a very inadequate and often erroneous notion as to a man's success. There were fair and unfair ways of making money, and many, he feared, were unscrupulous as to how they made money. Against practices of an unscrupulous nature he urged his hearers to be on their guard, and to avoid all unfair means of getting fees. The temptation to do so, he knew, was very great, for the careers of some, apparently highly successful men, showed that the public often thought more of the low, unscrupulous, advertising man than they did of one who endeavoured faithfully, and without parade, to discharge his duty towards them. There were better rewards than money to be gained in the medical and dental professions—such as a high reputation for scientific attainments, high social position, the respect of one's colleagues, and lastly, the consciousness of having faithfully discharged one's duty. The President was much applauded during the delivery of his address, and at its conclusion a vote of thanks was carried unanimously. The medical officers of the Dental Hospital are to be congratulated on the great success of the meeting. It is seldom that we see such a large and fashionable audience at a medical meeting as that which crowded the Large Hall at Willis's on Monday afternoon.

FROM ABROAD.

Dr. Vacher on the Epidemic Variola of 1870-71.

As the small-pox, which prevailed epidemically throughout Europe from 1869 to 1873, has almost entirely disappeared from the Continent, only showing itself by some isolated cases, Dr. Vacher (*Gazette Méd.*, September 18) considers it an opportune time to reckon up the losses it has occasioned, and to draw the practical conclusions the examination may teach us. For some time past the Académie de Médecine and the French medical societies have been urging the importance of revaccination, but vaccination itself has been too much kept out of view—for it seems incredible that, seventy-five years after Jenner's discovery, one-third of the population of France is still deprived of the benefit of vaccination, and that there are some departments, as Aveyron and Corsica, in which scarcely 20 per cent. of the inhabitants are thus protected. It is this circumstance which aggravates the mortality of variola, and renders epidemics so dangerous, even for those who have been vaccinated. It is not only ignorance and negligence that are the causes of this state of things, but there are unreasoning opposition and prejudices against vaccination, maintained even by persons who belong to the educated classes. Persons of this description point to the late epidemic, which, according to their figures, has in France carried off 200,000 victims, and ask what confidence can henceforth be placed in the efficacy of vaccination, which has evidently become diminished in power, if not radically powerless.

The object of this paper is to show the erroneousness of these ideas, and for this purpose a most important document

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published by the Swedish Government may be cited. It furnishes an account of the number of deaths from small-pox that have taken place in Sweden during a century, arranged in decennial periods. These we have not space for, but it will suffice to state that the mortality from small-pox fell from 44,184 for the period 1792-1801, to 14,898 for the period 1802-1811, vaccination having been introduced in 1801. In the period 1852-61 it fell as low as 4175, and, even during the general European recrudescence of the disease, only rose during the period 1862-71 to 8999. The value of these numbers is, however, best brought out by comparing them with those of the population. In 1760 Sweden had 1,981,000 inhabitants, and in the period of 1762-71 there was one death from variola per annum in every 364 inhabitants, and the deaths caused by this disease constituted twelve-hundredths of the total of deaths. At the present time, with a population of more than 4,000,000, there is but one death for 4650 inhabitants, and small-pox only constitutes one-hundredth of the total of deaths. The Swedish Government contributes liberally to the expenses of vaccination, and M. Vacher contrasts it favourably in this respect with that of France. In the latter country, too, the *conseils* of the departments are often most niggardly in their contributions, and the disease is found to be most prevalent in the localities where such parsimony exists.

Recurring to the epidemic in France, this is known to have shown itself at some points early in 1870, and it became generalised as a consequence of the war of that year, the defeated troops spreading it in every direction. The concentration of troops, also, in various places, furnished new aliment to the epidemic. On their arrival at Paris in September, 1870, it took on most disastrous proportions, the deaths becoming suddenly increased in October from 600 to 1500; and during the four months of investment they amounted to 6405,—being double of those which were caused by the arms of the investing army. The armistice at last put an end to an epidemic which, in fifteen months, had killed 13,093 persons. Although the troops spread the disease in every direction, it is to be observed that it only committed great devastation where the inhabitants had been badly vaccinated. Thus, at Albi, where vaccination and revaccination had been carefully executed in 1869 and 1870, there were only 114 deaths in a population of 25,059; while at Monterat, where vaccination had been grossly neglected, there were 180 deaths and 50 disfigurations among 2384 inhabitants.

As to the pretended immunity of young children, and the prevalent popular prejudice against their being vaccinated too young, it is to be observed that of 10,331 deaths from small-pox at Paris, 213 took place during the first month, 151 between one and two months, 107 between two and three, 200 from three to six, 397 from six to twelve,—being a total of 1153 less than one year of age: a large proportion, when it is remembered that the numbers of infants of that age at Paris does not exceed 20,000.

The French epidemic spread to adjoining countries in consequence of the events of the war. Thus, after Sedan, it became general in Belgium, producing 21,315 deaths, and the same thing occurred in Switzerland, although no exact figures have been yet published. The disease also broke out in the Prussian fortresses very soon after the arrival of the first French prisoners, and its propagation was greatly favoured by the careless way in which prisoners suffering from the disease were exposed and transported. From early in 1871, in consequence of the distribution of detachments of French prisoners over the whole of Prussia, the disease prevailed in every province, and Dr. Guttstadt states that in 1871 there occurred 59,838 deaths from this cause—1216 of these occurring among the French prisoners. In Berlin there were carried off 5084 persons, 1322 being infants of less than a year old. Dr. Guttstadt states the number of persons who had been revaccinated as 270,000, and of these 1036 took small-pox, only 162 dying. Italy, which was at first free from the disease, was invaded by the epidemic on the return of the Garibaldians, who, in the Côte-d'Or, had suffered as much from small-pox as from the arms of the enemy. The Italian Government has not as yet published its report on the epidemic of 1871-72, but a memoir by Prof. Toscani, on the disease as it prevailed in Rome, is of interest. There were 3149 cases, with 1219 deaths. Here, as in Paris and Berlin, the infants were the chief sufferers; 74 per cent. dying of those aged less than forty days, and 55 per cent. between forty days and one year. Of 521 persons who had been vaccinated, there were but 72 deaths, or 13½ per cent.; while of 2289 non-vaccinated there died 1065, or 46½ per cent. M. Toscani believes that many of the vaccinations had been most imperfectly performed. Among the 3149 cases there were twenty-three persons who already had had the small-pox, and six of these had been vaccinated before their first attack. One very remarkable case was that of a woman fifty-five years of age, who had been vaccinated and revaccinated in France before contracting her first small-pox, and then succumbed to the hæmorrhagic form of the disease which she took at Rome. There were 57 examples of this hæmorrhagic form of the disease, with 50 deaths, *i.e.*, 88 per cent. The disease was confluent in 1747 cases, with 919 deaths, or 54 per cent.; and discrete or varioloidal in 433 cases, with 217 deaths, or 16 per cent.

After adverting to the successful operation of the Scotch Vaccination Act, M. Vacher arrives at the final conclusion that the discovery of Jenner will never render the services it is capable of until vaccination be rendered obligatory in all countries.

The Bromhydrate of Quinine.

Terminating his account of the Therapeutical Employment of Bromhydrate of Quinine (*Journal de Thérapeutique*, September 10), Prof. Gubler arrives at the following conclusions:—1. The bromhydrate corresponding to the sulphate of the same base is more soluble and more rich in alkaloid than the latter. 2. It possesses the physiological properties of the salts of quinine in general, and probably also the therapeutical virtues of its officinal congener. 3. Still, the action of the bromhydrate seems to differ from that of the sulphate of quinine, not only by the moderation of the symptoms of quinic intoxication (*ivresse*), but also by a marked tendency towards nervous sedation and hypnotism. 4. The qualities it thus possesses especially indicate its use in the treatment of the congestive and febrile affections of the nervous system—neuralgia-neuritis, irritative neuroses, encephalic hyperæmia, etc.,—in combating which it has already furnished me with excellent results. 5. The bromide has manifested remarkable power in a case of incoercible vomiting, and has frequently been of service in cases ordinarily amenable to the sulphate, as in visceral or articular fluxions, whether diathesic or not, rheumatismal or gouty, and in symptomatic fevers, *à frigore*, etc. 6. This new medicine has been given in quantities of from six to fifteen grains per diem, in doses of three grains, administered sometimes in the form of pill, and at others of hypodermic injection. 7. Injected into the cellular tissue it has always proved absolutely inoffensive. In no case has the hypodermic injection of three grains of the bromhydrate (equivalent to about four and a half of the sulphate) been followed by the slightest inflammatory accident, neither redness nor tumefaction being visible next day around the seat of puncture. 8. This complete innocuity, joined to its greater solubility, constitute an incontestable superiority of this new combination of quinine, and recommend it wherever there is indication or necessity of administering quinine hypodermically.

Urethral Neuropathy.

Under this designation, Dr. Bron (*Lyon Médical*, September 5) describes one of the occasional consequences of gonorrhœa. As a general rule, he observes, after the discharge has ceased the patient regards himself as cured; but this is not always the case. There may subsist or supervene a considerable amount of *malaise*, the patient complaining of lumbar lassitude, and a sense of heaviness in the hypogastric region. The urethra becomes the seat of various painful sensations, difficult of description. Sometimes they simulate the symptoms of stone or stricture, but are not of any fixed character, coming on and disappearing at intervals not to be foreseen, and resisting all remedies. The rectum may also be painfully affected, although no disease can be detected, and there is a sense of plenitude of the pelvis in general. These various symptoms, which are often conjoined with great disturbance of the digestive organs, are not all observed in the same individual, but are met with in different degrees in various patients—sometimes being only very transitory, but at others absolutely fixed, and the occasion of great physical and moral suffering.

The direct cause of this suffering is not always easily detected, for there may not be a single sign of the preceding blenorrhagia present, and it is chiefly the patient himself who insists upon this being the origin of what he suffers, and often regards it as a proof that his malady has been imperfectly cured. M. Bron considers the seat of this suffering to be those portions of the urethra which are narrower than

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the rest, and are consequently more sensitive to the passage of the urine. This sensibility becomes in these cases, after the subsidence of the acute symptoms, a true neurosis, which may long resist the remedies usually resorted to. He speaks unfavourably of mercury, bleeding, opiates, baths, blisters, etc., as either of no advantage at all or of only temporary utility, and strongly recommends the passage of the bougie. Any chronic inflammation that may remain, and the spasm it gives rise to, are by this effectually relieved. He passes very gently on alternate days a small soft bougie, which is progressively increased in size, and is left *in situ* for only one or two minutes. In a very short time the exaggerated sensibility of the urethra becomes modified, and the use of the instrument is repeated or not according to whether the symptoms recur.

REVIEWS.

On the Psoriasis or Lepra. By GEORGE GASKOIN, Surgeon to the British Hospital for Diseases of the Skin. London: J. and A. Churchill, New Burlington-street. 1875.

THE object of this meritorious work will be best explained in the words of the author himself in his prefatory remarks, to be "to give an account of psoriasis in all its various shades and divergences," and to pay special attention to the "mixed and intermediate forms." As far as the description of the manifold varieties of true psoriasis vulgaris is concerned, Mr. Gaskoin seems to us to have succeeded admirably; he has followed nature not only in his outlines, but, so to speak, in his lights and shades. On the other hand, when he deals with the localised forms of psoriasis (or what he calls psoriasis)—*e.g.*, as it affects the palms of the hands, the genitals, and the mucous membranes,—we think that he not only stultifies his definition of psoriasis at the beginning of the volume, but also applies the term to affections altogether independent of that disease, and of a syphilitic or eczematous nature. The same observation will apply to the cases of infantile psoriasis at pages 117-18, which Mr. Gaskoin says he has generally diagnosed as *non*-syphilitic. The great blemish of the book seems to us to be that the author is not definite enough in separating the manifestations of psoriasis from those of syphilis, or in expressing his views of the relation or non-relation between the two diseases. At one place he speaks of the effects of syphilis appearing to be inextricably mixed up with psoriasis vulgaris, without adducing facts or arguments for or against such a statement; and at another—in the chapter on Psoriasis Palmaria et plantaria—he goes so far as to imply that psoriasis vulgaris is not at all uncommon on the palms (contrary to the experience of most observers), and that the palmar affection is not nearly so often due to syphilis as is generally supposed. The question is—"Is not a dry, non-pruritic desquamative affection of the palm, preceded or accompanied either by epidermic thickening or loss of epidermis, and possibly by the formation of fissures, and limited to the palm, almost without exception of syphilitic origin?" Can Mr. Gaskoin answer "No"?

We have laid so much stress on this one point—the accurate separation of syphilitic skin diseases from psoriasis—because we find that not only most medical students, but also some practitioners, are apt to confuse them with one another. The question teachers are most often asked about a case of ordinary psoriasis is, "Is it specific?" It is all-important to make an accurate diagnosis between psoriasis vulgaris and the so-called syphilitic psoriasis, for the simple reason that the same treatment will not do indifferently for either. We are sorry that the author of so interesting a monograph, to which we naturally look for the most definite statements, should give so uncertain a sound in dealing with this part of his subject.

Mr. Gaskoin's chapter on the Pathology of Psoriasis is most sensible. His use of the term "asthma" may be somewhat vague, and the connexion of that symptom with psoriasis a less intimate one than he is inclined to believe; but having failed to discover any one definite cause for psoriasis, and having found that, as far as his experience goes, there is no foundation in fact for many of the statements made as to its etiology, he has the honesty to confess his ignorance rather than to strain after imaginary causes.

The chapter on treatment contains a very interesting historical digression on the rise of arsenic into use as a remedy for diseases of the skin; and later on Mr. Gaskoin reviews most of the drugs which have been proposed for psoriasis, but without showing much favour to any but the older remedies, arsenic and tar. He supplies a very copious selection of formulæ for ointments, baths, etc., at the end of the book.

We cannot end these remarks without noticing a certain quaintness about Mr. Gaskoin's style of writing, which is very pleasant, and reminds one somewhat of the older essayists. For the sake of it we can pardon a hazy sentence here and there. We hope that Mr. Gaskoin will continue his researches into the nature of psoriasis with as much zeal as he displays in the pages under review, and that at some future period he will be able to throw much additional light on that common but still enigmatical disease.

Lectures on Skin Diseases. By E. D. MAPOTHER, M.D. Second edition. Dublin: Fannin and Co. 1875.

As this little work has reached the second edition, it is evident that it meets a want which was not fully supplied. We are rather sorry, however, that Dr. Mapother has not revised the present issue a little more carefully, and that he should have allowed so much that is excellent and trustworthy to be marred by loose and incorrect statements such as we here meet with. Space will not permit of our considering more than a few of these statements, examples of which occur (at page 47) where the author denies that the secondary fever of small-pox is proportional to the extent of eruption, and (at page 44) where the contagion of erysipelas is emphatically denied. We are rather surprised to find (at page 108) the face spoken of as a frequent seat of psoriasis vulgaris, and (at page 110) that the action of mercury is so highly curative of the same disease that Dr. Mapother "has no need to try other remedies." We fancy that few observers this side of the Irish Channel would be likely to concur in the latter axiom. A remark of the author's (page 34), to the effect that "while ringworm of the body may die out spontaneously, that of the scalp never does," we would answer with a sentence from the work of that shrewd observer, Samuel Plumbe, which has all the greater weight from the fact that when it was written the fungus on which the ringworm depends had not yet been discovered. At page 121 of his "Practical Treatise on the Diseases of the Skin" (third edition, 1829), speaking of the ill success of the treatment of porrigo furfurans, he says, "It is a curious, though very consoling fact, however, that a *spontaneous* disappearance of the disease occurs in nineteen cases out of twenty before the age of puberty arrives."

Dr. Mapother seems to us to have made a mess of some parts of the lecture on Eczema; for instance, when he says (page 69) that the fluid exuded by a weeping eczema is *fibrinous* rather than albuminous, "because it stiffens linen when it dries." He might as well say that white of egg was fibrin for the same reason. It is also difficult to say why, after decrying Willan's classification of eczema as a vesicular disease (at page 69), because "eczema is very seldom vesicular," he should finish his description of that disease (page 80) with the remark that "it is not necessary for us to alter Willan's definition of eczema—'an eruption of small vesicles of various parts of the skin usually set close or crowded together.'" If a definition is incorrect we should have thought it would have been better to abandon it for a better one, especially in a manual intended for students. Dr. Mapother favours us with a long discussion as to the connexion between gout and eczema, but we are sorry to be unable to believe as implicitly as he does that gout and eczema are brother and sister. Dr. Mapother has some curious ideas, too, about the internal treatment of eczema, and avoids the use of arsenic and other "alterative" drugs for the curious reason that "we do not understand their action"! (page 85). We might as well give up physic altogether if we adopted Dr. Mapother's line of argument, but we almost doubt whether he means it seriously.

We have a word, too, to say about the plates with which the book is illustrated. The first one (page 20), which represents the cuniculus of the *Acarus scabiei*, is a garbled figure, which is really taken from Neumann's work, but which is here stated to be after "Milbengang," which word, we suppose, Dr. Mapother believes to be the artist's name, whereas it is only the German expression for the burrow of the acarus! We may here remark *en passant* that the author's classical knowledge seems to be on a par with his acquaintance with German; in speaking of chilblains (page 65) he ascribes the term "pernio" to Hippocrates, whereas if Liddell and Scott's Lexicon may be trusted, it appears to have been unknown to the Greeks,

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while it occurs in the writings of Pliny. To return to the engravings—the origin of the plate at page 130, representing the section of a corn, is not acknowledged as it should be, but it is really borrowed with trifling alterations from Rindfleisch's "Pathology," to which the plate at page 193 (a section of lupus) also belongs. We are sorry that Dr. Mapother has borrowed this particular plate, for, apart from the fact that Rindfleisch's view that lupus is an adenoma of the sebaceous and sweat-glands is opposed to that of the most recent observers—for example, Volkmann and Friedländer,—it is about the worst (especially in its reduced form) of a number of indifferent woodcuts which occur in Rindfleisch's book. We have not room for the discussion of a number of other points which are open to objection, but they are happily in many cases not of a character likely to mislead. We are sorry if we have been obliged to criticise the work somewhat harshly, but we should be failing in our duty if we did not direct attention to errors. The good parts of the book, however, we are happy to say, far outbalance the bad. There is much life about the description of the different diseases, and those who like to acquire their knowledge in a free and easy and not very systematic manner, may gain a great deal of useful information from Dr. Mapother's lectures.

Hebra on Diseases of the Skin. Vol. IV. Translated and edited for the Sydenham Society by Waren Tay, F.R.C.S., Assistant-Surgeon to the London Hospital, etc. London. 1875.

This volume, which is somewhat smaller than the three preceding it, completes the translation of Hebra's work as far as it has yet been issued in German. The remaining portion, which will, we believe, be chiefly devoted to the parasitic diseases of the skin, has not as yet made its appearance, although nearly three years have elapsed since the previous "*Lieferung*" was published. The part now before us treats of the new growths which attack the skin. The first chapter contains a description of the disease to which Hebra, who first described it, has given the name of "rhino-scleroma"—a rare affection which has not as yet been recognised in this country. The mucous membrane of the nose becomes the seat of a neoplasm of sarcomatous character, which developes in the form of tubercles of extraordinary hardness, and these obstruct the nares, and may interfere with respiration. Their course is slow, and it is unaffected by any but local treatment. The disease has no relation to syphilis.

The chapters on Lupus Erythematosus and Lupus Vulgaris are excellent, and enter into their description, pathology, and treatment more completely than has been attempted in any former work. The English edition might, however, have been enriched with some account of the recent researches of Friedländer into the histology of lupus, and a *résumé* of Mr. Hutchinson's views with regard to lupus and its treatment would have been very acceptable. The various forms of carcinoma and sarcoma cutis are carefully described, but we are rather surprised that the chief reference to that curious disease, which Alibert named "mycosis fungoide," should be found in a note by the translator.

The work of translating and editing has, as in the previous volumes, been excellently performed by Mr. Tay; the only fault we have to find with his performance is that he has been a trifle too modest, and drawn too little on his own experience, and on his acquaintance with the practice of English dermatologists, to furnish comments on several points which would have been elucidated by a footnote.

Professor Johann Christian Jüngken. — This celebrated man, the father of the Berlin Medical Faculty, died on September 8, at Hanover, while on his return from Pyrmont. He was born in 1793, and, having received his doctor's degree in 1817, commenced his distinguished career as a teacher as soon as 1818. He quickly acquired great renown as an oculist and as an operating surgeon, holding the ophthalmologic clinic for forty years, and the surgical for thirty years, and resigning both in 1868, the year of his jubilee. It was to him that was chiefly owing in Germany the commencement of the scientific culture of ophthalmology, raising it from the condition of mere empiricism to its proper position in the circle of medical science. The large number of students who were attracted by his operative skill were assiduously instructed in the spirit of true science.

MEDICAL NEWS.

Apothecaries' Hall. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, September 30 :—

Harvey, Thomas Prickard, Pryland-road, Newington-green-road, N.
Kellard, James Thomas William Stentsford, Trafalgar-place, Stoke, Devonport.

The following gentlemen also on the same day passed their primary professional examination :—

Anderson, Alexander, St. Bartholomew's Hospital.
Betty, Samuel George, University College.
Hopkins, John, University College.
Harvey, Henry Frederick, University College.
Brown, Francis Wheeler, London Hospital.
McGachen, Frederick William Dobson, London Hospital.

At the Preliminary Examination in Arts held at the Hall of the Society on September 24 and 25, 145 candidates presented themselves, of whom 32 were rejected, and the following 113 passed, and received certificates of proficiency in general education, viz. :—

In the first class, in order of merit :—

First: F. S. Pridden. Second: C. Ellaby. Third: A. V. Bernays, F. C. B. Butler, J. F. Easmon, S. de Cardonnell Elmsall, P. Garrard, C. J. Harper, W. L. Pruen, F. C. Selous, C. L. Stow, E. G. Williams, and G. J. Wilson.

In the second class, in alphabetical order :—

C. D. Adam, J. B. Adams, R. A. Bazire, D. Bennett, E. J. Biden, R. A. Billiald, A. Bosanquet, H. Bourcheier, J. L. Bousignac, P. Brown, C. G. Bunn, H. P. Butler, S. Butterworth, J. F. Caddy, J. A. Caldwell, G. H. Capes, H. W. Carr, W. J. Clarke, E. S. Cockell, W. S. C. Collins, C. A. R. A. Colmer, E. R. Cree, W. H. Crosse, H. W. T. Crow, B. H. Dale, E. Davies, J. D. Davies, W. J. S. Davis, P. H. Day, B. J. Dorrian, J. M. Douglas, J. B. Dreaper, H. W. Edis, F. W. Elliott, C. Evans, E. Farmer, S. Farmer, W. A. Fenton, J. W. Field, H. E. B. Flanagan, C. L. Gill, G. T. Girdler, P. Hall, J. Hammond, E. Hazel, N. Hildyard, F. Hitch, W. Holt, A. R. Jacobs, F. Jones, G. M. Jones, R. B. Knowles, T. L. Laxton, F. R. Le Cocq, A. Lee, J. J. Lewis, R. Lewis, J. P. Little, E. H. Locker, L. Mark, L. Matheson, G. McKee, E. J. Moberly, Peter Monti, H. Parsons, W. H. C. Payne, J. H. Powell, Z. Prentice, F. W. Prideaux, J. D. Priest, T. Rhodes, J. T. Richards, J. M. Rogers, C. Rowley, R. F. Shaw, W. E. Sicard, G. E. Skinner, A. Slate, W. Slater, S. Smyth, A. Sharland, W. C. Steele, H. H. Sturge, C. A. A. Taylor, A. B. Thorald, F. F. Thorne, A. W. Veness, A. J. Verrall, J. E. Viney, J. Waldron, A. Ward, G. B. Waterhouse, F. S. Watson, J. G. Webb, W. S. Webb, J. Whitehouse, R. J. P. Wilson, O. Withers, and F. Woore.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Cassan, Theodore, L.R.C.P. Edin., M.R.C.S., L.S.A.—House-Surgeon to the Royal South Hants Infirmary.

Pink, Thomas, M.R.C.S. Eng., L.S.A.—Resident Surgeon to the Royal Sea-Bathing Infirmary, *vice* Mr. Richmond, resigned.

Renny, A. W., M.B., C.M. Edin.—Resident Medical Officer to the Royal Stirling Infirmary, *vice* Dr. Purves, resigned.

BIRTHS.

O'Flaherty.—On September 22, at Ardagh House, Killarney, the wife of T. A. O'Flaherty, M.D., M.R.C.S. Eng. (formerly of London), of a son.

Lidbetter.—On September 26, at Quadrant Villa, 257, Essex-road, Canonbury, the wife of T. G. Lidbetter, M.R.C.S., of a daughter.

Sheldon.—On October 3, at 123, Cornwall-road, Notting-hill, W., the wife of Thomas Sheldon, M.D., of a son.

Whitehead.—On September 27, at St. Andrew's Villa, Ventnor, the wife of John L. Whitehead, M.D., of a daughter.

MARRIAGES.

Barnett—Boyd.—On September 28, at Emmanuel Church, Clifton, Bristol, John Milford Barnett, M.D., Surgeon H.M. Indian Army, of Croft House, Holywood, co. Down, to Selina Isabella, only daughter of Major-General Brooke Boyd, H.M. Indian Army, of Clifton.

Bladon—Atkin.—On October 5, at St. Saviour's, Clapham-common, Charles Edward Bladon to Amelia Kate, eldest daughter of the late W. N. Aitken, L.R.C.S. Edin., of Laggan-park, Dumfriesshire.

Clifton—Begbie.—On October 5, at Christ Church, Kidbrook, Kent, Robert Walter Clifton, Surgeon-Major 33rd (Duke of Wellington's) Regiment, to Mary Louisa Caroline, eldest daughter of T. Stirling Begbie, Esq., of Blackheath.

Davey—Vincent.—On October 5, at the Roman Catholic Church, Spanish-place, Robert R. F. Davey, of the War Office, to Mary Elizabeth Payne, younger daughter of J. Vincent, M.D., East Dereham.

Johnson—Bradshaw.—On September 30, at the parish church, Twickenham, George Money Johnson, Esq., solicitor, to Georgiana Elizabeth, second daughter of the late Henry Bradshaw, M.R.C.S.

Robson—Crothers.—On October 1, at the parish church, St. Leonards-on-Sea, Henry Robson, youngest son of the late Rev. John Robson, D.D., of Glasgow, to Jane Gray, eldest daughter of R. Crothers, M.D., of 2, Warrior-terrace, St. Leonard's-on-Sea.

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TIDY—DOBELL.—On October 5, at St. Augustine's Church, South Kensington, Charles Meymott Tidy, M.B., Joint Lecturer on Chemistry and Professor of Medical Jurisprudence at the London Hospital, to Violet Fordham, second daughter of Horace Dobell, M.D., of 84, Harley-street, Cavendish-square.

DEATHS.

BARNETT, ELIZA, widow of the late Henry Barnett, M.R.C.S., at 13, Montpelier-row, Blackheath, on October 5, in her 73rd year.

BENNET, WILLIAM FORD, M.R.C.S., eldest son of W. F. Bennett, Esq., Devonshire-buildings, Bath, on October 2.

BUSCK, JOHN STRUDWICKE, M.D., F.R.C.S., late of Woodford, at Norwood, on September 29, aged 59.

DALDY, MARY ANN, wife of Thomas M. Daldy, M.D., of 41, Finsbury-square, at Brighton, suddenly, on October 4, in her 62nd year.

DICKSON, BERYL LINDSAY, youngest child of Lindsay Frederick Dickson, M.D., Surgeon-Major Bengal Army.

DICKSON, JOSEPH, second son of the late W. F. D. Dickson, M.R.C.S., of Fountain-street, Ulverston, on September 27, aged 29.

FOWLER, WILLIAM, L.R.C.P., second son of the late George Fowler, M.R.C.S., of Newington-terrace, Kennington-park, Surrey, on September 30.

FURNIVALL, EDWARD THOMAS, M.R.C.S., at Egham, Surrey, on October 2, in his 42nd year.

MURRAY, CHARLES, M.R.C.S., at his residence, Waterloo Bank, Oldham, on September 29, in the 41st year of his age.

PART, JAMES, M.D., F.R.C.S., at his residence, 89, Camden-road, N.W., on October 1, aged 66.

ROE, MARIAN, widow of Edward Roe, surgeon, late of Canonbury, N., and elder daughter of John Prince, surgeon, at Tunbridge Wells, on October 2, aged 77.

SMITH, FREDERICK MUCHALL, infant son of Frederick A. A. Smith, M.D., at Mere, Wilts, on September 24.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOARD OF WORKS, SAINT GILES DISTRICT.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials (limited to three), to the Clerk to the Board, 199, High Holborn, not later than October 23.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Applications, with testimonials, to the Clerk of the Union, before November 6.

DONCASTER INFIRMARY.—House-Surgeon. Applications, with testimonials, to the Honorary Secretary, Doncaster, on or before October 10.

DORSET COUNTY HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman, on or before October 20.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—Assistant-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Medical Staff, Children's Dispensary, Gartside-street, Manchester, on or before October 27.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

RICHMOND INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, at the Infirmary, Richmond, Surrey, on or before October 25.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, Ece Villa, Tiverton.

UNIVERSITY COLLEGE HOSPITAL, LONDON.—Surgical Registrar. Applications, with testimonials, to the Secretary of the Council of University College, on or before October 19.

WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to Mr. A. P. Watkins, 50, Foregate-street, Worcester, on or before October 23.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

VACANCY.

Aston Union.—The Sutton Coldfield District is vacant; area 14,260; population 6127; salary £42 per annum.

APPOINTMENTS.

Hertford Union.—Thos. Odell, M.R.C.S. Eng., L.S.A., to the Third District.

Leighton Buzzard Union.—Charles C. Hicks, M.D. St. And., M.R.C.S., L.S.A., to the Upper District.

Marlborough Union.—Cyrus James, M.R.C.S. Eng., L.S.A. Lond., to the Second District.

BEQUESTS TO LIVERPOOL MEDICAL CHARITIES.—The late Mr. James Tyrer, of Bournemouth, and formerly of Liverpool, has left the sum of £10,000 to be equally divided among a number of charitable societies and institutions, among them being the following Liverpool medical charities, viz.:—The Royal Infirmary, the Dispensaries, the Northern Hospital, the Southern and Toxteth Hospital, and the Hospital for the reception of persons suffering from Infectious and Contagious Diseases. Mr. James Houghton, who was for many years Treasurer of the Royal Southern Hospital, Liverpool, has bequeathed £5000 to that institution.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

*** A circular, relating to some lectures to be delivered at the Homœopathic Hospital, has reached us; it concludes thus—"Further announcements will be made in the medical journals—excepting only the *Lancet*, *British Medical Journal*, and *Medical Times and Gazette*." The joke is good. These being taken away, what is left?

F. E. H J.—They are usually considered objectionable on the ground of experience.

C. R. Francis, M.B.—No address was given; the paper has now been for some time in type.

A., Northamptonshire.—Dr. Warneford, in 1851, founded eight new scholarships of £25 per annum each, for medical students at King's College, London.

Owen K.—Dr. David M. Moir, of Musselburgh, contributed a series of poems during a period of more than thirty years to *Blackwood's Magazine*, under the signature of "Delta." He died at Dumfries, July 6, 1851.

J. Clough T.—Dr. Edward Johnstone, of Edgbaston Hall, near Birmingham, presided at the first meeting, in 1840, to found the Queen's Hospital, Birmingham. He accepted the office of Honorary Physician, which he continued to hold until the time of his death in 1851, and on the incorporation of Queen's College he was appointed the first principal.

Statistician.—The parliamentary returns recently published show that in England and Wales there were 6379 factories, in which 783,022 persons were employed; in Scotland 680, and 154,919 persons employed; and in Ireland 235, where 67,744 persons were employed.

Eustace.—The late Dr. James Mackness, of Hastings, was nominated with other members of the profession, at the meeting of the Provincial Medical Association at Worcester, in August, 1849, to prepare a code of medical ethics. In the following year he was selected to write a monograph of the Medical Topography and Geology of Sussex.

Secundus.—The foundation-stone of the Portsmouth, Portsea, and Gosport Hospital was laid by Prince Albert on September 27, 1847.

Claude.—Dr. Richard Pinckard was elected Physician to the Bloomsbury Dispensary in 1835.

Wykin.—Consult Mr. Watson's "Medico-Legal Treatise on Homicide."

J. J.—Sir Richard Dobson, M.D., continued as Chief Medical Officer and Surgeon of Greenwich Hospital until June, 1844, when he retired on full pay. He died September 1, 1847.

Sydney L.—The late Mr. John Morgan, of Tottenham, undertook the dissection of the elephant shot in a rabid state at Exeter Change; numerous anatomical preparations from which, with many others of value, the work of his scalpel, are deposited in Guy's Museum. Mr. Morgan was a member of the Council of the Royal College of Surgeons. He died on October 4, 1847.

E. B., Bradford.—In 1838, Dr. Southwood Smith, in a report to the Poor-law Commissioners, described the deplorable sanitary condition of large masses of the population in London. This, and similar reports by Dr. Arnott and Dr. Kay (afterwards Sir J. Kay Shuttleworth) on the same subject, were published by the Poor-law Commissioners in their reports of 1838 and 1839.

A. A.—Dr. John Wyllie is the Secretary to the Royal College of Physicians, Edinburgh.

W. S. S.—Mr. Ralph Fulshaw is the Certifying Factory Surgeon for Earl-Shilton, Leicestershire.

THE MAUNSELL MEMORIAL FUND.

	£	s.	d.
Amount already acknowledged	167	13	0
A. B., per Dr. Rogers ...	1	1	0
Dr. Andrew, Palmerstown	1	1	0
Professor Apjohn	2	2	0
Thomas H. Atkinson, Esq.	1	0	0
Anonymous	1	0	0
Dr. Barbor, Carlingford ...	1	1	0
Dr. James Brady	1	1	0
Dr. J. W. Brady, Clara ...	1	1	0
Dr. Berry, Mallow... ...	1	1	0
B. Banks, Esq., Sec. Local Government Board, Ire.	2	0	0
Dr. Cranny	1	1	0
Dr. Darby, Bray	2	0	0
Dr. Evans, Dawson-street	0	10	0
Fannin and Co.	1	0	0
Dr. Forrest	1	1	0
Edward Fox, Esq., J.P. ...	1	0	0
Thomas Fry, Esq., T.C....	1	1	0
Dr. Hudson	2	2	0
Dr. Jennings	2	2	0
Michael Kernan, Esq., T.C.	1	0	0
Dr. P. C. Little	1	1	0
Dr. Henry, Pomeroy ...	1	1	0
Dr. S. Maunsell, 75th Regt.	10	0	0
Professor William Moore	1	1	0
Dr. Mollan	2	0	0
Dr. M'Swiney	1	1	0
Dr. Peebles...	1	1	0
Dr. Robinson, Fintona ...	2	2	0
Dr. Scully, jun., Hon. Sec. Co. Tipperary Medical Association	1	1	0
Dr. W. T. Stoker	1	1	0
Dr. Robert Swan	1	0	0
Robert Swan, F.R.C.S.I....	1	0	0
Dr. Toler	1	1	0
Dr. Twiss, per Dr. Rogers	1	1	0
Henry Wilson, F.R.C.S.I.	1	1	0
Michael Webb, Esq. ...	0	10	0
Dr. Welsh, Ballyshannon	1	0	0
R. Perrse White, F.R.C.S.I.	1	1	0
Dr. Stewart Woodhouse ...	1	1	0

N.B.—Subscriptions will be received by Dr. Joseph Rogers, 33, Dean-street, Soho, London.

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Oxoniensis.—Dr. Giacomo Tommasini died at Parma, November 26, 1846. His medical works have been translated into most of the modern languages.

Cæsar.—The Hospital for Consumption at Brompton now contains 257 beds.

Scotus.—Tea, on and after January 1 next, is to be examined, under the new Adulteration Act (which came into effect on the 1st inst.), by the Customs when imported, and if unfit for human food is to be forfeited and destroyed.

William Augustus.—The introduction of the system of non-restraint in lunatic asylums is generally attributed to Pinel. He it was who first reduced the kindly thought to practice in the Bicêtre in 1792.

N. L. B.—Dr. John Kidd, in 1834, succeeded Dr. Williams as Librarian to the Radcliffe Library, Oxford.

COMMUNICATIONS have been received from—

Dr. Brakenridge, Edinburgh; Mr. Clay, Birmingham; Mr. Jesser, Leeds; Mr. Bramwell, Newcastle; Mr. Fairlie Clark, London; Dr. McCraith, Smyrna; Dr. Wilkins, London; Mr. Davy, London; Dr. Dickinson, Liverpool; Dr. Francis, Rochester; The Rev. Dr. Haughton, Dublin; Dr. Speedy, Dublin; Miss Solomon, London; F. E. H. J.; Mr. Jonathan Hutchinson, London; Mr. Henry Morris, London; Dr. W. Bathurst Woodman, London; Dr. Eustace Smith, London; Mr. J. Chatto, London; Dr. Corfield, London; Mr. W. Douglas Hemming, London; Mr. George Brown, London; Dr. Sparks, London; Dr. A. W. Renny, Stirling; Mr. Ernest Hart, London; Mr. P. Dinwoodie, Moffat; Mr. W. T. Wyatt, London; Professor Humphry, Cambridge; Dr. J. Rogers, London; Mr. M. Sullivan, London; Dr. J. F. Payne, London.

BOOKS AND PAMPHLETS RECEIVED—

Blake's Zoology for Students—Greenhow on Addison's Disease—De Warker on a Study of the Normal Movements of the Unimpregnated Uterus—Theobald on Tinnitus Aurium—Gordon on Fractures of the Lower End of the Radius—McDonnell's Lectures and Essays on the Science and Practice of Surgery—Des Contre-Indications de la Version dans la Présentation de l'Epaule, et des Moyens qui peuvent Remplacer cette Opération, par M. le Dr. A. Pinard—Roberts' New Scheme of Drainage and Sewage Disposal.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Edinburgh Medical Journal—British and Foreign Medico-Chirurgical Review—The Doctor—L'Archives Générales de Médecine—Indian Medical Gazette—Obstetrical Journal of Great Britain and Ireland—Journal of Anatomy and Physiology, vol. x., part 1—Leeds Mercury—Yorkshire Post—Popular Science Review—Monthly Microscopical Journal—Science Gossip—Practitioner.

APPOINTMENTS FOR THE WEEK.

October 9. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

11. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

12. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Dickinson, "On the Pathology of Chorea." Dr. Greenhalgh, "On the Use of the Actual Cautery in the Enucleation of Fibroid Tumours of the Uterus."

13. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Mr. Jonathan Hutchinson, "On Varicella Prurigo."

14. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

15. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 2.

BIRTHS.

Births of Boys, 1224; Girls, 1144; Total, 2368.
Average of 10 corresponding years 1865-74, 2127·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	725	676	1401
Average of the ten years 1865-74	645·6	637·8	1283·4
Average corrected to increased population	...	...	1378
Deaths of people aged 80 and upwards	...	...	42

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	12	1	5	..	3	1	14
North	751729	...	1	30	6	4	...	5	2	41
Central ...	334369	...	1	10	1	3	...	2	1	19
East	639111	...	3	14	...	14	1	4	...	32
South	967692	...	4	47	4	18	1	4	1	48
Total	3254260	...	11	113	12	44	2	18	5	145

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·980 in.
Mean temperature	55·1°
Highest point of thermometer	69·4°
Lowest point of thermometer	45·3°
Mean dew-point temperature	49·5°
General direction of wind	W.S.W. & S.W.
Whole amount of rain in the week	0·84 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 2, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Oct. 2.	Deaths Registered during the week ending Oct. 2.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2368	1401	68·4	45·3	55·1	12·84	0·84	2·13
Portsmouth ...	129632	27·3	75	53	...	...	...	...	...	...
Norwich	82842	11·1	52	35	65·0	43·8	53·1	11·73	0·79	2·01
Bristol	196186	44·1	148	103	65·2	41·6	54·6	12·56	1·15	2·92
Wolverhampton ...	71718	21·1	55	38	63·6	43·5	52·7	11·50	0·60	1·52
Birmingham ...	366325	43·6	258	218	65·0	46·0	54·4	12·44	0·32	0·81
Leicester	109830	34·3	76	57	66·8	42·8	52·8	11·56	0·49	1·24
Nottingham ...	92951	46·2	53	35	66·9	40·1	53·5	11·85	0·64	1·63
Liverpool	516063	99·1	343	283	64·7	48·0	53·6	12·01	0·85	2·16
Manchester ...	356926	83·1	249	208	64·8	44·6	53·4	11·89	0·84	2·13
Salford	135720	26·3	132	92	63·9	43·0	52·5	11·39	1·14	2·90
Oldham	87437	18·7	70	41	...	...	...	...	...	...
Bradford	166305	23·3	116	95	64·2	45·8	50·1	10·00	0·72	1·83
Leeds	265118	13·2	244	173	65·0	45·0	53·9	12·17	0·61	1·55
Sheffield	267881	13·6	225	143	66·0	46·5	54·2	12·33	0·37	0·94
Hull	133932	36·8	111	90	...	...	...	...	...	...
Sunderland ...	106342	32·2	101	64	73·0	44·0	55·1	12·84	0·13	0·33
Newcastle-on-Tyne	137665	25·6	98	59	...	41·0	...	...	0·31	0·79
Edinburgh	211626	50·5	118	92	...	...	...	...	...	...
Glasgow	534564	88·6	399	214	...	...	...	...	...	...
Dublin	314666	31·3	168	166	67·2	41·0	54·1	12·25	0·58	1·47
Total of 21 Towns in United Kingdm	7742889	37·0	5459	3880	7·30	40·1	53·5	11·95	0·65	1·65

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·66 in. The lowest was 29·35 in. on Sunday night, the 26th ult., and the highest 29·90 in. on Thursday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

ADDRESS ON HEALTH.

DELIVERED AT THE SOCIAL SCIENCE CONGRESS AT BRIGHTON.

By BENJAMIN W. RICHARDSON, M.D., F.R.S.

We meet in this assembly, a voluntary Parliament of men and women, to study together and to exchange knowledge and thought on works of every-day life and usefulness. Our object, to make the present existence better and happier; to inquire, in this particular section of our Congress—What are the conditions which lead to the pain and penalty of disease; what the means for the removal of those conditions when they are discovered? What are the most ready and convincing methods of making known to the uninformed the facts: that many of the conditions are under our control; that neither mental serenity nor mental development can exist with an unhealthy animal organisation; that poverty is the shadow of disease, and wealth the shadow of health?

These objects relate to ourselves, to our own reliefs from suffering, to our own happiness, to our own riches. We have, I trust and believe, yet another object, one that relates not to ourselves, but to those who have yet to be; those to whom we may become known, but whom we can never know, who are the ourselves, unseen to ourselves, continuing our mission.

We are privileged more than any who have as yet lived on this planet, in being able to foresee, and in some measure estimate, the results of our wealth of labour as it may be possibly extended over and through the unborn. A few scholars of the past, like him who, writing to the close of his mortal day, sang himself to his immortal rest with the "*Gloria in excelsis*," a few scholars might foresee, even as that Bœda did, that their living actual work was but the beginning of their triumphant course through the ages—the momentum. But the masses of the nations, crude and selfish, have had no such prescience, no such intent. "Let us eat and drink, for to-morrow we die." That has been the pass, if not the password, with them and theirs.

We, scholars of modern thought, have the broader, and therefore more solemn and obligatory knowledge, that however many to-morrows may come, and whatever fate they may bring, we never die; that, strictly speaking, no one yet who has lived has ever died; that for good or for evil our every change from potentiality into motion is carried on beyond our own apparent transitoriness; that we are the waves of the ocean of life, communicating motion to the expanse before us, and leaving the history we have made on the shore behind.

Thus we are led to feel this greater object: that to whatever extent we, by our exertions, confer benefits on those who live, we extend the advantage to those who have to live; that one good thought leading to practical useful action from one man or woman, may go to the virtue of thousands of generations; that one breath of health wafted by our breath may, in the aggregate of life saved by it, represent in its ultimate effect all the life that now is or has been.

At the close of a parliamentary session, an uneventful leader of a section of Parliament banters his more eventful rival, and enlivening his criticism by a sneer at our Congress, challenges the contempt of his rival, as if to draw it forth in the same critical direction. Alas! it is too true that great congresses, like great men, and even like parliaments, do live sometimes for many years and talk much, and seem to miss much and advance little; so that in what relates to the mere present, it were wrong, possibly, to challenge the sally of the statesman, who, from his helpless height, looked down on our weakness. But inasmuch as no man knoweth the end of the spoken word, as that which is spoken to-day, earnestly and simply, may not reappear for years, and may then appear with force and quality of hidden virtue, there is reason for our uniting together beyond the proof of necessity which is given in the fact of our existence. Perchance some day our natural learning, gathered in our varied walks of life, and submitted in open council, may survive even Parliamentary strife; perchance our resolutions, though no sign-manual immediately grace them, are the informal Bills which Ministers and Oppositions shall one day discuss, Parliaments pass, royal hands sign, and the fixed administrators of the will of the nation duly administer.

These thoughts on the future, rather than on the passing influence of our congressional work, have led me to the simple design of the address which, as President of this Section, I venture to submit to you to-day. It is my object to put forward a theoretical outline of a community so circumstanced and so maintained by the exercise of its own freewill, guided by scientific knowledge, that in it the perfection of sanitary results will be approached, if not actually realised, in the co-existence of the lowest possible general mortality with the highest possible individual longevity. I shall try to show a working community in which death—if I may apply so common and expressive a phrase on so solemn a subject—in which death is kept as nearly as possible in its proper or natural place in the scheme of life.

Health and Civilisation.

Before I proceed to this task, it is right I should ask of the past what hope there is of any such advancement of human progress. For as my Lord of Verulum quaintly teaches, "the past ever deserves that men should stand upon it for awhile to see which way they should go, but when they have made up their minds they should hesitate no longer, but proceed with cheerfulness." For a moment, then, we will stand on the past.

From this vantage-ground we gather the fact, that onward with the simple progress of true civilisation the value of life has increased. Ere yet the words "sanitary science" had been written; ere yet the heralds of that science, some of whom, in the persons of our illustrious colleagues Edwin Chadwick and William Farr, are with us in this place at this moment; ere yet these heralds had summoned the world to answer for its profligacy of life, the health and strength of mankind were undergoing improvement. One or two striking facts must be sufficient in the brief space at my disposal to demonstrate this truth. In England, from 1790 to 1810, Heberden calculated that the general mortality diminished one-fourth. In France, during the same period, the same favourable returns were made. The deaths in France, Berard calculated, were 1 in 30 in the year 1780, and during the eight years, from 1817 to 1828, 1 in 40, or a fourth less. In 1780, out of 100 new-born infants, in France, 50 died in the two first years; in the later period, extending from the time of the census that was taken in 1817 to 1827, only 38 of the same age died—an augmentation of infant life equal to 25 per cent. In 1780 as many as 55 per cent. died before reaching the age of ten years; in the later period 43, or about a fifth less. In 1780 only 21 persons per cent. attained the age of fifty years; in the later period 32, or eleven more, reached that term. In 1780 but 15 persons per cent. arrived at sixty years; in the later period 24 arrived at that age.

Side by side with these facts of the statist we detect other facts which show that in the progress of civilisation the actual organic strength and build of the man and woman increases. Just as in the highest developments of the fine arts the sculptor and painter place before us the finest imaginative types of strength, grace, and beauty; so the silent artist, civilisation, approaches nearer and nearer to perfection, and by evolution of form and mind developes what is practically a new order of physical and mental build. Peron—who first used, if he did not invent, the little instrument, the dynamometer, or muscular strength measurer—subjected specimens of different stages of civilisation to the test of his gauge, and discovered that the strength of the limbs of the natives of Van Diemen's Land and New Holland was as 50° of power, while that of the Frenchmen was 69°, and of the Englishmen 71°. The same order of facts is maintained in respect to the size of body. The stalwart Englishman of to-day can neither get into the armour nor be placed in the sarcophagus of those sons of men who were accounted the heroes of the infantile life of the human world.

We discover, moreover, from our view of the past, that the developments of tenacity of life and of vital power have been comparatively rapid in their course when they have once commenced. There is nothing discoverable to us that would lead to the conception of a human civilisation extending back over two hundred generations; and when in these generations we survey the actual effect of civilisation—so fragmentary, and overshadowed by persistent barbarism—in influencing disease and mortality, we are induced to the observation of at most twelve generations, including our own, engaged, indirectly or directly, in the work of sanitary progress. During this

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comparatively brief period, the labour of which, until within a century, has had no systematic direction, the changes for good that have been effected are amongst the most startling of historical facts. Pestilences which decimated populations, and which, like the Great Plague of London, destroyed 7165 people in a single week, have lost their virulency; gaol fever has disappeared, and our gaols, once each a plague-spot, have become, by a strange perversion of civilisation, the health-spots of, at least, one kingdom. The term "black death" is heard no more; and ague, from which the London physician once made a fortune, is now a rare tax even on the skill of the hard-worked union medical officer.

From the study of the past we are warranted, then, in assuming that civilisation, unaided by special scientific knowledge, reduces disease and lessens mortality, and that the hope of doing still more by systematic scientific art is fully justified.

I might hereupon proceed to my project straightway. I perceive, however, that it may be urged, that as mere civilising influences can of themselves effect so much, they might safely be left to themselves to complete, through the necessity of their demands, the whole sanitary code. If this were so, a formula for a city of health were practically useless. The city would come without the special call for it.

I think it probable the city would come in the manner described, but how long it would be coming is hard to say, for whatever great results have followed civilisation, the most that has occurred has been an unexpected, unexplained, and therefore uncertain arrest of the spread of the grand physical scourges of mankind. The phenomena have been suppressed, but the root of not one of them has been touched. Still in our midst are thousands of enfeebled human organisms which only are comparable with the savage. Still are left amongst us the bases of every disease that, up to the present hour, has afflicted humanity.

The existing calendar of diseases, studied in connexion with the classical history of them written for us by the longest unbroken line of authorities in the world of letters, shows, in unmistakable language, that the imposition of every known malady of man is coeval with every phase of his recorded life on the planet. No malady, once originated, has ever actually died out; many remain as potent as ever. That wasting fatal scourge, pulmonary consumption, is the same in character as when Cœlius Aurelianus gave it description; the cancer of to-day is the cancer known to Paulus Ægineta; the Black Death, though its name is gone, lingers in malignant typhus; the great plague of Athens is the modern great plague of England, scarlet fever; the dancing mania of the Middle Ages and convulsionary epidemic of Montmartre, subdued in its violence, is still to be seen in some American communities, and even at this hour in the New Forest of England; small-pox, when the blessed protection of vaccination is withdrawn, is the same virulent destroyer as it was when the Arabian Rhazes defined it; ague lurks yet in our own island, and, albeit the physician is not enriched by it, is in no symptom changed from the ague that Celsus knew so well; cholera, in its modern representation, is more terrible a malady than its ancient type, in so far as we have knowledge of it from ancient learning; and even that fearful scourge the great plague of Constantinople, the plague of hallucination and convulsion which raged in the fifth century of our era, has in our time, under the new names of tetanoid fever and cerebro-spinal meningitis, been met with here and in France, and in Massachusetts has, in the year 1873, laid 747 victims in the dust.

I must cease these illustrations, though I could extend them fairly over the whole chapter of disease, past and present. Suffice it if I have proved the general proposition, that disease is now as it was in the beginning, except that in some examples of it it is less virulent; that the science for extinguishing any one disease has yet to be learned; and that, as the bases of disease exist, untouched by civilisation, so the danger is ever imminent, unless we specially provide against it, that the development of disease may occur with original virulence and fatality, and may at any moment be made active by accidental or systematic ignorance.

A CITY OF HEALTH.

I now come to the design I have in hand. Mr. Chadwick has many times told us that he could build a city that would give any stated mortality, from fifty, or any number more, to five, or perhaps some number less, in the thousand annually. I believe Mr. Chadwick to be correct to the letter in this statement, and for that reason I have projected a city that shall show the lowest mortality. I need not say no such city exists, and you must pardon me for drawing upon your imaginations as I describe it. Depicting nothing whatever but what is at this present moment easily possible, I shall strive to bring into ready and agreeable view a community not abundantly favoured by natural resources, which, under the direction of the scientific knowledge acquired in the past two generations, has attained a vitality not perfectly natural, but approaching to that standard. In an artistic sense it would have been better to have chosen a small town or large village than a city for my description; but as the great mortality of states is resident in cities, it is practically better to take the larger and less favoured community. If cities could be transformed, the rest would follow.

Our city, which may be named *Hygeia*, has the advantage of being a new foundation, but it is so built that existing cities might be largely modelled upon it.

The population of the city may be placed at 100,000, living in 20,000 houses, built on 4000 acres of land—an average of 25 persons to an acre. This may be considered a large population for the space occupied, but, since the effect of density on vitality tells only determinately when it reaches a certain extreme degree, as in Liverpool and Glasgow, the estimate may be ventured.

The safety of the population of the city is provided for against density by the character of the houses, which insures an equal distribution of the population. Tall houses overshadowing the streets, and creating necessity for one entrance to several tenements, are nowhere permitted. In streets devoted to business, where the tradespeople require a place of mart or shop, the houses are four storeys high, and in some of the western streets where the houses are separate, three and four storeyed buildings are erected; but, on the whole, it is found bad to exceed this range, and as each storey is limited to fifteen feet, no house is higher than sixty feet.

The substratum of the city is of two kinds. At its northern and highest part there is clay; at its southern and south-eastern, gravel. Whatever disadvantages might spring in other places from a retention of water on a clay soil, is here met by the plan that is universally followed, of building every house on arches of solid brickwork. So, where in other towns there are areas, and kitchens, and servants' offices, there are here subways through which the air flows freely, and down the inclines of which all currents of water are carried away.

The acreage of our model city allows room for three wide main streets or boulevards, which run from east to west, and which are the main thoroughfares. Beneath each of these is a subway, a railway along which the heavy traffic of the city is carried on. The streets from north to south, which cross the main thoroughfares at right angles, and the minor streets which run parallel, are all wide, and, owing to the lowness of the houses, are thoroughly ventilated, and in the day are filled with sunlight. They are planted on each side of the pathways with trees, and in many places with shrubs and evergreens. All the interspaces between the backs of houses are gardens. The churches, hospitals, theatres, banks, lecture-rooms, and other public buildings, as well as some private buildings, such as warehouses and stables, stand alone, forming parts of streets, and occupying the position of several houses. They are surrounded with garden space, and add not only to the beauty, but to the healthiness of the city. The large houses of the wealthy are situated in a similar manner.

The streets of the city are paved throughout in the same material. As yet wood pavement set in asphalte has been found the best; it is noiseless, cleanly, and durable. Tramways are nowhere permitted, the system of underground railways being found amply sufficient for all purposes. The side pavements, which are everywhere ten feet wide, are of white or light grey stone. They have a slight incline towards the streets, and the streets have an incline from their centres towards the margins of the pavements.

From the circumstance that the houses of our model city are based on subways, there is no difficulty whatever in cleansing the streets, no more difficulty than is experienced in Paris. That disgrace to our modern civilisation, the mud-cart, is not known, and even the necessity for Mr. E. H. Bayley's road-way movable tanks for mud-sweepings (so much wanted in London and other towns similarly built) does not exist. The accumulation of mud and dirt in the streets is washed away every day through side openings into the subways, and is conveyed, with the sewage, to a destination apart from the city.

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Thus the streets everywhere are dry and clean, free alike of holes and open drains. Gutter children are an impossibility in a place where there are no gutters for their innocent delectation. Instead of the gutter the poorest child has the garden; for the foul sight and smell of unwholesome garbage, he has flowers and green sward.

It will be seen, from what has been already told, that in this our model city there are no underground cellars, kitchens, or other caves, which, worse than those ancient British caves that Nottingham still can show the antiquarian as the once fastnesses of her savage children, are even now the loathsome residences of many millions of our domestic and industrial classes. There is not permitted to be one room underground. The living part of every house begins on the level of the street. The houses are built of a brick which has the following sanitary advantages:—It is glazed, and quite impermeable to water, so that during wet seasons the walls of the houses are not saturated with tons of water, as is the case with so many of our present residences. The bricks are perforated transversely, and at the end of each there is a wedge opening, into which no mortar is inserted, and by which all the openings are allowed to communicate with each other. The walls are in this manner honeycombed, so that there is in them a constant body of common air let in by side openings in the outer wall, which air can be changed at pleasure, and, if required, can be heated from the fire-grates of the house. The bricks intended for the inside wall of the house, those which form the walls of the rooms, are glazed in different colours, according to the taste of the owner, and are laid so neatly that the after-adornment of the walls is considered unnecessary, and, indeed, objectionable. By this means those most unhealthy parts of household accommodation, layers of mouldy paste and size, layers of poisonous paper, or layers of absorbing colour stuff or distemper, are entirely done away with. The walls of the rooms can be made clean at any time by the simple use of water, and the ceilings, which are turned in light arches of thinner brick, or tile, coloured to match the wall, are open to the same cleansing process. The colour selected for the inner brickwork is grey, as a rule, that being most agreeable to the sense of sight; but various tastes prevail, and art so soon ministers to taste, that, in the houses of the wealthy, delightful patterns of work of Pompeian elegance are soon introduced.

As with the bricks, so with the mortar and the wood employed in building: they are rendered, as far as possible, free of moisture. Sea-sand containing salt, and wood that has been saturated with sea-water—two common commodities in badly built houses—find no place in our modern city.

The most radical changes in the houses of our city are in the chimneys, the roofs, the kitchens, and their adjoining offices. The chimneys, arranged after the manner proposed by Mr. Spencer Wells, are all connected with central shafts, into which the smoke is drawn, and, after being passed through a gas-furnace to destroy the free carbon, is discharged colourless into the open air. The city, therefore, at the expense of a small smoke-rate, is free of raised chimneys and of the intolerable nuisance of smoke. The roofs of the houses are but slightly arched, and are, indeed, all but flat. They are covered either with asphalte, which experience, out of our supposed city, has proved to last long and to be easily repaired, or with flat tile. The roofs, barricaded round with iron palisade, tastefully painted, make excellent outdoor grounds for every house. In some instances flowers are cultivated on them.

The housewife must not be shocked when she hears that the kitchens of our model city, and all the kitchen offices, are immediately beneath these garden roofs; are, in fact, in the upper floor of the house instead of the lower. In every point of view, sanitary and economical, this arrangement succeeds admirably. The kitchen is lighted to perfection, so that all uncleanliness is at once detected. The smell which arises from cooking is never disseminated through the rooms of the house. In conveying the cooked food from the kitchen, in houses where there is no lift, the heavy-weighted dishes have to be conveyed down, the emptied and lighter dishes upstairs. The hot water from the kitchen boiler is distributed easily by conducting pipes into the lower rooms, so that in every room and bedroom hot and cold water can at all times be obtained for washing or cleaning purposes; and as on every floor there is a sink for receiving waste water, the carrying of heavy pails from floor to floor is not required. The scullery, which is by the side of the kitchen, is provided with a copper and all the appliances for laundry work; and when that is done at home the open places on the roof above make an excellent drying ground.

In the wall of the scullery is the upper opening to the shaft of the dust-bin shaft. This shaft, open to the air from the roof, extends to the bin under the basement of the house. A sliding door in the wall opens into the shaft to receive the dust, and this plan is carried out on every floor. The coal-bin is off the scullery, and is ventilated into the air through a shaft, also passing through the roof.

On the landing, in the second or middle storeys of the three-storeyed houses, there is a bath-room, supplied with hot and cold water from the kitchen above. The floor of the kitchen and of all the upper storeys is slightly raised in the centre, and is of smooth grey tile; the floor of the bath-room is the same. In the living-rooms, where the floors are of wood, a true oak margin of floor extends two feet around each room. Over this no carpet is ever laid. It is kept bright and clean by the old-fashioned beeswax and turpentine, and the air is made fresh and ozonic by the process.

Considering that a third part of the life of man is, or should be, spent in sleep, great care is taken with the bedrooms, so that they shall be thoroughly lighted, roomy, and ventilated. Twelve hundred cubic feet of space is allowed for each sleeper, and from the sleeping apartments all unnecessary articles of furniture and of dress are rigorously excluded. Old clothes, old shoes, and other offensive articles of the same order, are never permitted to have residence there. In most instances the rooms on the first floor are made the bedrooms, and the lower the living-rooms. In the larger houses bedrooms are carried out in the upper floor for the use of the domestics.

To facilitate communication between the kitchen and the entrance-hall, so that articles of food, fuel, and the like may be carried up, a shaft runs in the partition between two houses, and carries a basket-lift in all houses that are above two storeys high. Every heavy thing to and from the kitchen is thus carried up and down from floor to floor and from the top to the basement, and much unnecessary labour is thereby saved. In the two-storeyed houses the lift is unnecessary; a flight of outer steps leads to the upper or kitchen floor.

The warming and ventilating of the houses is carried out by a common and simple plan. The cheerfulness of the fireside is not sacrificed; there is still the open grate in every room, but at the back of the firestove there is an air-box or case, which, distinct from the chimney, communicates by an opening with the outer air, and by another opening with the room. When the fire in the room heats the iron receptacle, fresh air is brought in from without, and is diffused into the room at the upper part on a plan similar to that devised by Captain Galtin.

As each house is complete within itself in all its arrangements, those disfigurements called back premises are not required. There is a wide space consequently between the back fronts of all houses, which space is, in every instance, turned into a garden square, kept in neat order, ornamented with flowers and trees, and furnished with playgrounds for children, young and old.

The houses being built on arched subways, great convenience exists for conveying sewage from, and for conducting water and gas into, the different domiciles. All pipes are conveyed along the subways, and enter each house from beneath. Thus the mains of the water-pipe and the mains of the gas are within instant control on the first floor of the building, and a leakage from either can be immediately prevented. The officers who supply the commodities of gas and water have admission to the subways, and find it most easy and economical to keep all that is under their charge in perfect repair. The sewers of the houses run along the floors of the subways, and are built in brick. They empty into three cross main sewers. They are trapped for each house, and as the water-supply is continuous, they are kept well flushed. In addition to the house-flushings there are special openings into the sewers, by which, at any time, under the direction of the sanitary officer, an independent flushing can be carried out. The sewers are ventilated into tall shafts from the mains by means of a pneumatic engine.

The water-closets in the houses are situated on the middle and basement floors. The continuous water-supply flushes them without danger of charging the drinking-water with gases emanating from the closet—a danger so imminent in the present method of cisterns, which supply drinking- as well as flushing-water.

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As we walk the streets of our model city, we notice first an absence of places for the public sale of spirituous liquors. Whether this be a voluntary purgation in goodly imitation of the National Temperance League, the effect of Sir Wilfrid Lawson's Permissive Bill and most permissive wit and wisdom, or the work of the Good Templars, we need not stay to inquire. We look at the fact only. To this city, as to the town of St. Johnsbury, in Vermont, which Mr. Hepworth Dixon has so graphically described, we may apply the description Mr. Dixon has written:—"No bar, no dram-shop, no saloon, defiles the place; nor is there a single gaming-hell or house of ill-repute." Through all the workshops into which we pass, in whatever labour the men or women may be occupied—and the place is noted for its manufacturing industry—at whatever degree of heat or cold, strong drink is unknown. Practically, we are in a total abstainers' town, and a man seen intoxicated would be so avoided by the whole community, he would have no peace to remain.

And, as smoking and drinking go largely together—as the two practices were, indeed, original exchanges of social degradations between the civilised man and the savage, the savage getting very much the worst of the bargain,—so the practices largely disappear together. Pipe and glass, cigar and sherry-cobbler, like the Siamese twins, who could only live connected, have both died in our model city. Tobacco, by far the more innocent partner of the firm, lived, as it perhaps deserved to do, a little the longest; but it passed away, and the tobacconist's counter, like the dram counter, has disappeared.

The streets of our city, though sufficiently filled with busy people, are comparatively silent. The subways relieve the heavy traffic, and the factories are all at short distances from the town, except those in which the work that is carried on is silent and free from nuisance. This brings me to speak of some of the public buildings which have relation to our present studies.

It has been found in our towns, generally, that men and women who are engaged in industrial callings, such as tailoring, shoe-making, dress-making, lace-work, and the like, work at their own homes amongst their children. That this is a common cause of disease is well understood. I have myself seen the half-made riding-habit, that was ultimately to clothe some wealthy damsel rejoicing in her morning ride, act as the coverlet of a poor tailor's child stricken with malignant scarlet fever. These things must be, in the ordinary course of events under our present bad ordinary system. In the model city we have in our mind's eye, these dangers are met by the simple provision of workmen's offices or work-rooms. In convenient parts of the town there are blocks of buildings, designed mainly after the manner of the houses, in which each workman can have a work-room on payment of a moderate sum per week. Here he may work as many hours as he pleases, but he may not transform the room into a home. Each block is under the charge of a superintendent, and also under the observation of the sanitary authorities. The family is thus separated from the work, and the working man is secured the same advantages as the lawyer, the merchant, the banker now possess: or, to make the parallel more correct, he has the same advantage as the man or woman who works in a factory, and goes home to eat and to sleep.

In most towns throughout the kingdom the laundry system is dangerous in the extreme. For anything the healthy householder knows, the clothes he and his children wear have been mixed before, during, and after the process of washing, with the clothes that have come from the bed or the body of some sufferer from a contagious malady. Some of the most fatal outbreaks of disease I have met with have been communicated in this manner. In our model community this danger is entirely avoided by the establishment of public laundries, under municipal direction. No person is obliged to send any article of clothing to be washed at the public laundry; but if he does not send there he must have the washing done at home. Private laundries that do not come under the inspection of the sanitary officer are absolutely forbidden. It is incumbent on all who send clothes to the public laundry from an infected house to state the fact. The clothes thus received are passed for special cleansing into the disinfecting rooms. They are specially washed, dried, and prepared for future wear. The laundries are placed in convenient positions, a little outside the town; they have extensive drying grounds, and practically they are worked so economically, that home washing-days, those invaders of domestic comfort, are abolished.

Passing along the main streets of the city, we see in twenty places, equally distant, a separate building surrounded by its own grounds—a model hospital for the sick. To make these institutions the best of their kind, no expense is spared. Several elements contribute to their success. They are small, and are readily removable. The old idea of warehousing diseases on the largest possible scale, and of making it the boast of an institution that it contains so many hundred beds, is abandoned here. The old idea of building an institution so that it shall stand for centuries, like a Norman castle, but, unlike the castle, still retain its original character as a shelter for the afflicted, is abandoned. The still more absurd idea of building hospitals for the treatment of special organs of the body, as if the different organs could walk out of the body and present themselves for treatment, is also abandoned.

It will repay us a minute of time to look at one of these model hospitals. One is the *fac-simile* of the other, and is devoted to the service of every five thousand of the population. Like every building in the place, it is erected on a subway. There is a wide central entrance, to which there is no ascent, and into which a carriage, cab, or ambulance can drive direct. On each side the gateway are the houses of the resident medical officer and of the matron. Passing down the centre, which is lofty and covered in with glass, we arrive at two side-wings running right and left from the centre, and forming cross-corridors. These are the wards: twelve on one hand for male, twelve on the other for female patients. The cross-corridors are twelve feet wide and twenty feet high, and are roofed with glass. The corridor on each side is a framework of walls of glazed brick, arched overhead, and divided into six segments. In each segment is a separate, light, elegant removable ward, constructed of glass and iron, twelve feet high, fourteen feet long, and ten feet wide. The cubic capacity of each ward is 1680 feet. Each patient who is ill enough to require constant attendance has one of these wards entirely to himself, so that the injurious influences on the sick, which are created by mixing up, in one large room, the living and the dying; those who could sleep, were they at rest, with those who cannot sleep, because they are racked with pain; those who are too nervous or sensitive to move, or cough, or speak, lest they should disturb others; and those who do whatever pleases them: these bad influences are absent.

The wards are fitted up neatly and elegantly. At one end they open into the corridor, at the other towards a verandah which leads to a garden. In bright weather those sick, who ever are confined to bed, can, under the direction of the doctor, be wheeled in their beds out into the gardens without leaving the level floor. The wards are warmed by a current of air made to circulate through them by the action of a steam-engine, with which every hospital is supplied, and which performs such a number of useful purposes, that the wonder is, how hospital management could go on without this assistance.

If at any time a ward becomes infectious, it is removed from its position, and replaced by a new ward. It is then taken to pieces, disinfected, and laid by ready to replace another that may require temporary ejection.

The hospital is supplied on each side with ordinary baths, hot-air baths, vapour-baths, and saline baths.

A day sitting-room is attached to each wing, and every reasonable method is taken for engaging the minds of the sick in agreeable and harmless pastimes.

Two trained nurses attend to each corridor, and connected with the hospital is a school for nurses under the direction of the medical superintendent and the matron. From this school nurses are provided for the town; they are not merely efficient for any duty in the vocation in which they are always engaged, either within the hospital or out of it, but from the care with which they attend to their own personal cleanliness, and the plan they pursue of changing every garment on leaving an infectious case, they fail to be the bearers of any communicable disease. To a hospital four medical officers are appointed, each of whom, therefore, has six resident patients under his care. The officers are called simply medical officers, the distinction, now altogether obsolete, between physicians and surgeons being discarded.

The hospital is brought, by an electrical wire, into communication with all the fire-stations, factories, mills, theatres, and other important public places. It has an ambulance always ready to be sent out to bring any injured persons to the institution. The ambulance drives straight into the hospital, where a bed of the same height on silent wheels, so that it can be moved without vibration into a ward, receives the patient.

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The kitchens, laundries, and laboratories are in a separate block at the back of the institution, but are connected with it by the central corridor. The kitchen and laundries are at the top of this building, the laboratories below. The disinfecting-room is close to the engine-room, and superheated steam, which the engine supplies, is used for disinfection.

The out-patient department, which is apart from the body of the hospital, resembles that of the Queen's Hospital, Birmingham: the first out-patient department, as far as I am aware, that ever deserved to be seen by a generous public. The patients waiting for advice are seated in a large hall, warmed at all seasons to a proper heat, lighted from the top through a glass roof, and perfectly ventilated. The infectious cases are separated carefully from the rest. The consulting-rooms of the medical staff are comfortably fitted, the dispensary is thoroughly officered, and the order that prevails is so effective that a sick person, who is punctual to time, has never to wait.

The medical officers attached to the hospital in our model city are allowed to hold but one appointment at the same time, and that for a limited period. Thus every medical man in the city obtains the equal advantage of hospital practice, and the value of the best medical and surgical skill is fairly equalised through the whole community.

In addition to the hospital building is a separate block, furnished with wards, constructed in the same way as the general wards, for the reception of children suffering from any of the infectious diseases. These wards are so planned that the people generally send sick members of their own family into them for treatment, and pay for the privilege.

Supplementary to the hospital are certain other institutions of a kindred character. To check the terrible course of infantile mortality of other large cities—the 76 in the 1000 of mortality under five years of age—homes for little children are abundant. In these the destitute young are carefully tended by intelligent nurses, and mothers, while following their daily callings, are enabled to leave their children under efficient care.

In a city from which that grand source of wild mirth, hopeless sorrow, and confirmed madness—alcohol—has been expelled, it could hardly be expected that much insanity would be found. The few who are insane are placed in houses licensed as asylums, but not different in appearance from other houses in the city. Here they live, in small communities, under proper medical supervision, with their own gardens and pastimes. The houses of the helpless and aged are, like the asylums, the same as the houses of the rest of the town. No large building for the poor of pretentious style uprears itself; no men badged and badgered as paupers walk the place. Those poor who are really, from physical causes, unable to work, are maintained in a manner showing that they possess yet the dignity of human kind; that, being worth preservation, they are therefore worthy of respectful tenderness. The rest, those who can work, are employed in useful labours, which pay for their board. If they cannot find work, and are deserving, they may lodge in the house and earn their subsistence; or they may live from the house and receive pay for work done. If they will not work, they, as vagrants, find a home in prison, where they are compelled to share the common lot of mankind.

Our model city is of course well furnished with baths—swimming-baths, Turkish baths,—playgrounds, gymnasia, libraries, board schools, fine art schools, lecture-halls, and places of instructive amusement. In every board-school drill forms part of the programme. I need not dwell on these subjects, but must pass to the sanitary officers and offices.

There is in the city one principal sanitary officer—a duly qualified medical man elected by the municipal council,—whose sole duty is to watch over the sanitary welfare of the place. Under him as sanitary officers are all the medical men who form the poor-law medical staff. To him these make their reports on vaccination and every matter of health pertaining to their respective districts; to him every registrar of births and deaths forwards copies of his registration returns; and to his office are sent, by the medical men generally, registered returns of the cases of sickness prevailing in the district. His inspectors likewise make careful returns of all the known prevailing diseases of the lower animals and of plants. To his office are forwarded, for examination and analysis, specimens of foods and drinks suspected to be adulterated, impure, or otherwise unfitted for use. For the conduction of these researches, the sanitary superintendent is allowed a competent chemical staff. Thus, under this central supervision, every death and every disease of the living world in that district, and every assumable cause of disease, comes to light and is subjected, if need be, to inquiry.

At a distance from the town are the sanitary works, the sewage pumping works, the water and gas works, the slaughter-houses, and the public laboratories. The sewage, which is brought from the town partly by its own flow and partly by pumping apparatus, is conveyed away to well-drained sewage farms belonging to the city, but at a distance from it, where it is utilised on Mr. Hope's plan.

The water-supply, derived from a river which flows to the south-west of the city, is unpolluted by sewage or other refuse, is carefully filtered, is tested twice daily, and if found unsatisfactory is supplied through a reserve tank, in which it can be made to undergo further purification. It is carried through the city everywhere by iron pipes. Leaden pipes are forbidden.

In the sanitary establishment are disinfecting rooms, a mortuary, and ambulances for the conveyance of persons suffering from contagious disease. These are at all times open to the use of the public, subject to the few and simple rules of the management.

The gas, like the water, is submitted to regular analysis by the staff of the sanitary officer, and any fault he may detect which indicates a departure from the standard of purity framed by the municipal council, is immediately remedied, both gas and water being exclusively under the control of the local authority.

The inspectors of the sanitary officer have under them a body of scavengers. These, each day, in the early morning, pass through the various districts allotted to them, and remove all refuse in closed vans. Every portion of manure from stables, streets, and yards is in this way removed daily, and transported to the city farms for utilisation.

Two additional conveniences are supplied by the sanitary scientific work of this establishment. From steam-works steam is condensed, and a large supply of distilled water is obtained and preserved in a separate tank. This is conveyed by a small main into the city, and at a moderate cost distilled water can be supplied for those domestic purposes for which hard water is objectionable.

The second sanitary convenience is a large ozone generator. By this apparatus ozone can be produced in any required quantity, and is made to play many useful purposes. It is passed through the drinking-water in the reserve reservoir whenever the water shows excess of organic impurity, and it is conveyed into the city for diffusion into private houses, for purposes of disinfection.

The slaughter-houses of the city are all public, and are separated by a distance of a quarter of a mile from the city. They are easily removable edifices, and are under the supervision of the sanitary staff. The Jewish system of inspecting every carcase that is killed is rigorously carried out, with this improvement, that the inspector is a man of scientific knowledge.

All animals used for food—cattle, fowls, swine, rabbits—are subjected to examination in the slaughter-house, or in the market, if they be brought into the city from other depôts. The slaughter-houses are so constructed that the animals killed are relieved from the pain of death. They pass through a narcotic chamber, and are brought to the slaughterer oblivious of their fate. The slaughter-houses drain into the sewers of the city, and their complete purification daily, from all offal and refuse, is rigidly enforced.

The buildings, sheds, and styes for domestic food-producing animals are removed a short distance from the city, and are also under the supervision of the sanitary officer; the food and water supplied for these animals comes equally with human food under proper inspection.

One other subject only remains to be noticed in connexion with the arrangements of our model city, and that is the mode of the disposal of the dead. The question of cremation and of burial in the earth has been considered, and there are some who advocate cremation. For various reasons the process of burial is still retained: Firstly, because the cremation process is open to serious medico-legal objections; secondly, because, by the complete resolution of the body into its elementary and inodorous gases in the cremation furnace, that intervening chemical link between the organic and inorganic worlds, the ammonia, is destroyed, and the economy of nature is thereby dangerously disturbed; thirdly, because the natural tendencies

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of the people lead them still to the earth, as the most fitting resting-place into which, when lifeless, they should be drawn.

Thus the cemetery holds its place in our city, but in a form much modified from the ordinary cemetery. The burial-ground is artificially made of a fine carboniferous earth. Vegetation of rapid growth is cultivated over it. The dead are placed in the earth from the bier, either in basket work or simply in the shroud; and the monumental slab, instead of being set over or at the head or foot of a raised grave, is placed in a spacious covered hall or temple, and records simply the fact that the person commemorated was recommitted to earth in those grounds. In a few months, indeed, no monument would indicate the remains of any dead. In that rapidly resolving soil the transformation of dust into dust is too perfect to leave a trace of residuum. The natural circle of transmutation is harmlessly completed, and the economy of nature conserved.

Results.

Omitting, necessarily, many minor but yet important details, I close the description of the imaginary health city. I have yet to indicate what are the results that might be fairly predicted in respect to the disease and mortality presented under the conditions specified.

Two kinds of observation guide me in this essay—one derived from statistical and sanitary work; the other from experience, extended now over thirty years, of disease, its phenomena, disease, its origins, its causes, its terminations.

I infer, then, that in our model city certain forms of disease would find no possible home, or, at the worst, a home so transient as not to affect the mortality in any serious degree. The infantile diseases—infantile and remittent fevers, convulsions, diarrhœa, croup, marasmus, dysentery—would, I calculate, be almost unknown. Typhus and typhoid fevers and cholera could not, I believe, exist in the city except temporarily, and by pure accident; small-pox would be kept under entire control; puerperal fever and hospital fever would probably cease altogether; rheumatic fever, induced by residence in damp houses, and the heart disease subsequent upon it, would be removed; death from privation and from purpura and scurvy would certainly cease; delirium tremens, liver disease, alcoholic phthisis, alcoholic degeneration of kidney and all the varied forms of paralysis, insanity, and other affections due to alcohol, would be completely effaced. The parasitic diseases arising from the introduction into the body, through food, of the larvæ of the entozoa, would cease, and that large class of deaths from pulmonary consumption, induced in less favoured cities by exposure to impure air and badly ventilated rooms, would, I believe, be reduced so as to bring down the mortality of this signally fatal malady one-third at least.

Some diseases, pre-eminently those which arise from uncontrollable causes, from sudden fluctuations of temperature, electrical storms, and similar great variations of nature, would remain as active as ever; and pneumonia, bronchitis, congestion of the lungs, and summer cholera would still hold their sway. Cancer, also, and allied constitutional diseases of strong hereditary character, would yet, as far as we can see, prevail. I fear, moreover, it must be admitted that two or three of the epidemic diseases, notably scarlet fever, measles, and whooping-cough, would assert themselves, and, though limited in their diffusion by the sanitary provisions for arresting their progress, would claim a considerable number of victims.

With these facts clearly in view, I must be careful not to claim for my model city more than it deserves; but calculating the mortality which would be saved, and comparing the result with the mortality which now prevails in the most favoured of our large English towns, I conclude that an average mortality of 8 per 1000 would be the maximum in the first generation living under this salutary *régime*. That in a succeeding generation Mr. Chadwick's estimate of a possible mortality of 5 per 1000 would be realised, I have no reasonable doubt, since the almost unrecognised, though potent, influence of heredity in disease would immediately lessen in intensity, and the healthier parents would bring forth the healthier offspring.

As my voice ceases to dwell on this theme of a yet unknown city of health, do not, I pray you, wake as from a mere dream. The details of the city exist. They have been worked out by those pioneers of sanitary science, so many of whom surround me to-day, and specially by him whose hopeful thought has suggested my design. I am, therefore, but as a draughtsman, who, knowing somewhat your desires and aspirations, have drawn a plan, which you in your wisdom can modify, improve, perfect. In this I know we are of one mind, that though the ideal we all of us hold be never reached during our lives, we shall continue to work successfully for its realisation. Utopia itself is but another word for time; and some day the masses, who now heed us not, or smile incredulously at our proceedings, will awake to our conceptions. Then our knowledge, like light rapidly conveyed from one torch to another, will bury us in its brightness.

> "By swift degrees the love of Nature works
> And warms the bosom, till at last sublim'd
> To rapture and enthusiastic heat,
> We feel the present Deity, and taste
> The joy of God to see a happy world!"

COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond., F.R.C.P.,
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Lecture IX.—Fibroid Induration of the Lung (Cirrhosis).

(*Concluded from page* 414.)

After the illustrations furnished by the preceding cases, little remains to be added upon the subject of diagnosis. The disease produces consolidation of the lung, combined with contraction of the diseased pulmonary tissue and dilatation of its bronchi. Its distinguishing marks will therefore be the physical signs indicative of those conditions: a falling-in of the chest-wall at the seat of disease, with drawing of the neighbouring organs towards the affected part; dulness on percussion, with usually diminution in vocal fremitus; loud blowing or cavernous breathing, with metallic crepitation and gurgling, and bronchophonic resonance of the voice;—these signs confined to one side of the chest; the other lung being healthy. Additional evidence is furnished by the character of the special symptoms. The cough is paroxysmal, and ends in the expectoration of large quantities of offensive purulent fluid, sometimes also in retching and sickness. The breath often has an offensive putrid odour. There are signs that the blood passes with difficulty through the lungs: the right ventricle is frequently hypertrophied; the superficial veins of the chest, neck, and often of the arms, are unusually visible; and the fingers soon become clubbed.

If the case be first seen during an attack of catarrhal pneumonia, it may be mistaken for one of pleurisy with effusion; if there be much falling-in of the chest-wall, the disease may be confounded with pleurisy in the stage of retraction. The distinguishing marks, by means of which the two diseases may be recognised, have already been insisted upon. Of these, the one which may be looked upon as of the chiefest importance in excluding pleurisy is the presence of metallic gurgling rhonchus; for although, in the pleurisy of childhood, cavernous breathing and bronchophony are far from uncommon, the breath-sound is not accompanied by rhonchus, and the crackling friction which is often heard can usually be readily recognised by its superficial character, and is never large and metallic like the sounds produced in a rigid, dilated air-tube. The cavernous character of the breath-sounds may cause the presence of ulcerative destruction of lung to be suspected, but the strict limitation of the disease to one side of the chest, which would not be the case in phthisis, may serve to establish the difference. Besides, the general condition of the patient is here of importance. In fibroid induration of the lung nutrition is usually fair and the strength pretty good, while the third stage of phthisis is seldom unaccompanied by emaciation and great weakness. It must not, however, be forgotten that ulceration of the bronchial tubes may occur as a consequence of the continued irritation induced by the fetid contents of the tubes, and may lead to destruction of lung-tissue and the formation of cavities. In these cases (called "fibroid phthisis" by Dr. Andrew Clark), cavities and dilated bronchi may be present in the same lung. Here, however, the opposite lung seldom escapes, and, if there be much destruction of tissue, general nutrition is seriously impaired. The child wastes and becomes more and more enfeebled; his temperature is high; and he dies with all the symptoms of consumptive disease. In most cases where ulceration of the bronchial tubes is taking place, a careful microscopic examina-

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tion of the sputum will discover the presence of fragments of elastic tissue.

The prognosis in fibroid induration of the lung in children is not necessarily unfavourable. So long as it remains simple it appears to exercise little influence upon the nutrition and general development of the child. It becomes dangerous only through the accidents which such a condition of lung tends especially to provoke. As such patients are very sensitive to changes of temperature, they are very prone to suffer from attacks of pulmonary catarrh, and on account of the difficulty met with in expelling secretion from the rigid air-tubes, the sputum is apt to be retained and to putrefy. It then gives rise to great irritation, and after a time may excite an attack of catarrhal pneumonia. The seat of the induration is therefore of importance in prognosis, for if the apex of the lung be the part affected, the force of gravity will itself tend to prevent accumulation of secretion in the air-passages, and the chances of retention will be greatly diminished; while in the case of disease at the base of the lung, all the conditions assist in opposing the escape of the contents of the tubes, and the danger of an attack of catarrhal pneumonia is materially increased. As the irritation of the bronchi is in direct proportion to the degree of putrescence of the expectoration, an offensive smell from the breath or the sputa is a certain sign that the lung is exposed to the risk of inflammation.

Catarrhal pneumonia, when it occurs, generally assumes the subacute, and therefore less severe type, and if the disease be not extensive and the nutrition of the child be good, often ends favourably after a time, but its course is apt to be protracted, for the retained decomposing secretions act as a constant source of irritation. When the attack of pneumonia is acute and violent, its issue is usually as disastrous as in any other case of this serious disease.

Anything which reduces the strength of the child, such as attacks of diarrhœa, or of vomiting, or of severe hæmoptysis, must be looked upon as an unpromising symptom, for healthy nutrition of the body generally is indispensable to favourable progress. Hæmoptysis is not necessarily a sign that ulceration of the bronchial tubes is taking place, but it is often due to this cause, and when it occurs, a careful microscopic examination of the expectoration should be made. If amyloid disease of organs occur, especially if it be accompanied by œdema, the prognosis becomes very serious, but even in these cases death may not take place until after considerable delay. Œdema, although unaccompanied by amyloid change, is itself a dangerous symptom, as it betokens a very impoverished condition of the blood.

The treatment of fibroid induration of the lung consists in doing our best to maintain healthy nutrition, and in preventing, if possible, the accidents to which this state of lung is necessarily prone. On account of the sensitiveness of such patients to changes of temperature, great care should be taken to avoid sudden chills. The child should be warmly dressed, and should never leave the house in damp or cold weather without some special protection for the neck and chest. All catarrhs should receive immediate treatment. The patient should be at once confined to bed, and saline diaphoretics should be administered so as to loosen the cough and relieve the irritation of the air-passages. Afterwards, stimulating expectorants can be employed to assist in the expulsion of the phlegm. In cases where there is great rigidity of the bronchi, and little power to expectorate, and especially in cases where an offensive smell from the breath indicates that secretion has been retained and is putrefying in the tubes, disinfecting and astringent inhalations should be employed to remove the offensive character of the secretion and prevent its reproduction. Inhalations of steam, impregnated with carbolic acid or creasote (twenty minims to the pint), may be made use of, and the addition of a teaspoonful of the compound tincture of benzoin, which is a powerful stimulating expectorant, will be found of service. When the amount of secretion is large, it can often be controlled by limiting the quantity of liquid taken by the patient, and by the use of tannin and other astringents in a spray. In these cases, the best medicines are tonic and astringent remedies, such as tinct. ferri perchlor. in large doses, with quinine, and a few drops of liq. morphiæ. Cod-liver oil is also useful. The expulsion of the contents of the tubes is greatly assisted by an occasional emetic. The best emetic in these cases is the one which acts most quickly and produces the least nausea, such as a teaspoonful of mustard in water, or a couple of drachms of powdered alum in syrup. Sulphate of zinc is not to be recommended for children, as its action is very uncertain.

In cases where vomiting takes place after the fits of coughing, great interference with nutrition may be the consequence, for the paroxysms of cough are apt to occur immediately after a meal; and in such a case the greater part of the food may be returned. Now, the vomiting cannot be regarded as otherwise than a beneficial act, in that it assists in the expulsion of the injurious secretions. It is only hurtful to nutrition because it takes place at an inconvenient time. In these cases the terminal vomiting may often be controlled by small doses of liq. strychniæ, or by one drop of liq. arsenicalis given with iron and morphia; but as it is undesirable to put an end to the vomiting entirely, this may be encouraged at another time, as in the early morning, by draughts of warm water, preceded, if necessary, by a dose of alum or mustard in water.

Catarrhal pneumonia, when it occurs in these cases, must be treated in the usual way. When there is dropsy, tonic and astringent remedies are especially indicated.

ORIGINAL COMMUNICATIONS.

CASES OF OBSCURE NERVE DISORDER.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
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(*Continued from page* 184.)

Case 13.—*Febricula—Great Debility—Paralysis of Right Leg—Recovery after Blister—Remarks.*

E. M., AGED twenty-nine, servant, hair black, eyes grey; admitted March 19, 1875. Ill seven days. Has generally pretty good health. Never had hæmoptysis. Had diarrhœa for two days before admission. Bowels open four times since; stools very offensive and greenish-yellow; some stomach-sickness also. Tongue moist, a little coated. Coughs, and expectorates mucous fluid. Right subclavicular region rather flattened; percussion-note at that part is pretty good, but not so full as at left. Air enters freely during inspiration in left front; not so freely in right, and there are more râles heard in it than in left. No marked dulness in backs; breathing rather weak in both, especially in right, where there are some imperfect râles. Family asthmatical, but long-lived. Heart's sounds quite normal. Temperature 101·6° this morning, 103° last night. No eruption; is very weak; urine not albuminous, of good colour, barely acid, contains an excess of urea, throws down lithates when nitric acid is added. Simple diet, milk, beef-tea. Acidi nitrici ℥iij., aq. 3j., quater die.

March 22.—Temperature at 11 a.m., 98·4°. Bowels not open for twenty-four hours. Tongue moist and clean. Expectoration mucous.

25th.—Pulse 78; temperature 97·6°. Urine, specific gravity 1014; no albumen. Scanty mucous expectoration. Is hungry. Right front is still less resonant than left, but the breathing is quite as good in one as in the other. In the supra-spinal fossæ also the breathing on both sides is fairly good. Fish and pudding.

30th.—Total urine of twenty-four hours 68 oz., specific gravity 1016; total acidity for twenty-four hours 62·69 grains of oxalic acid.

April 1.—Is very weak, can hardly stand. Chop; extra stout. Quin. disulph. gr. ij. ter die.

8th.—Is getting on well, except that his right lower limb is almost completely paralysed as regards motion; he can scarcely flex or extend the limb at all, and cannot exert any force against an arm opposing the movement. He is unable to stand. Was weak in both legs when he was admitted. He cannot retain his urine very well. There is no loss of sensibility in the skin of right lower limb, but when his foot is on the ground the sole feels puffy. He has a peculiar numby feeling about the middle of the thigh at the outer forepart, which makes him feel sick; and a peculiar sense of irritation about the limb day and night, which makes it difficult for him to get it into an easy posture. The irritation commences from the spot just indicated, which is about three inches in the vertical diameter by three inches in the transverse. He does not bear handling of this spot well; it does not cause pain, but makes him feel queer all over. He broke the right thigh fourteen years ago, and he was laid up a long time; was two years unable to walk without crutches; the strength returned quite suddenly to the limb. The situation of the fracture corresponds pretty nearly with that of the spot above indicated, and there is perhaps some thickening in this situation.

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Both the femoral artery and the dorsalis pedis are felt beating on the right side. The right leg felt colder to him than the left. A blister was ordered to the patch of skin from whence the irritation seemed to start, and liquor vesicator. was brushed over it. While this was being done, he remarked that he felt the sensation which it caused down to the foot.

10th.—Blister has risen, and has relieved the irritation; the leg feels more comfortable and warmer. To have sole in place of chop.

12th.—Has gained a good deal of power in right leg; can flex and extend it easily, and can push with some force against a resisting arm.

19th.—Can extend and flex his leg now at the knee against all the force I can exert against it with my arm, and can walk about, but halts on the right leg. The abnormal sensations have disappeared.

26th.—Seems now quite well; walks perfectly well, and can exert great force with right leg; has normal control over his bladder.

Went out in a day or two after.

Remarks.—This case is surely one of great interest. There can be no possible doubt that the limb was truly paralysed, and that completely as regards motion. Sensation was also disordered, but was not lost—at least, to any notable extent. The temperature was probably a little lowered, but the vaso-motor nerves were not so affected as to interfere with the circulation through the limb. There was no evident wasting of the part. The same disorder seems to have occurred fourteen years previously, after fracture of the right femur, and to have disappeared almost suddenly after continuing two years. The effect of a blister to a certain part of the integument was immediately beneficial and very speedily curative. These facts cannot be explained on the view of a neuritis of the sciatic nerve having been set up by the injury to the bone, for if this had existed to the extent of causing such marked paralysis, it must have caused more pain, and could not have disappeared so suddenly. That the fracture was in some way concerned in causing the morbid change can hardly be doubted, but it is difficult to say how it acted. On the first occasion a sensory nerve filament may have been caught in or teased by the callus, but this could not have been the case on the last. The disease for which he was then admitted seems to have been an attack of febricula, or perhaps of abortive typhoid, and can hardly have affected the seat of fracture. Perhaps the great general debility which the fever caused may have reproduced the derangement in the originally injured nerve filament. However this may be, there can be no doubt that the innervation of a certain patch of skin of the affected limb was peculiarly deranged, and that impressions proceeding from this area were widely felt throughout the system. These impressions arriving at the motor nerve cells giving origin to the filaments of the crural and sciatic nerves, prevented their natural action, and caused paralysis. The cells presiding over the motor nerves of the bladder were similarly, but less severely, affected. The loss of power was owing to a true paralysis, and not to a rigid state of the muscles, such as might be thought to have been produced by excessive stimulus of afferent nerves. The case is a good instance of reflex paralysis, all the more proving from the palsy having been confined to one side. Brown-Séquard is certainly right in directing attention to the peripheral origin of various grave disorders involving nerve-centres, both of a spasmodic and paralytic character. The peripheral change or lesion may often be latent, and so escape notice. This is well known as regards reflex pains and dysæsthesiæ, but not so well as regards the homologous motor disorders.

A CASE OF MALARIOUS HÆMATURIA.

By C. R. FRANCIS, M.B.,
Surgeon-General, Bengal Army (retired).

PAROXYSMAL HÆMATURIA has formed the subject of some discussion in the medical journals during the past few years, but it seems to be now generally admitted that the disease is usually of malarious origin; quinine, with or without iron, being the staple of treatment. In the following case, which came under my observation recently in India, although the hæmaturia was not(a) paroxysmal, malaria was evidently the *fons et origo mali*. The patient, a male European infant at the breast, and about four months old at the time of the attack, became feverish on March 29, 1873. The child's complexion was habitually very pale, and his temperament eminently nervous—inheritances from his father; but, up to the above date, his health had been uninterruptedly good.(b) The fever, which assumed the characters of a somewhat irregular intermittent, subsided shortly after midnight, but returned the following evening. It thus continued, with varying severity and more or less irregularity, till April 9, when the high colour of the urine attracted attention. On the 14th this high colour had greatly increased. Between these two dates the urine had soaked into the napkins in the ordinary way; but on the latter date, at the request of the medical officer in attendance, it was voided (with evident suffering) into an eight-ounce measure-glass.

The secretion, which emitted little or no smell of urine, looked like pure blood, and soon separated into two distinct portions—a dark-red deposit, and a clear supernatant fluid resembling liquor sanguinis. On putting some of the deposit under the microscope, large quantities of (apparently) crystals of oxalate of lime were seen, with urates, and entire red corpuscles mixed with what was no doubt the *débris* of others. Owing to a singular oversight the liquor was not tested with the care with which it might have been. It would, doubtless, have been found full of albumen. The child was now, as may be supposed, very weak.

The attack being (presumably) malarious, it was decided to give quinine in full doses to the mother, this being considered a safer course than administering such a powerful drug direct to so young an infant; whose stomach was, moreover, very irritable. Five grains were therefore prescribed, to be taken in the evening in anticipation of the expected paroxysm. Ten grains were given in five-grain doses on the following day, and repeated daily till the 17th, when, improvement having taken place, the doses were reduced. Gallic acid was added to the first three doses of quinine, but was then discontinued, as the infant was griped, and there was no amelioration. No decided change occurred in the urine until twenty-five grains of quinine had been taken. Then the napkins were decidedly lighter; and from this time the renal secretion was rapidly restored to its normal condition.

On the 18th it was quite natural, and the fever had (for the nonce) altogether disappeared.

The child remained weakly for some weeks (and even months) afterwards, and symptoms of fever showed themselves occasionally; but quinine, taken by the mother, always arrested the attacks.

On May 12, rather extensive discolorations (from purpura) appeared on an arm and a leg, and more slightly on the trunk. These, too, yielded to quinine and tonics.

The little patient remained under my observation till September, 1874, when I left the station. During that period his health varied. For a few weeks together he would, apparently, be quite well; then, under irritation from teething, feverishness or diarrhœa would throw him back; but the abnormal condition of the urine never returned.

(a) It seemed rather as if the blood itself took the place of the urine, which should have been secreted from it. Doubtless both the purpura and hæmaturia were due to the same pathological condition.

(b) The child had been vaccinated about three weeks previously, with a satisfactory result.

THE PARIS FACULTY OF MEDICINE.—Stimulated, we suppose, by the threatened rivalry of the new clerical *soi-disant* "free" University, the Minister of Public Instruction has just appointed a Commission to report on the means of ameliorating and rendering more complete the teaching of the Faculty of Medicine. Besides the officials of the various bodies connected with the Ministry of Public Instruction, Profs. Chauffard and Würtz, of the Faculty, and MM. Moissonet and M. Alphonse Guérin, members of the Council of the Assistance Publique, constitute the Commission. Prof. Würtz has resigned his office of Dean of the Faculty—not, however, as was supposed, in consequence of his appointment of Professor of Organic Chemistry at the Faculté des Sciences, for he still retains his Professorship of Chemistry at the Faculté de Médecine, where his lectures are highly appreciated. He has resigned the office of Dean, as many others have before him, from inability to execute its functions; and it may be said to be going begging, Professors Gosselin, Depaul, and Vulpian having successively refused it. It seems that the Paris students are very difficult to manage, and have been a source of torment to many successive Deans, as Orfila, Bouillaud, Rayer, Tardieu, and now Prof. Würtz.

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REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASES UNDER THE CARE OF MR. BIRKETT.

Case 1.—*Exostosis from First Ribs—Pain in Course of Cervical Nerves—No Relief.*

[Reported by Mr. P. F. Gilbert, Ward Clerk.]

Harriet P., aged twenty-two, was admitted into Martha ward on January 6, 1875. She was in this ward under Mr. Birkett, three years ago last May, for seven weeks. Patient had then noticed a swelling for four months. When first noticed it was about the size of a pea, and gradually increased until admission, giving rise to considerable pain in the shoulder and arm.

On admission in 1871 there was fulness at a point behind the junction of middle and inner thirds of clavicle; there was pulsation visible, but the skin was natural in appearance. There was constant pain, severe at times, and a bony prominence, conical in shape, reaching one inch and three-eighths above the clavicle.

On May 23 Mr. Birkett made an incision about three inches long, a little behind the clavicle, over the prominence downwards, and outwards and forwards. He then turned aside part of the brachial plexus, and chipped away the growth piecemeal, leaving a rough surface. Base of growth was broad, and attached to first rib.

Patient went out on July 24, 1871, with wound healing by healthy granulations.

She got better after being at home some time. She never quite got rid of the pain, but suffered no inconvenience for six months. Then she noticed a pain running from the site of the tumour up the side of the neck, behind the ear, on the left side of the head, and in the temple. This is not constant, and does not recur at fixed intervals. The pain has been getting worse up to the present time, and is so severe that she feels very dizzy and cannot see out of the adjacent eye. The pain is of a sharp throbbing character, and the left side of face flushes, sometimes the right also. She also complains of a shooting pain in the left side, about the posterior border of axilla, in the left shoulder, and in the left arm along the anterior surface and down the extensor side of the forearm, and down the middle finger. The pain is of the same character as that in the head. Patient complains of a pain in the shoulder on inspiration. When the pain is bad she says her breathing gets somewhat affected. She states that the tumour has increased in size since she left the Hospital, and occasionally is very painful. She has been under treatment ever since.

On examination, there is a soft ovoid cicatrix about one inch in breadth and three inches in length, extending downwards and outwards to the upper border of the external half of the clavicle. Somewhat to the inner side of this is felt the subclavian artery, pushed forward so that it may almost be grasped. In the centre of the cicatrix may be felt a roundish, smooth, and hard tumour apparently coming directly forwards, and very tender when pressed upon. The left pulse appears rather more feeble than the right.

January 11.—Patient is in bed, with severe attack of pain in head and side, radiating from the tumour, and lasting for several hours. This is the first severe attack of pain since admission. Face is much flushed, and pupils dilated. She says the sight is impaired.

18th.—Continued much the same as she had been for some time previously, and went out unrelieved.

Case 2.—*Injury to Musculo-Spiral, etc., Nerves—Partial Paralysis of Forearm—Small-pox—No Relief—Patient sent to Stockwell December* 3—*Death.*

[Reported by S. J. Instone.]

The following case illustrates the advantage of a correct anatomical knowledge in diagnosing the seat of injury correctly. Here, owing to paralysis of certain parts only, it was known that one end of a large plexus was affected. Unfortunately, the patient developed small-pox fifteen days after admission to the hospital, from which he died:—

Samuel M., aged twenty-seven, a sailor, was admitted November 16, 1874, into Lazarus ward. He gave the following family history. Father and mother alive; has four brothers and one sister, alive and well. Has always enjoyed good health. About five years ago he dislocated the first phalanx of his thumb. He had yellow fever about three years ago, and about the same time also he lost the sight of his right eye through some paint getting into it. About ten weeks ago, on the river near Antwerp, he went down the side of a ship to clear a foul anchor, when the cable that held it slipped, and the chain twisted round his arm, and carried him down to the bottom of the river with the anchor. He was extricated with some difficulty and taken to a hospital. There was a wound on the inner side of his arm just above the elbow, which bled a good deal at the time, and also a bruise on the outer side, which afterwards sloughed. Since then he has had hardly any use in his arm.

On admission, patient is a tall, healthy-looking man. He has an old cicatrix on the outer and inner side of his left arm, just above the elbow. There is more or less loss of sensation in the forearm, and also atrophy of the muscles. The forearm lies in the prone position, and the hand drops downwards. He can supinate the arm slightly by means of biceps muscle, and also flex his fingers a little, but there seems almost complete loss of motion in the extensor muscles, producing dropped wrist.

November 20.—Patient has had his arm galvanised to-day.

25th.—Can flex his fingers a little better since his arm has been daily galvanised. He has sensation in the fourth and fifth fingers, and also in the thumb and the back of the hand better than in the other fingers. Galvanism (interrupted current) has been applied daily without much improvement.

On the evening of November 28 patient did not feel so well as usual, and on the next day had a fit of shivering, accompanied by pain in the back and head. A dose of aperient medicine was given, and patient remained in bed.

30th.—To-day he feels no better; his bowels have freely acted, but the pain in back has increased in severity, with some pain in the abdomen about the umbilicus. Vomits occasionally. Morning temperature 103°; respirations 28; pulse 100. Ordered quinæ sulph. gr. v., t. d. s., and milk diet. Evening temperature 102·8°; respirations 24; pulse 100.

December 1.—Has passed a very restless night, owing to the severe pain in back, but seems a little easier this morning. Bowels moved. Ordered pulv. Doveri gr. x., t. d. s. Morning temperature 102·8°; respirations 24; pulse 100. Evening temperature 103·8°; respiration 28; pulse 108.

2nd.—Patient has been very restless all night. Suffering from great thirst. Pain in head and back still very severe. This morning, on patient's forehead, face, trunk, and upper extremities there is an eruption of small, red, isolated spots, which are raised above the skin, some round, others irregular in shape; these are very close together on the face, but more scattered on the trunk and upper extremities; but very few on the abdomen, and none to be seen on the lower extremities. There are two solitary spots on the upper part of the chest, which are distinctly vesicular. Temperature 103·8°; respirations 28; pulse 112.

3rd.—This morning the eruption on face is much more confluent; only here and there can small patches of normal skin be found. The spots on trunk and upper extremities are vastly increased, the old ones becoming vesicular, and in a few instances quite pustular. The eruption has also appeared on the lower extremities. The pain in back has very much diminished since the appearance of the eruption. Temperature 103°; respirations 24; pulse 100. Mid-day temperature 103°. Evening temperature 101·8°; respirations 26; pulse 100. 10·30 p.m.: Patient complains this evening of throat being so sore, and on examination the whole of the mucous membrane is found to be swollen and injected, and covered with small white patches.

4th.—Patient has had no sleep during the night. The throat is more swollen. The eruption on the face is now so confluent that it presents a universal nodular appearance; about the trunk and extremities it is thicker, though still distinct; and on the back there are a few large pustules surrounded by several rows of minute vesicles radiating from the pustule. Temperature 101·2°; respirations 24; pulse 92. Patient was removed this day to Stockwell Hospital, where he died a few days afterwards.

Case 3.—*Webbed Fingers—Operation—Improvement.*

[Reported by Mr. P. F. Gilbert, Ward Clerk.]

The following case is interesting, as showing the existence

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of the same kind of deformity of limb in several members of the same family, and in two generations:—

Selina B., aged sixteen, was admitted on November 25, 1874. Her family history was good. Patient came into the hospital to have two of her fingers on her left hand separated—namely, the second and third,—which are united from the base to the tip by integuments; but the first phalanges are much more strongly united than the other two. The ungual phalanges are not webbed at the extremities. The thumb of the same hand has a slightly flattened terminal phalanx and some distortion. Ungual phalanges of both thumbs flattened; nail widened out, and bone also appears to be expanded and flattened. Patient has a brother with two thumbs on each hand; and another brother, now dead, who had the same condition, with a tendency also to webbing between the second and third fingers of the hand.

December 2.—Chloroform was given, and the patient's fingers were separated as far back as the natural division. Dressed with the carbolised gauze every day. Healed rapidly as far as the articulation between first and second phalanges. Further back than this granulating, and showing a tendency to fill up again.

7th.—The mother of the patient brought up another daughter to-day, aged nineteen, in whom the thumb of the right hand was double from the metacarpal articulation; the phalanges, however, were united along their whole length by webs of skin. There are two separate nails. The mother says she has had eleven children, but, with the exception of the four mentioned, all were perfectly formed. Her own family have nothing of the kind, but her husband and his brother have each flattened thumbs.

12th.—Going on nicely.

19th.—The back of hand is swollen, but the wound between fingers looks healthy.

23rd.—Was ordered to keep in bed, and the swelling has now gone down. The wound is closing well.

28th.—The fingers have a tendency to re-unite. The hand looks healthy, and does not give much pain.

29th.—The reunion was broken down to-day, and the fingers kept separate by an elastic band.

30th.—The band was taken off, as it hurt the fingers, and lint has again been placed between the fingers.

January 1.—Doing well.

6th.—Discharged.

11th.—Came up to have fingers dressed. Fingers perectly healed as far back as a little beyond the first articulation, and healing rapidly beyond this. Kept well apart. Great improvement since she left.

March 1.—Patient came up about three weeks ago to show herself. The wounds had perfectly healed, and the fingers were separate as far back as half-way down the first phalanges, and she had good use in them.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

EMPYEMA—PARACENTESIS—RECOVERY.

(Under the care of Dr. CAYLEY.)

[For the notes of the following cases we are indebted to Mr. Burtonshaw, House-Surgeon.]

George A. N., aged two years, was admitted May 28, 1875, under the care of Dr. Cayley, with the following history:—Previous health good. Present attack began a month ago with cough, dyspnœa, and fever. During the last week or two has had accessions of fever every night, followed by sweating, and has lost much flesh.

State on Admission.—Child anæmic and considerably emaciated. No marked dyspnœa. Absolute dulness over left base behind, as high as spine of scapula. Over dull space breath-sounds are extremely feeble. On opposite side breathing exaggerated. In front, percussion- and breath-sounds normal on both sides. Heart slightly displaced to right.

Paracentesis performed. Puncture made in line of angle of scapula. Two drachms thick pus withdrawn.

June 1.—General condition much improved. Dulness at left base much less marked. The breathing continues very feeble.

4th.—Physical signs remain the same.

15th.—At left base there is comparative but not absolute dulness as high as spine of scapula. Breath-sounds, though feeble, everywhere heard, and vesicular in character.

After this the patient made a good recovery, and was sent to the Convalescent Home at Croydon on August 5.

September 24.—Returned from Croydon looking remarkably well.

PLEURISY—PARACENTESIS—RECOVERY.

(Under the care of Dr. CAYLEY.)

Charles S., aged seven years, was admitted as an out-patient on June 15, under the care of Dr. Cayley. He had scarlatina twelve months before, and had not been well since. He was very anæmic, and complained of pain in his left side, cough, languor, shortness of breath, and at night-time chills and sweatings. There was dulness on percussion at the left base, in the axilla, and in front as high as the fourth rib; apex of heart beat in epigastrium; over dull space the breathing was feeble; the intercostal spaces appeared somewhat bulging; no cardiac murmur was audible. Paracentesis was performed in lower part of axilla. Fifteen ounces of greenish serum were drawn off by the aspirator. The child then returned home.

June 10.—Attended again. The axilla and front of chest were now resonant. There was dulness at the base of the lung behind. The breathing over the base of the lung was feeble, but not tubular, and accompanied by some fine crepitation. General condition much improved.

22nd.—Physical signs the same. A systolic murmur was now noticed over the base of the heart, and a loud venous hum at the root of the neck. The murmur was probably due to anæmia.

From this time the patient's health gradually improved, and the physical signs over the lung became normal, but the cardiac murmur remained. He continued to attend until August 20, when he was discharged cured.

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Medical Times and Gazette.

SATURDAY, OCTOBER 16, 1875.

THE MODEL CITY OF HEALTH.

We have heard it said that attendance at the scientific and other congresses and meetings which are now held regularly every autumn is really a weariness to the spirit and the flesh, and that most persons who are not either enthusiastic talkers or paper-writers come away year after year declaring that they have been awfully bored, and will never go to a congress

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again. But this must no doubt be taken as an invention of the cynics, or as the plaint of some unwary and helpless victim of hobby-riders, for it is certain that numbers of individuals do attend these congresses over and over again, though impelled thereto very probably by very various and fixed motives. It cannot be denied, however, that the meetings in question are apt to be attended more or less largely by hobby-riders, or that the papers read at them must, sometimes at any rate, be founded on and supported by statistics and other "dry details," which may seem very tedious and wearisome to the multitude. There can be, then, no question that the members of the Social Science Congress must have been delightfully surprised and proportionally grateful when the President of the Health Department, instead of giving a "dry" scientific address, indulged them with a poetic vision of a model city of health, planned, built, and governed as Science would govern, build, and plan it, with the special object of combining "the lowest possible general mortality with the highest possible individual longevity, so as to show a working community in which death is kept as nearly as possible in its proper or natural place in the scheme of life." We feel sure that our readers will be grateful to us for giving them the pleasure of perusing Dr. Richardson's address in full, and will agree with us that it does not admit of abstract or condensation, as also that it does not admit of ordinary criticism. It would doubtless be easy to pick holes in it; to point to the ignoring of difficulties, and the omission of important and even necessary details; to suggest that such a scheme, if it could be carried out, would reduce men to perpetually ruled and governed machines, destroying all individuality of character and temperament, or at least requiring individuality to be entirely subordinated to the general good; and to speak of it as utterly impossible of realisation this side of the millennium. But is it not the poet's or seer's part, or privilege, to ignore difficulties and prosaic details, and to present to us a picture of the imaginable "best" for man and his surroundings? We may believe that could any set of human beings, such as they now are, be placed in Dr. Richardson's Hygeiopolis, there would ere long be a wild outbreak and revolt against the proprieties and perfections of their environment; but that is no reason why Dr. Richardson should not tell us what man, as he should be morally, might become physically under sanitary conditions that are scientifically possible. On the contrary, as we know how vastly man's moral nature is affected by his physical surroundings, and how insanitary conditions debase him, and cause drunkenness, debauchery, cruelty, and crime, as well as disease, there is all the more reason for picturing, so graphically as Dr. Richardson has done, what man might be if all that sanitary science calls for could be carried out. And our readers will not fail to note that there is hardly a single detail of the arrangements and construction of his city of health that has not already been worked out and recommended by the pioneers of sanitary reform. He has but most skilfully gathered them together, and presented them to us in the concrete, as a standard towards which we may work. He tells us that his model city "is so built that existing cities might be largely modelled upon it"; but a comparison between his Hygæia and our efforts at remodelling or improving our existing cities might make us despair. Some details will be found elsewhere in our columns of what seems a grand scheme for the improvement of a small part of London; but how mean, miserable, and utterly insufficient is the plan when contrasted with Hygæia, where every street is broad and well lit by the sun, where no house is higher than sixty feet, and no underground room exists; where "gutter children are an impossibility," as gutters are unknown; "instead of the gutter the poorest child has the garden; for the foul sight and smell of unwholesome garbage he has flowers and green sward"; and where, in the bedrooms, "twelve hundred cubic feet of space is allowed for every sleeper," and every unclean or old garment is rigorously excluded!

But we will not allow ourselves to be betrayed into attempting any detailed examination of Dr. Richardson's eloquently depicted vision; we will not question any point of the magnificent results promised in respect of health of mind and body, or any one of the long list of diseases that would, according to him, be effaced; and we will even suppress all expressions of surprise at his unqualified counterblast against all use of "God's good creature, tobacco," as well as against all use of fermented drinks. The Address is most originally conceived, and ably executed, and will surely, we trust, lead some at least of its readers to a more thoughtful and vivid appreciation of what might undoubtedly be done towards the "effacement" of disease and the real civilisation of man.

THE WORKING OF THE ARTISANS' DWELLINGS IMPROVEMENT ACT.

It is evident that there is no disposition on the part of the Metropolitan Board of Works to allow the Artisans' and Labourers' Dwellings Improvement Act to come into operation without availing themselves of the powers which its clauses afford. Already their chief engineer, Sir J. W. Bazalgette, C.B., assisted by Mr. G. Vulliamy, the superintending architect, has presented an important report on the proposed improvements which it is contemplated to effect by means of the recent legislation. The Medical Officer of the Holborn District Board having represented that the area bounded by Gray's Inn-road on the west, Leather-lane on the east, Portpool-lane on the north, and Greville-street with Fox-court on the south, was, in his opinion, an unhealthy area for the purposes of this Act, the Metropolitan Board proceeded, on July 31 last, to view the district. The result of this inspection was the accepted opinion that the houses, courts, and alleys visited are unfit for human habitation, owing to their closeness, narrowness, and bad condition, and that these evils could not be effectually remedied otherwise than by an improvement scheme for the rearrangement and reconstruction of such streets and houses. A similar representation was made on July 27 regarding an area in Whitechapel; and further representations have since been made to the Board by local medical officers respecting other portions of the metropolis. These will all be considered in due course.

The report of the Dwellings Committee of the Dwellings Organisation Society, in 1873, and the facts detailed in a paper read before the Statistical Society in February last by Mr. Gatliff, afford much useful information on the subject. From these it may be gathered that there have been twenty-eight associations and individuals who, from motives of philanthropy or commercial speculation, have between them, so far as can be ascertained, provided improved dwellings for 32,435 of the poorer classes at an expenditure of about £1,209,359. Eight blocks of buildings erected in different parts of London by the Association above mentioned afford on an average an area of thirty-eight superficial feet per occupant, one-half of which is uncovered, and used for recreation, independent of the public thoroughfares. All the private associations have had the advantage of selecting sites for their buildings upon open spaces and adjoining thoroughfares, where land could be cheaply obtained, but the Metropolitan Board will, before the area under consideration becomes available for new buildings, have to purchase compulsorily the present buildings, and the trades carried on in them, to pull down and clear them away, and then to form new thoroughfares and drainage. It must not, therefore, be expected that the Board will be enabled under these conditions to provide the poorer classes with improved accommodation at low rents, at an outlay upon which the return will be

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remunerative. Much more might be done with this area it is proposed to remodel in Holborn, but the existence of Reid's Brewery (which stands on its northern side), of some factories, and of St. Alban's Church and Schools, would render the purchase of the ground too costly. At present it is suggested to form a new street, in continuation of Greville-street, into Gray's-inn-road, another in the line of Bell-court and Dorrington-street, a third in the line of Baldwin's-gardens, and a fourth in the line of Verulam-street and Union-buildings. The whole area, being thus intersected by public roads, will be again subdivided by twenty-two blocks of buildings, which will have paved open spaces, averaging thirty feet in width, surrounding each block. In forming the four new streets into Gray's Inn-road, it will be necessary to purchase and pull down some of the houses in that road, most of which are very old, dilapidated, and overcrowded. Some difficulty has been experienced in ascertaining accurately the number of the present resident population, owing, partly, to the migratory nature of the people, and partly to their desire to understate the number of their children, lest they should attract further attention from the School Board; but, as near as it can be ascertained, it amounts to 5515—one half adults and the other half children. It is proposed to deal with the 10½ acres included within the unhealthy area in the following manner:—Two acres and three-quarters of the factories, etc., before mentioned will remain undisturbed, one-third of an acre will be given up to the rebuilding of schools to be removed by the present scheme; one acre will be applied to the widening of Gray's Inn-road, 2½ acres to the formation of new thoroughfares within the area to be dealt with, and 2 acres to be left in spaces for air and recreation between the new buildings, so that the open spaces over the whole area will amount to about 4¾, instead of the present existing open spaces of 2½ acres only. The new labourers' dwellings will cover an area of about 2 acres, and will be calculated to provide not less than 500 cubic feet of air per adult; each house will contain on the average five separate floors or flats, which will average about 9 feet in height from floor to floor, and give a mean superficial area of about 150 square feet for living-rooms, and 100 square feet for bedrooms.

This is the proposed commencement of plans for rooting out some of the vilest and most unhealthy dens in the metropolis, and if the results achieved only equal the expectations formed, it will have to be conceded that the present Government has passed a sound, wise, and beneficial measure in the Artisans' and Labourers' Dwellings Improvement Act.

MEDICINE IN NEW SOUTH WALES: AN ENEMY IN THE CAMP.

The colony of New South Wales is unfortunate in not being protected by a Medical Act. All the neighbouring colonies—Victoria, Tasmania, South Australia, and Queensland—have a Medical Act, by which the public are protected against uneducated practitioners of medicine; but in New South Wales quacks and medical charlatans of all nations have hitherto been permitted to have full licence to practise.

Recently an attempt has been made to limit the practice of medicine to those who are duly qualified, and a Bill has been introduced into the Legislative Council of the colony to protect, as far as possible, persons suffering under disease or other bodily ailments against medical or surgical treatment by unskilled or ignorant individuals.

When the Bill came on for discussion, it was, to the astonishment of everyone, opposed in a most violent speech by Professor Smith, Dean of the Faculty of Medicine in the Sydney University. The speech, a copy of which is now before us, is of an extraordinary character; indeed, it appears almost incredible that an educated man, especially one holding such a high position as Professor Smith does, could have delivered himself of such sentiments. He began by saying that he wished to treat the medical profession with the utmost possible respect, and passed a high eulogium on its members for their benevolent efforts to promote the public good, but he soon showed his insincerity by insinuating that the qualified members of the profession in New South Wales were as dangerously ignorant and incompetent as those unqualified practitioners against whom it was intended to protect the public. He could not, he said, support the Bill, because it could not possibly protect the public, as there is ignorance and unskilfulness within the profession as well as out of it. There are unqualified practitioners, as well as qualified, among those legally recognised, and many given over to intemperance, against whom patients cannot be protected by Medical Bills.

As regards ignorance in the profession, the Professor said he had had opportunities, as one of the examiners in the University of Sydney, to come across some of it. Candidates, legally qualified and registered, had failed to pass, and others had not only failed, but their answers displayed an extraordinary amount of ignorance. That ignorance should be found in the profession was not to be wondered at, as medicine was more of an art than a science, and could not be taught by books and lectures only. A young man could gather sufficient from books to pass an examination, but a practitioner becomes skilful, not through lectures and examinations, but mainly by cultivating his powers of observation. To this end the senses must be cultivated, but, said the Professor, "there is a natural power of insight, a kind of divine gift which some men possess and others never attain." The faculty of detecting disease was not to be acquired by mere book study, it was sometimes possessed by men who have not gone through a regular course of training.

Professor Smith said much more to the same effect to justify his opposition to the Bill, but the extracts we have given above are sufficient to show the pernicious character of his speech. It would be useless to argue with one who can talk seriously of the "divine gift" of diagnosing disease, but we may be allowed to observe that such an one can scarcely have any notion of what the science and art of medicine really is, and must be wholly out of his element as Dean in the medical department of a University.

Of course the speech has caused a good deal of excitement among the profession in New South Wales, and a large meeting was held at Sydney, on June 2, to protest against its language as unbecoming, unjustifiable, and untrue. The meeting was attended by about fifty of the leading practitioners of New South Wales, and resolutions were unanimously passed condemnatory of the Professor's conduct and language, and urging the impropriety of his continuing to hold the office of Dean of the Faculty of Medicine in the University.

A UNIQUE MEDICAL CHARITY!

It may be new to many of our readers to be told that among the medical charities of the metropolis is an institution which is styled the Chelsea Hospital for Women. We ought, perhaps, to apologise for saying that the institution is a "charity," for, although it absorbs about £2000 per annum from the purses of the benevolent, those who receive the sympathy and "eminent professional assistance" here to be obtained are expected to maintain their self-respect by contributing as much as they are able towards the expenses of the Hospital, the minimum charge for in-patients being one guinea per week. By contributing in this manner the patients not only maintain their self-respect and receive sympathy and eminent professional assistance, but secure "immunity from many objects of unpleasantness" persons of refined feelings and habits are subjected to at general hos-

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pitals. Such being the peculiarities of the institution, it will be readily understood that the fact of its containing only eight beds for patients is the "occasion of distressing embarrassment to the authorities and the medical staff." That this distressing condition may be relieved, the committee of the institution are actively engaged in memorialising the City companies and other wealthy bodies in the metropolis to contribute liberally towards a contemplated extension of the Hospital. Before responding to the appeal, we hope that those who dispense the charity of the wealthy bodies thus memorialised will attentively peruse the annual report of the Hospital which has just been issued. A copy of it has come into our hands, and from it we gather that the eight beds of the Hospital entail an expenditure of £461 16s. 4d. for housekeeping, inclusive of wines and spirits, or about £59 per bed. In one of the general hospitals, where the number of beds occupied throughout the year averages 120, the cost under the same heading amounts to only £23 per bed. Salaries, wages, and commission absorb £421 8s. 4d., and the very respectable sum of £209 19s. 11d. is spent in advertising and postages. Were the same ratio of expenditure maintained in advertising the general hospital above alluded to, it would amount to £3000 per annum, but on referring to the balance-sheet of that institution we find that the actual cost of one year's advertising and postages amounted to barely £88. In his speech at the annual meeting of the Chelsea Hospital for Women, the noble President, Lord Wharncliffe, is reported to have said that "there were very few similar institutions of the same character as this throughout the metropolis." With the above facts before us, we sincerely hope that the noble lord's assertion is correct. In concluding his speech he ventured to assure the charitable that whatever they chose to give to the institution would not be thrown away. Here, too, he was probably correct; but we should like to know what distinction he draws between throwing away money, and spending it as it is admittedly spent at the institution over which he presides.

Although we cannot go so far as to say that the Chelsea Hospital for Women effects a large amount of good, still there is no doubt that it serves some useful purpose. At all events, it can be safely said that, apparently, directly or indirectly, it furnishes means of subsistence to some persons who would otherwise, in all probability, be compelled to gain their livelihood in a less philanthropic manner than by disbursing the benefactions of its noble supporters.

THE WEEK.

TOPICS OF THE DAY.

Apropos of winter resorts—a subject which has no doubt long before this begun to absorb the attention of those who are compelled to seek milder climates than our own for the coming months of severe weather,—Dr. Whitley has addressed a letter to the *Times* giving an official return of the temperature in San Remo during the four mid-winter months of 1874-75. From these observations we gather that in this town the mean temperature for the month of December, 1874, was 49°; for January, the same; for February, 43·7°; and for March, 51·1°. The winter in question, though comparatively severe, was decidedly milder than in places not far off, especially to the east. Thus it happened that several times in the month of February there was a thick layer of snow on the railway-carriages coming from Genoa, while the only snow seen in the town of San Remo (on about the same level) was a few flakes which fell on Ash Wednesday. The chief proof of a severe winter was the circumstance that ice was seen on several mornings in December, in favourable places, although the temperature was only once marked as being below freezing-point in the official returns; and Dr. Whitley records that during the ten previous winters he does not remember to have seen any ice at San Remo. The coldest time, in ordinary seasons, is the end of January and beginning of February, but the temperature is seldom so low as that observed during the last winter.

The visit of the Prince of Wales to India has been productive of a somewhat unpleasant surprise to not a few persons in this country. A large amount of property is held under lease for lives in various parts of the kingdom, and the life of his Royal Highness has been, in very numerous instances, selected for insertion, the reason being that it can never drop without the fact becoming at once known to both lessor and lessee. Lessees are frequently in the habit of effecting a policy on the Prince's life to protect themselves against the contingency of his death avoiding the lease. The different life offices have lately issued a notice to the effect that the Prince's visit to India necessitates an additional premium for extra risk, which must be paid before he sails. The Royal progress has thus unwittingly become the means of increasing the finances of the offices in question to a not inconsiderable extent.

Latest accounts received from Fiji are unanimous in recording the fact that the recent epidemic of measles is fast subsiding, and it is further satisfactory to note that the general sanitary condition of the country is greatly improving.

An inquest was held last week before Dr. Hardwicke, at the Highgate Infirmary, on the body of a carpenter, aged fifty, of Peckwater-street, Kentish Town, who died in the above institution, to which he had been removed by the parochial authorities of St. Pancras. It appeared from the evidence of Ann Page, the landlady, that the deceased was brought home from work very ill a fortnight ago, and was attended by Dr. Slyman. He continued to grow worse, and Dr. Brown, one of the parochial medical officers, gave an order for his removal to the Highgate Infirmary. He was taken there two days before he died. Witness saw deceased removed in a conveyance with a bed in it with blankets. Dr. Dowse, the Resident Medical Officer, said deceased was admitted into the Infirmary on the 28th ult. in an unconscious state, in which he remained until he died. The symptoms were consistent with what would be produced by a fracture of the base of the skull, although there were no outward bruises. He had made a post-mortem examination, and found that the cause of death was hæmorrhage on the brain. The coroner asked him if he thought it was a wise thing to remove a man such a long distance while in a state of insensibility. Dr. Dowse said he thought it would have been better if he had not been removed. Dr. Hardwicke remarked that he thought these removals required great discretion and care, especially in cases of brain disease, when the patients ought to be kept quiet—in fact, great art was necessary in removing the sick poor, and great skill was required in the selection of the proper ambulance for each particular case. He looked forward to seeing a proper set of ambulances provided for this purpose. Eventually a verdict of "Death from natural causes" was returned.

The auditors of the fund collected on Hospital Saturday have at last issued a report and statement of accounts. These latter would seem to include the sums collected and distributed in the year 1874, as well as the amount realised in the present year. The details are as follows:—Received: By balance from last report, £4941 0s. 4d.; by subscriptions to date, £4829 12s. 1d.; total, £9770 12s. 5d. Expended: To distribution account, 1874, £4494 6s. 8d.; to expenses, 1874, £388 7s. 8d.; to expenses, 1875, £871 9s. 6d.; cash in hand, £4016 8s. 7d.; total, £9770 12s. 5d. According to these figures, the expenses for collection upon the present occasion are more than double the outlay for the same purpose in 1874. But no explanation would appear to have been afforded by the auditors.

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The water of one of the ancient City pumps situated in the Minories has lately been pronounced to be in a very impure state. Mr. Wanklyn has recently examined the water drawn from this source, and has found it to contain—chlorine 11·1, free ammonia 0·01, albuminoid 0·76. It is, as is generally the case with polluted water of this description, clear, sparkling, and agreeable to the palate; and its impregnation with the salts detailed is supposed to be due to decomposing sewage, which evidently finds its way into the well. The water has already been examined by several medical officers of the City of London, who have severally pronounced it dangerous for drinking purposes; but some difficulty would appear to exist in closing the pump, on account of certain City privileges. Surely when the matter becomes one of public health, it should not be allowed to exist in its present unsanitary condition, and an application to the Home Secretary would, doubtless, procure the necessary authority for putting an end at once to what may eventually become a serious source of ill.

The Keighley Guardians, having acquired a reputation for wrong-headedness on the subject of vaccination, are evidently endeavouring to gain allies. Last week an extraordinary document was read at the weekly meeting of the Hackney Board of Guardians: it was a memorial from the Keighley authorities, requesting the co-operation of Hackney in refusing to prosecute in cases of conscientious refusal to comply with the requirements of the Vaccination Act. The memorial set forth that the Keighley Guardians regarded vaccination as doing evil that good might come, and the vaccination laws as a sin against God and man. The Hackney Guardians, presumably astonished at the outburst of confidence on the part of their Keighley brethren, simply ordered their clerk to acknowledge the receipt of this curious communication. We understand that a copy of the same memorial has been sent to the Islington Board of Guardians; but at their meeting last week the Guardians refused to allow the whole of it to be read.

Further inquiries made by the police respecting the death of Robert Naylor, who was found with his throat cut under a railway arch in Bow-common-lane, have not tended to throw any light on the matter. Since the adjournment of the inquest, however, Dr. Loane, the Medical Officer of the Mile-end Workhouse, has made an examination of the body, and he reports that the cut in the throat was from right to left, and that the left hand of the deceased was covered with blood, this appearance being consistent with the supposition that the man had destroyed himself. It will be remembered that the jury at the inquest was not inclined to believe that the deceased had committed suicide from the fact of the knife that was found lying by his side being closed. A medical examination had not then been made, in consequence of the extraordinary orders of the Middlesex magistrates, who systematically refuse to allow medical witnesses to receive fees. It can hardly be imagined by the most prejudiced observer that such a course is consistent with furthering the ends of justice.

We have, unfortunately, to record another death from the administration of chloroform. An inquiry was held last week before Mr. Carttar, at Greenwich, respecting the death of Robert Summers, aged fifty-six. Deceased was admitted to the Seamen's Hospital, from the ship *Rova*, of Liverpool, on the 2nd ult. He had received a wound in the thigh during the Crimean War, and had suffered great pain for some time past from a piece of dead bone remaining in the leg. With the consent of the deceased, it was decided that an operation should be performed for the removal of the bone, and that he should be placed under the influence of chloroform. Almost immediately after the chloroform had been administered, the deceased expired. A post-mortem examination showed that the heart was healthy, but that the brain was diseased. It having been proved that the chloroform was administered with due care, and that this was the first death that had occurred under the circumstances in the hospital, a verdict in accordance with the evidence was returned.

Upwards of 1500 gentlemen pursuing their professional studies at the eleven metropolitan hospitals were registered at the College of Surgeons up to Wednesday evening. The registration will not be closed until this day (Friday). A few days' grace are sometimes allowed under exceptional circumstances.

BRITISH MEDICAL DEFENCE ASSOCIATION.

The East London Branch of the British Medical Defence Association was last week successful in recovering under the Apothecaries Act two penalties of £20 each, from persons who were practising in the East-end of London without legal qualification. One of the defendants keeps a large chemist's shop and does a large visiting and prescribing practice; the other has been carrying on a so-called "provident dispensary." It is scarcely creditable to the profession that in both cases registered medical practitioners endeavoured to protect the defendants, but it is satisfactory to know that their conduct in the matter is to be brought under the notice of the Branch Medical Council for England at their next meeting. The Provisional Committee of the Defence Association has issued the following preliminary circular letter:—

"Sir,—I am desired by the Provisional Committee to inform you that an Association of registered medical practitioners has been formed for the purpose of suppressing, as far as possible, the practice of medicine and surgery by persons not legally qualified, and of maintaining the status and general interests of the profession. The efforts of the Association will be principally directed to enforcing the provisions of the Medical and other Acts, against those who, assuming to be duly qualified, impose upon the community at large, and practise to the detriment of the public health, and to the discredit and injury of the profession. Past experience teaches that the profession and the public have little to expect in the way of help in this matter from the General Medical Council, or the various corporations and licensing bodies, with, perhaps, one or two exceptions. It is, therefore, hoped that the objects of the Association will at once commend themselves to every registered practitioner. A general meeting of members of the profession interested in this movement will shortly be summoned, for the purpose of electing a president, council, and committees, together with the necessary officers. Branch Associations are being formed in various parts of London and the United Kingdom. The East London Branch is already in active working order, being engaged in three prosecutions under the Apothecaries Act. It is suggested that the annual subscription shall not exceed half a guinea; but donations to meet the preliminary expenses will be received with thanks. Should you wish to become a member of the Association, an early reply, with any suggestions you may have to make on the subject, will oblige."

The letter is signed by Mr. George Brown, Hon. Sec. (*pro tem.*) of the Association, 12, Colebrook-row, Islington, N.

INAUGURATION OF BROOMHILL HOME FOR THE RELIEF OF INCURABLES.

The inauguration of Broomhill Home for the Relief of Incurables took place on the 6th inst., in presence of a large and influential assemblage. Lord Provost Bain presided, and amongst those who took part in the proceedings were the Earl of Shaftesbury, the Earl of Glasgow, Admiral Sir William Edmonstone, M.P., Mr. A. Orr Ewing, M.P., Major Peploe, M.P., etc. Letters of apology were received from the Earl of Stair, the Earl of Galloway, the Marquis of Lorne, the Marquis of Bute, Sir William Stirling Maxwell, Bart., and several members of Parliament. It may be remembered that, at the end of March last, a bazaar on a very extensive scale was held in the Kibble Crystal Palace, Glasgow, at which the handsome sum of £14,000 was drawn for the purpose of building a home for the relief of those affected with incurable

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diseases. This, with £14,420 previously raised by subscription, made a fund of £28,420. Instead of erecting a new building the directors purchased the house and estate of Broomhill for the sum of £14,000. This estate, which extends to eighty acres, is about eight miles from Glasgow. The mansion house is situated in the centre of the estate, and, being erected on a rising ground, it commands an extensive view of the surrounding country. The directors having only got possession of the house in August, no proper idea can as yet be formed regarding the ultimate internal appearance of the building. In the meantime, it may be mentioned that it is intended to provide bedroom accommodation for 100 persons, and sitting-room accommodation for double that number. Hot-water pipes are to be used in the heating of the building, which is not expected to be ready for the reception of patients before February of next year. Lord Shaftesbury, in the course of his remarks, after paying a high tribute to Miss Beatrice Clugston, to whose indefatigable energy the present benevolent movement is mainly due, expressed his belief that the Glasgow Association owed its origin to the example set by Dr. Reed, of London, in founding a great institution for incurables. He also hoped that every large town would follow the example of Glasgow, and have its own hospital for those afflicted with incurable diseases. We understand that, for some time back, the Association has been actively engaged in affording out-door relief to incurables, of whom there are as many as 200 at present on the roll.

PEROXIDE OF HYDROGEN AS A DEODORISER.

In a lecture on Deodorisers and Disinfectants delivered to the members of the School of Science at Geelong, Dr. John Day said that the great value of peroxide of hydrogen as a deodoriser was only just beginning to be understood. Professor Roscoe had stated, as recently as 1871, that hydrogen dioxide, or peroxide, "does not occur in nature." Dr. Day claimed, however, to have discovered its presence, spontaneously generated, in a vast number of substances which are in almost daily use, such as all fats and fatty or expressed oils; nearly all perfumes; most, if not all, essential oils; kerosene, gasoline, and benzine; and deal and pine woods. In many respects gasoline is the best disinfectant with which he is acquainted. In addition to being highly volatile, it possessed the property of either generating peroxide of hydrogen, or of originally forming it and storing it up until brought into contact with any of those oxidisable substances for which it has an affinity. One of these two actions, he could not say which, took place long after all presence of the gasoline itself had passed away. When unglazed paper, or any porous substance, is brushed over with gasoline, it will at once give the reaction of peroxide of hydrogen, and continue to do so for a year or more. It is thus persistent in its action, which gives it an immense value over other disinfectants. He recommends that books, newspapers, etc., which have been used by fever patients, or kept in their apartments, be disinfected by brushing them over with gasoline. The most delicate wall-paper may be brushed over with it without injury, as may articles of wearing apparel. The hands may be disinfected by brushing them over with gasoline and allowing them to dry in the air. There is one drawback to its use—viz., its inflammability. Nevertheless, gasoline appears to be worthy of more attention as a disinfectant than it has hitherto received.

THE ISLINGTON POOR-LAW MEDICAL DISTRICTS.

This question still remains unsettled, and it appears probable will give rise to further contention. At the last meeting of the Islington Guardians it was stated that Mr. Gardner, Medical Officer of St. Peter's district, had refused to accept the offer of the Guardians, who wished to divide his district into two and give him £80, and the new officer £60 per annum. The Select Committee have recommended that Mr. Gardner receive six months' notice to terminate his present engagement, but no action will be taken in the matter until after the next meeting of the Guardians. Before Mr. Gardner can be dismissed, the sanction of the Local Government Board must be obtained, and it may be that the Board will not consent to the dismissal of an officer against whom no complaint has been made, as long as he shows his ability and willingness to discharge all the duties that are expected of him.

OUTBREAK OF FEVER IN THE SCHOOL-SHIP "CORNWALL."

A dangerous outbreak of enteric fever is reported to have occurred on board the ship *Cornwall*, which was established some years since as a reformatory-ship, and is moored in the Thames off Purfleet. A single case occurred about the middle of last month, but the disease did not assume an epidemic form until the 3rd or 4th inst., when an increase of cases occurred very rapidly, and up to the present date thirty-eight boys are said to be affected, as well as one of the officers. Dr. Harry Leach, Medical Officer of Health for the Port of London, and Dr. Glen Bolt, of Aveley, surgeon to the ship, have during the past week been actively engaged in endeavouring to trace the cause of the epidemic. An official report will probably be made by the Port Medical Officer to the Local Government Board, as it is undoubtedly of the utmost importance that special sanitary precautions should be taken where large numbers of persons are living afloat in vessels at fixed moorings. Twenty of the *Cornwall* boys are in the Seamen's Hospital at Greenwich, nineteen are on shore in a temporary hospital, and all are progressing favourably up to the present.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The opening meeting of the twentieth session was held on Friday, October 8, at the Royal Kent Dispensary, Greenwich-road; John Anderson, M.D., in the chair. The following members were elected officers for the session 1875-76:—*President:* J. N. Miller, M.D. *Vice-Presidents:* Thomas Creed, M.D.; J. P. Purvis, M.R.C.S. *Council:* J. Anderson, M.D.; Hughes Cable, M.R.C.S.; William Carr, M.D.; William Churton, M.R.C.S.; Ralph Gooding, B.A., M.D.; Frederick Moon, M.B.; William Lockhart, F.R.C.S. *Treasurer:* Prior Purviss, M.D. *Secretary:* Harry Knight Hitchcock, M.R.C.S. *Librarian:* J. B. Saundry, L.R.C.P., M.R.C.S. The next meeting will take place on Friday, November 5, at 8 p.m. precisely, when Dr. Braxton Hicks will read a paper.

UNIVERSITIES OF GLASGOW AND ABERDEEN.

At a meeting of the Liberal Committee of the General Council of the University of Glasgow, held on the 8th inst., it was agreed that, in the event of Lord Advocate Gordon accepting the vacant judgeship in the Court of Session, Mr. Anderson Kirkwood, LL.D., Dean of the Faculty of Procurators in Glasgow, and Assessor to the General Council of the University of Glasgow, should be nominated as the Liberal candidate. Dr. Kirkwood, we understand, has intimated his willingness to stand. The Conservative candidate is likely to be Mr. Watson, the present Solicitor-General, who, on Mr. Gordon's elevation to the Bench, will in all probability become Lord Advocate.

THE "CABBAGE-GARDEN" BURIAL-GROUND, DUBLIN.

At a meeting of the Board of Guardians of the South Dublin Union, held on September 30, the following resolution was adopted:—"That the order of September 9 inst., directing interment of workhouse inmates (Protestant) in the Cabbage-garden Burial-ground, be rescinded until further order." We congratulate the Board of Guardians on this graceful deference to public opinion as expressed in resolutions adopted by the Dublic Sanitary Association and by the Medical Board of the Meath Hospital, and forwarded to the Board of Guardians prior to their meeting on the 30th ult.

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OPHTHALMIA AT MITCHAM SCHOOLS.

From the reports of the meetings of the Guardians of the Holborn Union we learn that ophthalmia still prevails to a serious extent among the children at the Mitcham Schools. The experiment of sending children free from the disease among those who are affected appears not to have been attended with the happiest results, as they were immediately attacked by the disease. The committee appointed to report on the subject have recommended that the medical officer consult with the Superintendent and Matron with a view to set apart some ward or wards for the reception of children not suffering from ophthalmia. It is high time, surely, to adopt some rational measures to extirpate the disease from the Schools which might undoubtedly, be accomplished were proper dietetic and hygienic measures carried out.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

At the annual meeting, held in July last, the following officers were elected for the ensuing year:—*President:* Dr. G. Buchanan. *Vice-Presidents:* Dr. Thos. Stevenson, Dr. G. Ross, and Dr. F. T. Bond. *Treasurer:* J. Liddle, Esq. *Secretaries:* Dr. J. Northcote Vinen and Dr. W. H. Corfield. *Council:* Dr. J. Adams, Dr. C. O. Baylis, Dr. M. Corner, Dr. T. O. Dudfield, Dr. C. B. Fox, E. L. Jacob, Esq., Dr. P. Jones, H. Leach, Esq., Dr. H. G. Sutton, Dr. C. M. Tidy, Dr. J. W. Tripe, and Dr. W. T. G. Woodforde. The first meeting of the session will be held on Saturday, October 16, at 7.30 p.m., at the Scottish Corporation Hall, Crane-court, Fleet-street, when the President will deliver an inaugural address "On some Directions of Scientific Work by Medical Officers of Health."

THE SOCIAL SCIENCE CONGRESS.

Health Department.

As briefly announced last week, we publish to-day a report of the Social Science meetings held during the past week at Brighton. We can conceive no better means of "educating public opinion" than that of gathering together men and women of influence from all parts of the world to an intellectual and social feast at a fashionable and accessible health-resort. To what extent, we may ask, will the evils complained of be remedied? Judging from the apathy and indifference of the public to measures of sanitary reform, as shown by the meagre attendance of members at the Health Section, it would appear very unlikely that much lasting benefit will result from the present gathering. The subjects brought before the Section by papers and discussions may be considered under the following heads:—Bad construction of our large houses; bad water-supply; the importation of infectious diseases into our favourite watering-places and health-resorts; remedies to be suggested in each case.

The Health Section opened on Thursday, the 7th, in the Pavilion apartments by the reading of papers on the "special question" of the day—To what causes are to be attributed the ill-construction and want of sanitary provisions which exist in the dwellings of the upper and middle classes; and what is the best method which should be adopted to remedy and rectify the same?

Mr. Collins, from an architectural point of view, proceeded to discuss this question, with a view to show that the better class of houses are in a worse sanitary condition than those of the poor. A somewhat unfair comparison by way of illustration was made between the "model dwellings" recently erected and those known as "builders' houses." He asserted that London and its suburbs were infinitely worse provided for than many provincial towns, and referred to Brighton as an example of careful sanitary provision for the construction and drainage of houses. He attributed the failure of the Metropolitan Buildings Act to the apathy of the public, and to the promoters of the Bill, who appeared to consider that prevention of fire was of more importance than that of epidemics. He regretted the withdrawal of the Bill of 1874 introduced by the Metropolitan Board of Works. Inspection of a poor man's dwelling under the Nuisances Removal Act placed such dwellings at a greater advantage than those of the rich. He proceeded next to the consideration of the nature of the sanitary defects which are to be found in most London houses. Too often the subsoil on which the house rested was made up of decaying vegetable and animal refuse, and improperly drained; comparing such dwellings to receivers over a "still," in which impurities and gases are distilled over, and condensed above. He objected to the usual position of staircases, and their contiguity to water-closets and sinks. The cisterns, being located in inaccessible parts of the house, were very liable to become contaminated. As remedies for these defects he suggested—first, that additional compulsory and not permissive sanitary enactments were necessary; that the Building Act required revision, so as to confer greater authority on, and larger powers to, the district surveyor; and that local authorities should be made amenable to a central board, to carry out with strictness the provisions of the Act of Parliament. Secondly, that the clauses of the present Acts should be carefully utilised, and not rendered inoperative by the perfunctory manner in which their obligations are construed, amounting to avoidance thereof. Thirdly, that it should be imperative on vestries or local authorities that they should appoint well-qualified and well-paid officers to interpret and to carry into effect the laws relating to the health of the people. He then referred to the construction of basement-walls, floors, drainage, etc. He desired that all pipes should be of glazed earthenware, and that house-traps should be abolished, direct communication with the sewers being prevented by an open culvert, *i.e.*, all waste pipes discharging externally over, and not into, trapped cesspits. Cisterns to be of slate or galvanised iron, not lead or zinc; the overflow of cisterns terminating freely over the back yard or cesspit. Separate ventilating flues should pass up behind the kitchen flue to the roof, communicating with each room. Passages to water-closets should be well ventilated, and enclosed by glass screens. Valve, not pan closets, should be used, with a separate cistern to supply the closets. A ventilating shaft should be carried from drain to the roof of the house. Waste-pipes from baths should open freely into rain-water heads.

Mr. Eassie then read portions of his paper on "Suitable Sites, etc., for Houses." Seventy-five per cent. of potable waters are, he said, injurious to health. Of 7000 houses constructed in 1875, there were not a dozen free from injurious leakage of carburetted hydrogen. He suggested a very simple means of detecting gas leakage: all the burners in the house to be stopped up but one, upon which a pumping apparatus is to be fixed, with a column of mercury as a test-gauge. In this way any leak might be detected and subsequently repaired.

Dr. Taaffe, commenting upon the two papers, said that previous to his appointment as Medical Officer of Health for Brighton, the houses of the upper classes were considered to be as healthy as need be. It happens, however, that the builder systematically and successfully provides for the ventilation of drains into the houses. He was glad to state that in the great majority of cases the owners of houses had willingly carried out any suggestions that he found it necessary to make. He strongly objected to the usual practice of connecting the house-drain with the stack-pipe.

Dr. Hardwicke strongly protested against the depreciation of subsoils by removing the gravel and substituting rubbish for it. He made some important allusions to a method of testing air devised by himself. Much is done in the way of water analysis, but we must remember that water is often poisoned through the medium of air. Therefore, in the use of preventive measures we must direct more attention to the analysis of air. Methods of testing air have been too complicated for general use. That proposed by Dr. Hardwicke has the advantage of being equally simple with water analysis. The plan adopted is founded upon the principle that poison-germs are capable of solution; so that by forcing the air to be tested through a column of distilled water under mercury, it may be then tested in the usual way. With regard to house-inspection, he had made it a rule to visit every house in his district. At first the landlords objected, but he soon found that the remedies suggested for improving the sanitary condition were appreciated, as they put the house in a better condition for letting, and at a higher rental. Too often the base-

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ments of our large houses are in a very neglected state, because the occupiers do not like to encroach upon the servants' domain.

Dr. LITTLETON, Medical Officer of Health for Plymouth, claimed priority over Dr. Fergus, of Glasgow, for a ready method of analysing sewer-gas, by means of its ready solubility in water, proving thereby too often the medium by which typhoid fever is propagated. He called attention to the fact that the fall of the barometer is usually accompanied by exhalations from the water-trap on the house side.

Dr. RICHARDSON, the President of the Health Section, alluded to certain experiments made by himself and others on animals, to demonstrate the effect of inhaling diluted volumes of coal-gas for a prolonged period; and he alluded to a plan of Dr. Sedgewick's for detecting leakage in drain-pipes by pouring down ether and applying a lighted taper outside. The smallest leak was detected by the flame of the ignited ether.

It was resolved to request the Council to urge upon the Local Government Board the necessity for further and more complete legislation on the construction of dwelling-houses for all classes, showing that a clause in the Building Acts is necessary for enforcing that all newly-built houses should be properly certificated previous to their occupation.

Mr. P. H. HOLLAND read a paper on "Roof Pipes for Ventilating Sewers."

Mr. POWELL alluded to the powers now in the hands of rural authorities to obtain by-laws which would secure them against the evils of damp and subsoil emanations.

Mr. GODWIN read a paper entitled "Homes for the People, etc." He referred to the beneficial action of building societies in Pennsylvania, which provided cottagers with their own houses by small periodical payments.

On Friday, October 8, the special question for debate was—The advantages of English, as compared with foreign, watering-places and health-resorts; and the best means for rendering the English watering-places more efficient for obviating the dangers arising from the occasional introduction of infectious diseases, and determining the annual rate of mortality in each district. Dr. Macpherson and Dr. Fussell contributed papers on the subject.

Dr. MACPHERSON'S paper was short, giving a brief description of winter and summer health-resorts at home and abroad. The English watering-places being considered far superior to those of foreign countries, several suggestions for the improvement of watering-places were made, as also for a more reliable analysis of mineral waters.

Dr. FUSSELL'S paper referred to the latter part of this question. "No doubt," says the author, "infectious diseases should as early as possible come under the cognisance of the sanitary authority. Who is to undertake the task? The medical man could not do so in all cases, because so many mild cases occur where the doctor is not called in. It is in these that proper precautions are neglected. The existence of a fever-nest must be promptly attended to by the health officer and his staff of officials, who must certify to the freedom from disease as soon as a clean bill of health is established. If a heavy penalty were incurred in cases of neglect, general compliance with the regulations would be the result. To store up gunpowder or petroleum in inhabited districts, or to move infected cattle along a highway, is considered a misdemeanour, and punishable accordingly; but to store up convalescents from contagious maladies in a dwelling-house where the uninfected resort is a crime unworthy the cognisance of the Legislature! At Eastbourne the ready assistance of the medical men is most willingly accorded to trace out all cases of infectious disease. Forms are sent to all the doctors to fill up and report the existence of cases under their charge. So soon as these are returned to the medical officer of health, the house is visited and inspected, precautions given, and the children interdicted from attending school. Where a fever hospital exists the infected should be removed to it as soon as possible, and the clothes put in a disinfecting chamber." With regard to the method of determining the annual rate of mortality, Dr. Fussell expressed his opinion that too much reliance must not be placed upon the evidence of statistics as indicative of relative salubrity. In many cases no distinction is made between combined and purely urban sanitary districts. Besides this, the mortality-tables of our health-resorts are greatly swollen by the deaths of those who come to reside there for longer or shorter periods. Where can we draw the line between residents and visitors? Again, in places such as Brighton, the population is much augmented by young people at school, and certainly the distribution of ages materially affects the death-rate.

Dr. TAAFFE, commenting upon this paper, agreed that there ought to be legislation to prevent the importation of infectious disorders. It would not be desirable to compel medical men to furnish information respecting the prevalence of contagious diseases.

Professor WANKLYN stated that it was impossible to disinfect large masses of material. The removal of "rookeries" should be effected by burning—a cheaper process than that of removal. When the ground for the New Law Courts was cleared, disease was spread to an enormous extent.

Dr. FARR thought that children recovering from measles, etc., might be better dealt with in their own homes instead of being taken to the seaside. Certain isolated localities might be allotted on the outskirts of seaside towns for the reception of such cases.

Dr. HARDWICKE mentioned a plan adopted at Brussels for ascertaining the sanitary state of different parts of the town by means of a large map; the bad localities being indicated by small pins having different coloured heads.

Dr. ROBINSON described the steps taken at Dover with regard to the importation of infectious disorders. Many cases of scarlet fever, etc., were attended by druggists for the sake of concealment. Therefore, medical men could not report in all cases. He suggested, among other things, special railway-carriages for the conveyance of convalescents, and the adoption of some means of ascertaining what children returning to boarding-schools were in a healthy state. He also recommended a systematic inspection of lodging-houses for the protection of visitors.

The PRESIDENT said it appeared that they were all agreed that English watering-places bore a favourable comparison with any others, but it was singular that they showed such great differences in point of mortality, the death-rate varying in ten years from fifteen at Bognor to twenty-four at Whitby. He then alluded to the importance of registering disease as well as death, including the diseases of animals and plants, before we can do much to check the progress of epidemics. There was no doubt that the laundry was one of the most common causes of the spread of disease. Thatched houses could scarcely ever be properly disinfected. He regarded two months as the shortest time required for securing immunity from infectious disease.

The following resolution was agreed to:—"That it be recommended to the Council to suggest to the local sanitary authorities of our English watering-places and health-resorts the desirability of establishing a system by means of which owners of lodging-houses and hotels should be enabled to have their premises inspected by a competent authority, and certified if found free from infection and in a generally healthy condition with reference to drainage and other sanitary arrangements."

A paper was then read by Dr. SQUIRE on "Sanitary Precautions against Infectious Eruptive Diseases." The design of the author was to show that a careful study of the etiology and development of infectious diseases was necessary, with a due recognition of the varying periods of incubation, so that sufficiently early precautions may be taken to check the spread of such maladies. He did not believe that epidemics of measles, etc., were more fatal among races unaccustomed to the epidemic, as the Fijians. He attributed the fatality to other causes. The paper was altogether too technical for a "Social Science" audience.

A paper was then read on "Some Unsuspected Sources of Infectious Diseases, and the need of Domiciliary Sanitary Inspection." These sources of disease were pig-tubs, dust-heaps (known in Brighton as the "ash-heap nuisance"), and the laundry, the evils of which were described, and the necessity for placing all such matters under the supervision of medical officers of health was strongly advocated by Mr. BAINES, the writer of the paper.

We shall continue next week a report of the meetings on Monday and Tuesday last, and shall give a brief notice of the Sanitary Exhibition.

A SOCIETY of Medical Officers of Health for South Wales and Monmouthshire has been formed, and Mr. Thomas Jones Dyke, F.R.C.S., Eng., Medical Officer of Health for the Merthyr-Tydfil Urban Sanitary District, has been appointed president.

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THE WESTMINSTER HOSPITAL.

We publish the following extraordinary address from Mr. Cooke, the Senior Assistant-Surgeon to Westminster Hospital, to the Governors of that institution. It asserts the existence of a state of matters hardly credible, but, for obvious reasons, we withhold any word of comment until the authorities attacked have given, as no doubt they will give, a reply to it:—

"*To the Governors of the Westminster Hospital.*

"16, Woburn-place, Russell-square, October, 1875.

"My Lords, Ladies, and Gentlemen,—The laws and regulations of the Westminster Hospital state that that institution is under the control of the Governors, and on paying your annual subscription for the relief of the sick at that institution, you doubtless imagine that such is the case. It is my painful duty to undeceive you, and to show you that in some of the points most essential to the welfare of the sick, the affairs of the institution are managed by a private and self-constituted body of men, several of whom do not subscribe to the institution, whose interests are at variance with those of the Governors generally, and over whom your House Committee itself, when called upon to act in an important matter, has stated that it has no power of control.

"Your medical staff is largely represented in your three most important committees—*i.e.*, your House Committee, your Medical Committee, and your School of Medicine Committee. In each of these Committees, however, with the exception of the Medical Committee, preponderance in point of numbers is given to the lay element over the medical, the object which it is thus intended to secure being, apparently, to frustrate any combined effort of your medical officers to carry measures of their own, irrespectively of the interests of the institution at large.

"To defeat this object appears, however, to have been the aim of your medical staff. On May 7, 1874, a combination to that effect was agreed upon between your medical staff and the teachers of your Medical School. An association, calling itself the 'Council of the Westminster Hospital Medical School,' was founded 'to discuss matters relative to the current business of the Westminster Hospital Medical School, with a view to common action, and unanimity of representation at the House Committee.'

"No less than ten changes have taken place in your medical staff during the last four years, and in every case the appointment or promotion took place without a contest, one single candidate appearing before the Governors in each instance, though on one occasion four gentlemen, on another occasion three gentlemen, and on another occasion two gentlemen, qualified for the vacant office, came forward in hope of obtaining the appointment. This result was due to the influence of the 'Council' over the elections. But I would call your attention more particularly to the following extract from the minutes of the special meeting of the 'Council,' held on September 24, 1874, a few days after the death of the lamented Dr. Anstie, which extract is perfectly conformable to the original minutes, except in the non-insertion of the names of the gentlemen who were present on the occasion.

"'September 24, 1874.—*Special Meeting of the Council.*—The Dean having made some allusions to the great loss the School had sustained by the death of Dr. Anstie, both as regards the Hospital and the Chair of Medicine, and to the *movement on foot to contest the usual course of promotion*, Dr. Gibb made a statement to the Council, wherein he mentioned his desire and intention of retiring in twelve months, *if* his present promotion was not opposed. It was proposed and seconded and carried that the *handsome offer* of Dr. Gibb in the interests of the School be accepted, and that those present *pledge themselves* not to oppose that gentleman's election.'"

"Few comments only are, I believe, necessary. The terms 'intention and desire,' convey a wrong impression. After resigning the office of Assistant-Physician, with a view to becoming a candidate for the office of Physician, Dr. Gibb was met by his medical brethren and informed that his election would be opposed by them, and his return prevented, or probably prevented, unless he agreed with them privately, if elected, to resign the office before the expiration of one year. This, Dr. Gibb, doubtless impressed with the overwhelming power of his opponents, agreed to do; and the above entry was made in the minute-book to enforce, if necessary, compliance with the agreement on the part of Dr. Gibb.

"I am now opposed, in my turn, my Lords, Ladies, and Gentlemen, by the same self-constituted body who opposed Dr. Gibb, and who managed to procure his removal from the Hospital without your knowledge and consent. I am the Senior of your three Assistant-Surgeons, and I have for more than four years held the offices of Assistant-Surgeon and of Demonstrator of Anatomy. In both capacities I have done my work well, and I invite my opponents to come forward and prove the contrary. As a Demonstrator of Anatomy I nearly doubled during the last four years—and in one year in particular I more than doubled—the number of entries into the Anatomical Department of your Medical School; and my published works have obtained a large circulation and considerable popularity.

"A vacancy has occurred in the post of Surgeon in consequence of the resignation of my senior and respected friend Mr. Holthouse; and applications from candidates desirous of filling the post are to be received by your House Committee on the 19th inst. On that day I shall come forward as a candidate, conforming in every point to the laws and regulations of your Hospital (V. Chapter 9, clause 1, page 15). It is rumoured, however, by opponents that I shall not be nominated a candidate unless, in addition to conforming to the laws and regulations of the Hospital, I also previously resign the post of Assistant-Surgeon.

"My resignation as thus demanded in face of the organised opposition which every candidate must now encounter, who is not the *protégé* of your medical staff, would be courting defeat; it would be wilfully throwing away the five best years of my life, which I have been spending in unremunerative consulting practice, and also the work which I have done for the profession.

"I forward you, with this appeal, a printed copy of the law of the Westminster Hospital, referring to the nomination of candidates for the various offices, a list of the lords and gentlemen empowered to nominate candidates (House Committee), and a few extracts from my works on anatomy and physiology.

"Should you be of opinion that I have a just claim to be nominated candidate for the office of Surgeon, and to be allowed to come before the Governors as one of the candidates for such office, would you kindly do me the favour to express such an opinion either to any of the Lords and Gentlemen empowered to nominate, or in a letter addressed to myself.

"I am, my Lords, Ladies, and Gentlemen, your obedient Servant,

"Thomas Cooke.

"P.S.—At the last meeting of the Council I offered to settle all matters by *arbitration*; but my offer was not entertained."

FROM ABROAD.

The Pulse and Temperature in Fever.

An anonymous critic of Liebermeister's "Handbuch der Pathologie und Therapie des Fiebers" (which he states is only an enlarged and unimproved reproduction of his lecture in *Volkmann's Sammlung*, "Ueber Warmregulirung und Fieber") lays down some propositions (*Wiener Med. Woch.*, September 11) with respect to the relative value of observations made on the pulse and temperature in febrile diseases, that are deserving of notice at a period when considerations concerning temperatures seem by some practitioners to be alone worthy of attention. He observes:—1. As all pathologists and physiologists are agreed that the frequency of the pulse almost always bears a constant proportion to the temperature of the body, why should the thermometer be employed as a general rule, when a simple calculation after counting the pulse will sufficiently indicate the height of the temperature without the use of the instrument, which consumes valuable time and incommodes the patient? 2. While an exact observation of the pulse of itself indicates the condition of the temperature, the reverse does not hold good, for the determination of the temperature alone leaves quite obscure the conditions of the pulse, which explain so many things. 3. Hence is shown the one-sidedness of modern medicine in merely measuring the temperatures without troubling itself concerning the pulse. 4. Every practical physician knows that, putting aside the quality of the pulse, which the clinical observers of the present day take no notice of, its number frequently allows of a correct prognosis being made at an earlier period than does the mere determination of the temperature. Thus, in pneumonia, and several other febrile diseases, a diminution of the pulse takes place prior to a fall in the temperature; and the practitioner who measures the pulse with exactness has an advantage over him who merely judges by the temperature, in being able to announce improvement at an earlier period. 5. By attention to the pulse we may be made aware of the presence of fever, although no elevation of temperature can be shown. 6. It is an entirely erroneous view to represent the increase of temperature as the primary fact in fever, the increased frequency of pulse being only secondary. Exact observation shows that every fever commences with shivering, when the pulse is small and rapid, so that heat, following this when the fever has already established itself, can only be regarded as a consequence, and not as a cause. 7. The methodical employment of the cold bath illustrates this point. The homœopathists have often been reproached because their therapeutics are founded on merely symptomatic conditions, no heed being paid to causes. But the exact medicine of the present day is guilty of the same fault in the treatment of fever, since it supposes that it is treating the disease when it is combating a mere symptom—the increased temperature. The error is even still more gross in this case, because the heat is here only a secondary occurrence. 8. It can be shown that the results of experiments instituted by the "exact school" itself militate against its own theory. All modern clinical observers, and the author of this *Handbuch* with them, agree that the great danger in fever consists in the deleterious effects of a high temperature on the various tissues. But numerous experiments have shown that the cold bath always induces an increased production of caloric within the body. The same thing takes place in fever, and it is quite inconceivable that cold baths, if they diminish the external temperature, should be employed in the treatment of fever, inasmuch as, according to physiological laws, they must give rise to an increase of temperature. If, therefore, physiologists are agreed that in fever every application of cold externally tends to an increased production of caloric, it is evident that the later diminution of temperature that takes place must be sought for, not merely in the mechanical cooling of the skin,

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but in other factors. 9. The essential nature of fever continues a secret, and the various febrile diseases can only be successfully treated by ascertaining in each case, as exactly as possible, the remote and occasional causes. For example, in scarlatina and diphtheria we may often be in a position to declare a sudden and durable diminution of febrile action as soon as purgatives have produced an abundant discharge of frequently very fetid fæces. 10. The undeniable cooling after cold baths may very often originate either from a slight sweating being set up, or from the suppressed insensible perspiration being restored to its normal condition. Under either condition, cold and a durable diminution of temperature are produced. 11. As the increased action of the heart is the primary, and the augmented temperature the secondary phenomenon, a rational mode of treating fever should consist in discovering, and, when possible, in removing, all circumstances which have led to such increased frequency.

Prof. Verneuil on the Influence of the Liver on Traumatic Lesions.

At the recent Medical Congress held at Brussels, Prof. Verneuil read an interesting note (published in the *Gazette Hebd.*, October 8) on "The Influence exerted by prior Lesions of the Liver on the progress of Traumatic Lesions." He proposed, he said, to demonstrate that wounds and operations in the subjects of an affection of the liver are often followed by grave consequences. This idea, which he brought before a former Congress in 1867, and which some of his pupils have since illustrated, was first suggested to him by the perusal of a remarkable paper published by Dr. Norman Chevers in 1845, which has excited too little attention. Chevers has proved to demonstration, as regards renal affections, that they exert a most unfavourable influence on traumatic lesions, stating, at the same time, that he possessed only imperfect data concerning the influence of the liver and spleen. The numerous facts that have come under M. Verneuil's notice enable him to state that the liver exerts as unfavourable an influence as the kidney. The three points to be noted are the hepatic lesion anterior to the accidental or surgical wound, the nature of this wound itself, and the kind of accidents that ensue. M. Verneuil has met with—first, most of the affections of the liver (cirrhosis, steatosis, waxy or amyloid degeneration, old perihepatitis, secondary neoplastic deposits, biliary gravel, and hydatid cysts); secondly, with a great variety of surgical lesions as regards seat, extent, and gravity (compound fractures of the leg, fractures of the cranium, amputations of the thigh and leg, excision of the hip, kelotomy, fistula in ano, paracentesis, ablation of tumours, etc.); and thirdly, with nearly every traumatic complication (hæmorrhage, diffuse inflammation, septicæmia, pyæmia, etc.).

In face of this triple enumeration, M. Verneuil has put the question to himself, whether a given hepatic affection corresponds to a determinate accident, or whether a wound received by a sufferer from hepatic disease engenders any complication in preference to others. As far as his experience has gone, he has found that any lesion of the liver is able, on the occasion of any kind of wound, to provoke indifferently one or other of the accidents enumerated above; and that, reciprocally, any of these accidents may exhibit themselves in all hepatic patients the subjects of wounds. In the meantime, awaiting more precise knowledge, he thinks that it is still very useful to be aware that in these cases the traumatic centre has a chance of giving rise to an early or late hæmorrhage, or of being invaded by phlegmon or gangrene, and also to know that intense and rapid phlegmasiæ may become developed in the liver itself or in the organs that surround it.

"I wish now to demonstrate that the above-named accidents have depended upon the anterior hepatic affection, and that this consequently has principally led to the fatal termination. I am well aware that such accidents may be manifested without any anterior hepatic affection having existed in the wounded person, and that all persons who have been the subjects of disease of the liver do not die as a consequence of their wounds. It is not less beyond doubt that the subject of a crushed limb may succumb to pyæmia or septicæmia with a sound liver as well as with a diseased one. But when a man suffering from a simple fracture, and denying having any disease, is seized on the sixth day with vomiting and icterus, and dies on the nineteenth day of an hepato-peritonitis, a cirrhosis being found at the autopsy, is it possible to deny that it is by the liver he has died? I have been naturally greatly impressed and convinced by these facts, in which the insignificance of the injury rendered death absolutely improbable, and where scarcely anything existed to explain it but the mischievous influence of the anterior hepatic affection. Such influence, moreover, seems easy of explanation. We know how common in hepatic subjects are spontaneous hæmorrhages, diffuse, phlegmonous, and gangrenous inflammations, anæmia, the cachectic condition, pleurisy, peritonitis, etc.; and what is there surprising that a traumatic focus should become, in these predisposed subjects, the seat of local accidents, and that general and distant accidents should be manifested in these same subjects under the influence of the provocative action of traumatism? It may still be objected that the above accidents only appear spontaneously or become serious in acute and very advanced liver disease, and yet a good many of these wounded hepatic patients seemed at the time of receiving their wounds to be in satisfactory health. But do we not know that traumatism, however slight, excites in the entire economy sometimes a general perturbation, and sometimes, by a kind of selection of the weak point (*locus minoris resistentiæ*), a sudden and violent aggravation of lesions that are only slight or that slumbered? The affection of the organ that is suffering becomes aggravated, and its progress redoubtable."

Common Sense in the Sick-Room.

In a lecture bearing this title, delivered by Prof. Crosby at the Bellevue Hospital, New York (*Med. Record*, Sept. 4), we find many useful hints, which, obvious as they seem, are not always borne in mind. A few of these we may transcribe.

1. *Temperature.*—This should range from 65° to 70°, and be ascertained by a thermometer. If much higher than this, all febrile disturbances will be aggravated, while if much lower there is danger in ordinary cases of a chill being produced, although, if well supplied with blankets, the patient may often remain in a room with a lower temperature.

2. *The Sick-Room* should not be papered with a staring variegated pattern, which in cases of cerebral excitement may cause great annoyance or positive injury—the patient imagining that he sees all kinds of forms, and feeling worried in his attempts to disentangle the confusion they give rise to. The paper should be of a uniform neutral tint, such as light green, a delicate buff, or slate colour. Perhaps the light green is as agreeable as any colour that can be selected, resting the eye with a refreshing monotony. Such a uniform tint tends to "healthy stupidity," and this leads to repose. The floor should never be carpeted, but should consist of hard wood, oiled and varnished. Upon this there may be spread any number of pieces of carpeting, rugs, or mats, as may be desirable, placing them near the bed, at the doors, or where the traffic is. Each morning they should be quietly slid out and thoroughly shaken and aired; and while they are away the floor can be wiped with a damp cloth or soft brush, and when it is dry they may be replaced. On a floor so managed the *materies morbi* is not likely to accumulate. The windows should be so arranged as to admit abundance of light, which is a normal stimulus of the body, without the aid of which invalids are not easily treated. Even in those acute diseases in which it requires to be tempered, it should never be entirely shut out. The windows should not be surrounded by woollen tapestry or decorations of any kind. A plain white shade tempers the light sufficiently, and cuts off outside objects from the patient's view. All hangings, etc., should be avoided, as they may become the harbourers of the germs of disease.

3. *Cleanliness.*—It may seem superfluous to urge this as essential; but, in fact, it is so often only superficial that it requires our personal inspection to be secured. We never can be certain that it is maintained when the floor is carpeted; and dirty bed-covering is often concealed by merely spreading clean over it. In most cases, changing the bed-linen once or twice a week is not sufficient, a person confined to his bed, especially with febrile disease, requiring at least one clean sheet being placed on his bed daily. This may be an upper one, which next day, if not soiled, may be used as an under one. The pillow-cases should be changed as often; and patients suffering from any of the severer forms of acute disease, as scarlatina, typhoid, etc., or from disease in which there is any tendency to septic influences, will derive immense benefit from changing the bed throughout every day. When a patient's bed from any cause may be required to be changed daily or oftener, this in ordinary cases, when there are two bedsteads in the room, can be accomplished by bringing these alongside of each other, and sliding the

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patient from one to the other, or lifting him in a sheet. But in severe cases of any kind, when it is of importance that the patient should not be disturbed in his posture, moving him may be safely performed by improvising a *stretcher*. All that is required is a strong sheet or blanket as long as the patient, and two wooden rods (as, *e.g.*, rake-handles) of the same length as the sheet and an inch or more in diameter. To move a person easily, four assistants are required, who are to stand two on each side of the sheet and *exactly* opposite to each other. One of the wooden poles is to be placed close to the edge of the sheet, which is to be rolled very tightly over it, up to perhaps within five or six inches of the body,—the great thing being to draw the sheet smoothly out from the patient while rolling up the stick inside it. The opposite rod is to be adjusted in the same manner. When everything is ready, the assistants grasp the rods firmly with their hands placed about two feet apart, and as nearly as possible directly opposite to each other,—so that as they lift, and at the same time draw against each other, the sheet will be supported at exactly opposite points. The assistants are to first drag strongly against each other and then lift, and keep constantly pulling against each other as they move along. If the patient thus moved has a fracture, unless the precaution is taken of directing one of the assistants to grasp the rod exactly opposite the hands of the assistant on the opposite side, the bones may be disturbed during the act of moving.

4. *Management of the Dejections.*—There is no point of more importance than this. When the dejections have to be preserved for inspection, it will be found, unless explicit directions have been given, that they have been put away in some closet or room adjoining the sick-room, or other unsuitable place. They should be carried out of the house or placed in some out-room or bath-room having a window constantly open. Moreover, the odour, as well as any organic putrefactive matter of offensive stools, may be at once destroyed by means of a solution of the permanganate of potash (one grain to the ounce), a few ounces of this being poured into the vessel that is to receive the discharges.

5. *Ventilation.*—This is of great importance, for the sick demand a much larger supply of fresh air. If a healthy person requires 2000 cubic feet of breathing-space, the sick person should have at least 3000 or 4000, and the air should be changed twice as frequently. The movement of air in the sick-room should be imperceptible. At a temperature of 55° or 60°, air moving at the rate of three feet per second is perceptible, and any more rapid motion gives rise to a draught that may be dangerous. It is essential that the air be thoroughly diffused, and then be removed after having been breathed once. Prof. Crosby discusses the action of heated flues as ventilators, and gives the preference to the fireplace as the most simple and best method of ventilating sick-rooms, a window always being kept open at the top. There are three points to be noted: first, observe whether there is any perceptible odour on entering the room from the open air, indicating that ventilation is imperfect; secondly, always secure a free inlet and outlet for the air; thirdly, place an open-mouthed bottle by the side of the bed at night. In the morning, before there is any opening of doors or windows, or any movements about the room, pour a little clear lime-water into the bottle and shake it. If the air is impure, the carbonic acid will cause this to become milky.

6. *Dietetics.*—A man is not to be starved simply because he is sick, but neither can he, as a general rule, take such articles as when he is well. Milk, however, is an article which all may take, as far as disease is concerned, in any and every condition. It may require the addition of lime-water when there is marked acidity of the stomach present. A little gentian, also, is sometimes useful in stimulating the stomach; and it may be necessary to give the milk in small quantities, repeated often, and in this way, when ice-cold, it may be administered to irritable stomachs with the best effect. Contrary to the teaching of our fathers, we now believe that cold water, and even ice-cold water, is a most beneficial drink, which patients may take as often as they wish, providing too much be not taken at any one time. Tea also is a wholesome beverage, is very comforting to sick women, and may be given without harm if sufficiently diluted with milk. When made only just strong enough to give a flavour, and well supplied with milk, and perhaps a little sugar, it gives the patient a trifle of nourishment in a very palatable form. *Beef-tea* is also a good and nutritious article of diet in the sick-room, and those who deny its good qualities, do so probably from not having met with it well made. Prof. Crosby adds another to the almost innumerable recipes, viz.:—Take a pound of the *very best* beef, cut it into pieces the size of the end of the thumb, put it into a pint-basin, cover it with cold water, and then place it upon the back part of the range or stove, where the water will gradually get warmer and warmer, but will not reach the boiling-point. Let it simmer in this way for two hours, then bring it forward and boil over a quick fire for twenty minutes, immediately after pouring the fluid from the beef, and allowing the little particles that become detached to flow off with it. If there is any fat in the tea it should be removed, as the bile and pancreatic fluid may be unable to emulsify it, and it may then do more harm than good. The fat may be removed by dropping a piece of flannel upon it as it floats on the surface of the warm tea; or when the tea is quite cold, all the fat can be removed in a flake. The tea should not be strained, as the small particles which are essential to the value of the tea would be removed. It may now be salted, and given either hot or cold as soon as the pulse indicates any diminution in the force of the heart's action. If the patient's stomach be very irritable, so that large quantities of any substance cannot be borne, *beef extract* may be resorted to. Cut up a pound of the best beef into small pieces, and put them into a good-sized pickle-bottle with a wide mouth. This is corked loosely and placed in a kettle of water and kept boiling for two hours. If the bottle be now removed, it will be found to contain a considerable quantity of fluid, which may be poured off, the beef also being subjected to slight pressure to make it yield more. In this fluid we have a highly concentrated article of nourishment, which may be given, after seasoning, either pure or diluted, according to the state of the stomach. It is not nearly so palatable as rich beef-tea made as described, but tea as usually made contains but little beef and much water.

REVIEWS.

Nature and Treatment of Deformities of the Human Body. By Lambert H. Ormsby, A.B., M.B. Dub., F.R.C.S.I., Surgeon to the Meath Hospital, etc. Dublin: Fannin and Co.

The greater part of this volume appeared some time back in the pages of a medical contemporary, and it is difficult to understand why the author has taken the trouble to republish his papers in their present form; for, although a graduate of Dublin, Mr. Ormsby's style of writing is so singularly careless, that any reputation which he may hereafter gain as a practical surgeon must inevitably be imperilled by the issue of such a book as this. But the volume has worse faults than mere vulgarity of style. The pathological knowledge displayed is very defective, and the mode of reasoning adopted is almost startling in its simplicity. In a somewhat involved sentence nearly a page long (pages 98 and 99), Mr. Ormsby complains of the style adopted by many lecturers and writers, and suggests the means by which readers may be "saved the extreme tedium of wading through so much unnecessary matter to get at the sum and substance of any given subject." We have patiently waded through much matter in the volume before us, but have failed to glean any original information on any of the points brought forward. We will quote a few samples of the prevailing style, and then leave our readers to judge of the usefulness of such a contribution to surgical literature.

The valuable researches of Rudolphi are thus summarily dismissed—"*Disordered nervous influence* acting on the muscular system was shown to be the cause of club-hand and club-foot by Rudolphi in 1823. I would refute this theory by saying that in nearly all cases of *anencephalic fœti*, where there is no nervous system at all, we find the body well nourished and free from deformity" (page 20).

About talipes valgus, we have the following curious statement:—"There are two modifications of this distortion, described in orthopædic works on the subject as compound varieties, which I may mention are due—first, either to contraction or shortening of the tendo Achillis (which, when I say tendo Achillis, I mean the muscles forming that tendon), producing the variety called *talipes equino-valgus;* or second, to elongation of the tendo Achillis, producing the variety *talipes calcaneo-valgus*. The above subdivision, in my opinion, is very unimportant, and needs only a passing notice, as the

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tendo Achillis is more or less engaged in every case, and generally requires to be divided" (page 57).

A little further on, in the section on "Weak Ankles," we read, "If caused by improper boots, with high peg-top heels, and laced up to nearly the centre of the calf of the leg—most artistic to look at, and when laced looks very neat, until the person begins to walk,—this yielding tendency of the ankles 'to go down' is very clearly seen" (page 104).

On lateral curvature of the spine our author has also something characteristic to write:—"Sex has a great deal to say in influencing this deformity. It is nearly always seen in girls. To see it in boys is most uncommon. Delicate girls belonging to the scrofulous diathesis, generally before or about the commencement of the menstrual period, is the most common time to see symptoms of incipient curvature beginning" (page 166).

The book is illustrated with some indifferently executed woodcuts (mostly borrowed apparently from some French work, though their source is not acknowledged).

We have not met with Mr. Ormsby as an author before the publication of these papers, and therefore we are reluctant to point out to him these grave defects, but the kindest advice we can offer is that he will work more and write less, and that if at any future time he thinks of publishing further observations on a subject which clearly interests him, he will get the assistance of some literary friend who will purge his writing of such blemishes as those which teem in this book.

Modern Naval Hygiene. By Dr. Leroy de Mericourt, Professor of Medicine; Chief of the Statistical Department of the French Navy. Translated from the French by John Buckley, Staff-Surgeon H.M.S. *Endymion*. Griffin and Co., 15, Cockspur-street, Pall-mall. 1875.

Mr. Buckley has dedicated his translation to Sir Alexander Armstrong, the Director-General of the Medical Department of the Navy, "in recognition," as he says, "of Sir Alexander's unceasing efforts to improve the hygienic condition of the Royal Navy." The translation appears to have been very carefully and happily worked out, and must prove especially interesting to the members of our Naval Medical Department, inasmuch as it enables them to compare the rules in force in the French navy with those existing in our own. Further, Mr. Buckley ventures to hope that commanding officers of ships will derive some benefit from a perusal of his work, since their attention may be called by it to several matters, trifling in appearance, but which still exert an injurious influence on the health of the men, since it is abundantly evident that captains and doctors must work together to insure the well-being of all seamen committed to their joint charge.

The Sanitary Journal, devoted to Public Health. Edited by Edward Playter, M.D. Toronto: Dudley and Burns.

The July number of this publication, which is published monthly, has been brought to our notice. It contains some original communications on lead-poisoning, vaccination, sanitary legislation, water supply, etc. The matter, though not distinguished by any particular appearance of novelty, is well written. The paper on Vaccination conveys additional proofs, were any wanting, of the benefits of this operation in cases of small-pox—a very seasonable record, considering the agitation which is at present going on on the subject of vaccination in the Dominion of Canada.

Memoir of Thomas Turner, Esq., F.R.C.S., F.L.S., Member of the Council of the Royal College of Surgeons of England, etc. By a Relative. With an introduction by the Rev. David Bell, M.D., Vicar of Goole. London: Simpkin, Marshall, and Co., Stationers' Hall-court; Manchester: J. E. Cornish. 1875.

This Memoir is dedicated to the Principal and the Professors of the Owens College, and to the medical students of Manchester. The family of the late Mr. Turner had expressed a wish that the Rev. David Bell should compile a history of the life and works of their relative for publication; but the Vicar of Goole, owing to the pressure of other duties, was unable to undertake the task, being obliged to content himself with writing the introduction to the work.

In a general sense there is scant opportunity for commenting on books of this description; their chief points of interest are confined to the connexions of the person whose actions are recorded; and, although the history of the late Mr. Turner's life, as here set forth, exhibits a thorough love for his profession, combined with a gentleness of nature and singleness of purpose which must have made his loss severely felt amongst the particular circle which he cheered and adorned, it is, after all, only the record of a life to which a parallel may be found any day amongst the hard-working and much-enduring ranks of the profession.

We are inclined to think that the memory of Mr. Turner will not be enhanced amongst those who most acutely felt his loss by this publication, which, from its nature, would appear to be more fitted for private than public circulation.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

Friday, October 8.

Sir William Jenner, Bart., M.D., F.R.S., President, in the Chair.

A Method of Performing Iridectomy for the Improvement of Sight.

Mr. Brudenell Carter read a paper on this subject. He commenced by referring to the cases in which it was desirable to excise a portion of the iris in order to make an artificial pupil, on account of opacity of the central portion of the cornea or of the crystalline lens; and mentioned the disadvantages attendant upon an iridectomy of the ordinary shape, which extended too far towards the ciliary border of the iris, and uncovered too much of the margin of the crystalline lens, thus diminishing the acuteness of vision by spherical aberration of the rays of light. He described the best attainable artificial pupil in such cases as a V-shaped opening, its base continuous with the natural pupil, and its apex directed towards the ciliary border of the iris; and mentioned the endeavours of Mr. Bowman and of Dr. de Wecker to make such an opening—the former by passing a knife under the iris and cutting it against the cornea, the latter by thrusting one blade of a pair of scissors between the lens and the iris and the other between the iris and cornea, and cutting a slit in the membrane by closing them. The slit made by either of these methods would gape to the desired extent; but the author condemned both methods as being dangerous, and very liable to produce traumatic cataract or dislocation of the lens. He pointed out that if Dr. de Wecker's scissors were introduced closed into the anterior chamber, through a small opening in the corneo-scleral margin, and suffered to expand, the iris would rise in a little plait between the blades, and that this plait would be excised by closing them, leaving the pupil which was wanted. The piece excised remained on the upper surface of the closed blades, and was readily withdrawn with them, aided by the final outflow of aqueous humour, or might as readily be removed from the anterior chamber by fine iris forceps, from which the teeth had been filed away. The author had operated in this manner upon thirty eyes in sixteen patients, with no mischance except the production of traumatic cataract in the second eye operated upon; and he believed that such an accident would be effectually guarded against by directing the blunt extremities of the scissors-blades forwards towards the centre of the cornea. Four patients, each operated upon in this manner in both eyes, were present for exhibition to the Society, but only one of them was introduced into the meeting-room. As compared with other methods of making an artificial pupil, the author claimed for this the important merit of simplicity. After the first puncture was made, a single instrument was introduced once into the anterior chamber, was opened, closed, and withdrawn. The iris remained *in situ*; was neither seized, twisted, nor dragged out of the eye, and had no opportunity of contracting any adhesions with the external incision. After a small amount of practice, it was not difficult to regulate both the breadth of the piece removed and its extent towards the periphery, and thus to obtain an artificial pupil of the best shape, of determinate size, and in any position which might be desired, with a minimum of injury or disturbance to other parts of the organ. It need hardly be said that, for the relief of tension, the operation would be almost, if not altogether, valueless.

Mr. Spencer Watson said he had often seen an incision of the iris upwards and inwards make a more useful means of vision than the cut usually adopted.

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The PRESIDENT pointed out that Mr. Carter's paper was more directed to the mode of operating than to its situation.

IDIOPATHIC TETANUS.

Dr. SOUTHEY gave particulars of this case. The patient, a railway ticket-collector, well-nourished, aged twenty-one, came into St. Bartholomew's Hospital. Fourteen days previously, he had remained for some hours in wet clothes, two days after which tetanic symptoms had supervened, and had been treated without apparent improvement by moderate doses of chloral. On being seen at St. Bartholomew's he was sensible, able to move his arms, unable to move his legs, and had trismus. His skin perspired freely. Temperature 100°, pulse 120, respirations 40. The muscles of certain regions felt hard, and were tender. Attacks of opisthotonos, lasting from two to five miuutes, came on about every hour. The bowels were confined; the urine was scanty and high-coloured. Fluid food only had been given. The treatment after admission consisted of one pill of calomel and opium, followed by a mixture of bromide of potassium (one drachm) and conium juice (two drachms), to be taken every three hours. Stimulants were discontinued, and the diet consisted only of iced milk alternately with beef-tea. Great quietness was enjoined. The skin of the body was hyperæsthetic, and exposure to draughts of air excited the tetanic spasms. For the first three days the bowels did not act, and the spasms increased in violence and frequency. He was then ordered thirty grains of compound jalap powder, to be repeated every three hours until the bowels acted, and he was to be put into a bath, temperature 98°. Three doses of the powder had to be given. After the bowels were opened the trismic spasm was lessened. On the fifth day the bowels acted four times copiously; temperature 98°, pulse 120, respirations 30. On the sixth day three attacks of tetanic spasms occurred, after which the patient steadily improved, and no further spasms were observed. No wound or splinter could be found upon the patient's body after most diligent search. The invasion of the disease, as well as its declension, was gradual. The improvement coincided with the evacuation of the bowels. Purgatives have been highly commended in tetanus, the normal peristaltic action of the intestines being invariably arrested so long as the spasms are severe and continuous, and returning coincidently with the cessation of the spasms. But Dr. Southey did not think this indicated the administration of purgatives, which he considered might produce damage precisely as excitation of the cutaneous nerves was harmful. He had given the compound jalap powder, almost against his own will, when, perhaps, the bowels would have been naturally opened without its aid. The tepid bath was employed daily, sometimes for nearly an hour, and had a marked tranquillising effect. Bromide of potassium was commenced only on the thirteenth day of the illness—which date, if cases of tetanus survived, they often recovered; but the drug seemed to be specially indicated physiologically for the disease. Dr. Wood had recorded the results of treatment by its means in sixteen cases—nine of traumatic tetanus—all of which recovered; and seven of idiopathic tetanus, with five recoveries.

The PRESIDENT elicited that the treatment only began on the twelfth day, and suggested that cases which last so long generally get well. The quantity of conium given was small.

Dr. CAYLEY said that in a case of spasmodic torticollis he had given two ounces of the best succus conii before he could produce any physiological effect.

Dr. EVANS referred to the treatment of tetanus by heat as far back as Ambrose Paré.

Mr. EASTES was surprised that the seven cases of traumatic tetanus treated by bromide should have all got well.

Dr. YEO thought that purgatives were hardly done justice to. In one case where chloral was used hypodermically, no good was done till the places suppurated.

The PRESIDENT said that in all such cases a knowledge of dates was essential.

SALICYLIC ACID AS AN ANTISEPTIC.

Mr. CALLENDER brought forward a series of cases illustrating the use of this agent as an application to wounds. The acid was used in various ways, and the three following preparations were the ones chiefly employed:—*a*. Phosphate of soda three parts; salicylic acid, one part; water, fifty parts. *b*. Salicylic acid, one part; olive oil, forty-nine parts. *c*. Salicylic acid, one part; bicarbonate of soda, half a part; water, 100 parts. In addition to these, however, it was occasionally used combined with borax, or in the form of an ointment with prepared lard; and a preparation of the acid with mastic and spirits of wine was tried, but had to be abandoned by reason of the irritation caused, as it was thought, by the ingredients combined with the acid. Seven cases in which the acid had been employed were narrated. In three of the cases a vesicular eruption was caused by the acid, and necessitated its withdrawal. In one case it was followed by considerable local irritation, which was relieved by the withdrawal of the acid. In a case of excision of the elbow-joint for strumous disease, the wound was washed out with salicylic acid, and was dressed with solution "*a*" on Japanese paper. There was considerable discharge from the wound, and the granulations were pale and flabby; the dressing was after a time changed to carbolic acid, when the granulations became florid, and the discharge was reduced to a minimum. In the remaining two cases the wound healed rapidly under the application of salicylic acid. From these cases and from other observations, Mr. Callender arrived at the following conclusions:—Putting together its good points, he found that salicylic acid was free from odour, and so far was acceptable to the patients; that wounds healed under its influence, and, during the progress of the repair, were free from bad smells; that, unless strong with spirit or but little diluted, it did not cause local pain. Its bad points seemed to be these: That, above the strength of 2 per cent., it caused local irritation, with some constitutional disturbance; and if the patient had a delicate skin, even the weak preparation was a source of trouble; that there was more discharge from a wound dressed with salicylic than there was where carbolic acid was used; that its influence upon a recent wound, as after an operation, was not so efficacious against the occurrence of decomposition as was that of carbolic acid, chloride of zinc, or of boracic acid; that the repair of a wound was less active, and the granulations, if any, more flabby than when other simple or antiseptic dressings were employed. On the whole, while admitting its use as a local application to be fairly commendable, Mr. Callender thought it inferior in its antiseptic properties to other agents, and did not consider it to be a remedy meriting the strong recommendations which had been given it by some of those who had made trial of it.

EXTENSIVE WOUND OF THE KNEE-JOINT TREATED BY LISTER'S ANTISEPTIC METHOD.

Mr. PICK reported the case. The patient, aged eighteen, a sawyer by trade, was working a small circular-saw by means of a treadle, when his knee came in contact with the saw, causing a severe wound. When admitted into St. George's Hospital there was found to be a longitudinal wound in front of the left knee-joint, some four inches in length, and with jagged and lacerated edges. The wound had completely divided the patella, and extended some distance into the left condyle of the femur, producing a groove about an inch in depth in this bone. There were several fragments of bone and cartilage lying loose in the wound. The two halves of the patella were widely separated from each other, and the interior of the joint freely exposed. The patient was an apparently healthy man, and was reported to be temperate in his habits, and it was, therefore, determined to make an attempt to save the limb. Every part of the wound, including the interior of the joint, was first carefully sponged with a solution of carbolic acid, and all the loose fragments of bone and cartilage were removed. The edges were then brought together with catgut sutures. Just before the last stitch was tied, the interior of the joint was injected with a solution of carbolic acid of the strength of 1 in 40. The wound was then dressed with carbolised oil, silk, and shellac plaster, and put up in a swing cradle. During the progress of the case, for a few days there was some febrile excitement and free discharge from the wound. The pus, however, was perfectly natural, and free odour. About fifteen days after the accident, a large abscess formed on the outer side of the thigh, some distance above the joint; this was opened, and discharged freely. Throughout the time that the man was in the hospital, the discharge, though considerable, was never in the slightest degree offensive; and, after the first few days, there was no fever and no pain. At one time, he became somewhat low and emaciated from the free suppuration, and required a considerable amount of stimulants. Five months after the accident, he was discharged with a firmly anchylosed joint. Now, three years after the accident, he was strong and hearty, and stated that he enjoyed good health. There was firm bony anchylosis of the joint, and he was quite strong on the limb, and able to earn his living as a stoker at a gas factory. Mr. Pick remarked

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that cases of compound fracture of the patella had received but scant notice in our ordinary text-books of surgery, most of them dismissing the subject with the remark that such cases required immediate amputation; but that the admirable and exhaustive paper of Mr. Poland, in the fifty-third volume of the *Medico-Chirurgical Transactions*, had put the matter in a new light. And it was in consequence of the cases there narrated that he had determined to make an attempt to save the limb. His principal object, however, in bringing forward the case was to elicit the opinion of members present on the value of the so-called Lister's antiseptic dressing. Mr. Pick stated that he had the very greatest confidence in its efficacy, not so much because it retarded suppuration and hastened union as that it promoted healthy suppuration and prevented decomposition of the pus. He was of opinion that the reason some had not found any sufficient good from it was because they had not been sufficiently particular in their manner of using it.

The discussion on these papers was adjourned till next week.

MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 7:—

Boswell, Alexander, Disraeli-road, Putney.
Johnstone, William, Seaford, Liverpool.
Low, Frank Harrison, Aberdeen House, Blackheath.

The following gentlemen also on the same day passed their primary professional examination:—

Reeve, Henry, London Hospital.
Roberts, Henry William, Guy's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

WILSON, JAMES MITCHELL, M.B.—Medical Officer for the Borough of Rochdale.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—Mark A. Harte, Staff Surgeon to the *St. Vincent*; Edward R. Mulock, Surgeon to the *Tenzer*.

BIRTHS.

DIVER.—On October 11, at Yately House, Caterham Valley, the wife of E. Diver, M.D., of a daughter.

WORKMAN.—On September 29, at Titherley, Teignmouth, the wife of C. J. Workman, of a daughter.

MARRIAGES.

BATESON—JOHNSON.—On October 9, at St. John's Church, Ellel, near Lancaster, Surgeon-Major Robert Sander Bateson, H.M. Indian Army, to Elizabeth, daughter of J. Johnson, M.D., of Hampson-in-Ellel, Lancaster.

PICKERING—POWELL.—On October 2, at the British Consulate, and afterwards at the English Church, Dieppe, France, Thomas Henry Pickering, M.D., English physician, Arcachon, to Gertrude Ada Walsh, second daughter of Arthur Henry Powell, Esq., of the Deccan, India.

REYNOLDS—FINLAYSON.—At Warrenpoint Church, co. Down, Ireland, J. Emerson Reynolds, M.D., Professor of Chemistry in the University of Dublin, to Janet Elizabeth, only child of the Rev. Canon Finlayson, M.A., Prebendary of St. Michael's, Christ Church Cathedral, Dublin.

VINEN—KEARNEY.—On October 7, at St. Mary's Bampton, Oxon, Edwin Charles, eldest son of J. Northcote Vinen, M.D., of St. John's, Southwark, to Nora Hester Elizabeth, only daughter of the late W. H. Kearney, Esq., Member of the Society of Painters in Water Colours, Pall-mall.

WOODMAN—ALLEN.—On October 9, at St. Mark's Church, Torquay, John Woodman, F.R.C.S., of Exeter, to Catherine Louisa, second daughter of the late Rev. John Allen, M.A., Rector of North Huish, Devonshire.

WALKER—KITCHIN.—On October 6, at the parish church, Hampton, Archibald Dunbar Walker, M.D., to Florence Mary, second daughter of J. P. Kitchin, Esq., Manor House, Hampton.

DEATHS.

LEEDS, HANNAH, wife of Edward Leeds, M.A., M.B., at Castle-hill, Brenchley, Kent, on October 6, aged 34.

STOBO, SARAH, widow of the late Thomas Stobo, M.D., at 29, Union-street, Somers Town, on October 2, aged 86.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOARD OF WORKS, SAINT GILES DISTRICT.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials (limited to three), to the Clerk to the Board, 199, High Holborn, not later than October 23.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Applications, with testimonials, to the Clerk of the Union, before November 6.

DORSET COUNTY HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Chairman, on or before October 20.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—Assistant-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Medical Staff, Children's Dispensary, Gartside-street, Manchester, on or before October 27.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.—Physician and Assistant-Physician. Candidates must be F. or M.R.C.P. London. Applications, with testimonials, to the Secretary, before October 28.

MIDDLESEX HOSPITAL.—Two Resident Physicians' Assistants, and a Resident Obstetric Assistant. Candidates must be legally qualified. Applications, with testimonials, to the Secretary, before October 30.

NORTH SHIELDS AND TYNEMOUTH DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretaries, Dispensary House, North Shields, on or before November 1.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

RICHMOND INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, at the Infirmary, Richmond, Surrey, on or before October 25.

ROSS UNION.—Medical Officer and Public Vaccinator for the Third District. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, before October 25.

ROYAL FREE HOSPITAL, GRAY'S INN-ROAD, W.C.—Junior Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 27.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician-Accoucheur. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, at the Dispensary, on or before November 3.

TIVERTON INFIRMARY AND DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, Ece Villa, Tiverton.

UNIVERSITY COLLEGE HOSPITAL, LONDON.—Surgical Registrar. Applications, with testimonials, to the Secretary of the Council of University College, on or before October 19.

WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to Mr. A. P. Watkins, 50, Foregate-street, Worcester, on or before October 23.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

VACANCY.

Altrincham Union.—The Wilmslow District is vacant; area 8739; population 6662; salary £60 per annum.

APPOINTMENTS.

Ongar Union.—John B. G. Gidley Moore, L.R.C.P. Lond., L.R.C.P. Edin., to the First District.

Staines Union.—Edmund F. Thomas, L.R.C.P. Edin., M.R.C.S. Eng., to the Shepperton District.

Tisbury Union.—John F. Fiske, M.R.C.S. Eng., to the Donhead District.

Wycombe Union.—Alfred Warren, L.R.C.S. Edin., L.R.C.P. Edin., to the Eighth District.

ROYAL COLLEGE OF SURGEONS.—There have been two meetings of the Council of the College this week—the first was a special one on Wednesday for the election of three examiners, when Messrs. F. Le Gros Clark, F.R.S., late President of the College, and W. S. Savory, F.R.S., were re-elected, and Mr. J. E. Erichsen, was chosen to fill the vacancy occasioned by the resignation of Mr. Henry Hancock. At the second meeting these gentlemen were admitted.

QUEEN'S COLLEGE, CORK.—The Chair of Anatomy and Physiology and of Materia Medica, vacant by the resignation of Professors Corbett and Purcell O'Leary respectively, have just been filled up. The new Professor of Anatomy and Physiology is Dr. J. J. Charles, Demonstrator of Anatomy in Queen's College, Belfast; while Dr. Mathias O'Keeffe has been appointed to the Chair of Materia Medica. Both gentlemen are graduates in Arts and Medicine of the Queen's University in Ireland.

THE PHARMACEUTICAL SOCIETY OF IRELAND.—At a meeting of the Council, held at the King and Queen's College of Physicians, on Wednesday, October 6, 1875, the following gentlemen were elected examiners for the year ending September 30, 1876, subject to the approval of his Grace the Lord Lieutenant, and the Privy Council of Ireland:—*Examiner in Latin, English, and Arithmetic:* Edward W. Collins, M.D. Univ. Dub. *Examiner in Materia Medica and Botany:* Walter George Smith, M.D. Univ. Dub. *Examiner in Pharmaceutical and General Chemistry:* Henry N. Draper. *Examiner in Practical Pharmacy:* Robert Montgomery, L.A.H. Dub., M.R.C.S. Eng.

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THE WORCESTER GENERAL INFIRMARY.—A special meeting has been convened for the 29th inst., upon a requisition to the secretary, signed "by seven or more governors" under the rules, to consider the propriety of adding the following words to Rule 59 :—"But in case of the unavoidable absence of the Honorary Medical Officer and his substitute, the House-Surgeon shall attend to the out-patients of such absent officer."

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The first meeting of the session of this Society will be held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Saturday, October 16, at 7.30 p.m., when the following resolution will be proposed by Dr. Tripe:—"That for the future no one shall speak on any subject more than once, or for a longer period than ten minutes." The President will deliver an inaugural address, "On some Directions of Scientific Work by Medical Officers of Health."

THE SHAH OF PERSIA AND HIS PHYSICIAN.—A recent *Gazette* conveys the intelligence that the Queen has granted to William Cormick, Esq., M.D., who is actually employed beyond her Majesty's dominions, in the medical service of the Shah of Persia (in which he holds the appointment of Chief Medical Officer attached to the heir-apparent of the throne of Persia), her royal licence and authority that he may accept and wear the insignia of the Second Class of the Order of the Lion and Sun, conferred upon him recently by the Shah.

THE PUBLIC LIBRARIES OF PARIS.—Conformatory to a circular issued by the Minister of Public Instruction, a list of these establishments has just been made public:—1. The Library of the Arsenal, 200,000 volumes and 8000 MSS.; 2. Of the Sorbonne, 80,000 volumes; 3. Of the École de Médecine, 35,000 volumes; 4. The National Library, 1,700,000 printed volumes, 80,000 MSS., and 1,000,000 prints, maps, and engravings; 5. The Mazarin Library, 200,000 volumes, 4000 MSS., and eighty models in relief; 6. The St. Géneviève Library, 160,000 volumes and 350,000 MSS.; total 2,375,000 volumes and 442,000 MSS.—*Union Méd.*, October 7.

CHLORAL AS AN APPLICATION IN FISSURE OF THE ANUS.—Dr. Créquy, writing to Dr. Dujardin-Beaumetz corroborating the statements made by the latter as to the great value of chloral (diluted to a twentieth) as an application to all kinds of wounds, adds that he has found it also of the greatest utility in two cases of fissure of the anus. The patient having had a stool a few hours before, either spontaneously or by aid of an enema, he introduces between the lips of the fissure a small tent of charpie consisting of about twenty fibres, and first soaked in a solution of chloral diluted to a fiftieth. This is left in until discharged during defæcation next day. The first and second dressings are very painful, but afterwards they become less and less so, so that in a fortnight all pain has disappeared, and the fistula has cicatrised. —*Bull. de Thérap.*, September 30.

MEDICAL SOCIETY OF LONDON.—The opening meeting of the 102nd session will take place at the Society's House, 11, Chandos-street, Cavendish-square, on Monday next, October 18, at 8 p.m.; C. H. F. Routh, M.D., President. The Fothergillian Gold Medal, value twenty guineas, is offered annually for a dissertation on some subject connected with medical science, for which the learned of all countries are invited to become candidates. The subject selected for competition in March, 1876, is on "Cataract and its Treatment"; for March, 1877, on "Pyæmia." Essays, which must be in the English or Latin language, and not in the handwriting of the author, must be delivered to the Registrar, at the Society's House, on or before November 1 preceding. With the dissertation must be delivered a sealed packet having a motto or device on the outside, and within the author's name and designation. The same motto or device shall be inscribed on the dissertation. The successful essay becomes the property of the Society.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Mr. F. W. Lowndes.—By all means let us see the paper.

Grunter.—In America deer's brains used to be employed for softening and curing leather. In London, and still more abroad, brains are largely used as an article of food—"Cervelles au beurre noir" is a standing dish in many foreign cafés.

Mr. Lawson Tait.—We cannot possibly publish such a letter: a temperate statement we should consider. Dr. Rutherford is quite able to take care of himself; but, amongst other things, Mr. Lawson Tait must not forget that Dr. Rutherford has proved himself to be a thoroughly successful and reliable teacher, which it is not given to everyone to become.

D. E.—The absurd and costly pomp of funerals is not a new subject for the moralist. There is a poem called "The Grave," by Robert Blair, a country Scottish minister of the last century, in which all the obvious and homely truths about the shortness of life and the vanity of earthly pride are mixed with the most repulsive and noisome descriptions of death and decay. Here is a specimen:—

"But tell us, Why this waste?
Why this ado in earthing up a carcase
That's fall'n into disgrace, and in the nostril
Smells horrible? Ye undertakers! tell us,
'Midst all the gorgeous figures ye exhibit,
Why is the principle concealed for which
You make this mighty stir?" etc.

Early burial would cut at the root of unnecessary funeral pomp.

Exon.—The Dr. Busby who was satirised by the Brothers Smith in the "Rejected Addresses" was, we believe, a doctor of music, not of physic. The satirists illustrate the absurdity of the theory of the formation of the Cosmos by the accidental concourse of atoms by showing us Drury-lane Theatre built by chance after it had been burned down—

"I sing of *Atoms*, whose creative brain
With eddying impulse built new Drury-lane—
Not to the labours of subservient man,
To no young Wyatt appertains the plan.
We mortals stalk, like horses in a mill,
Impassive media of atomic will. . . .

"From floating elements in chaos hurled,
Self-formed of atoms sprang the infant world;
No Great First Cause inspired the happy plot,
But all was matter, and no matter what.
Atoms, attracted by some law occult,
Settling in space, the globe was the result—
Pure child of chance, which still directs the ball,
As rotatory atoms rise and fall."

As for the notion of the immortality of the soul—

"Breathe but a space, and Boreas' casual sweep
Shall bear your scattered corses o'er the deep
To gorge the greedy elements, and mix
With water, marl and clay, and stones and sticks;
Whilst, charged with fancied souls, sticks, stones, and clay
Shall take your seats, and hiss or clap the play."

DR. RICHARDSON'S HYGEIOPOLIS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In one point mentioned in Dr. Richardson's able scheme of a healthy city, presented to the Social Science Congress at Brighton, I think his aim was not sufficiently high. In dealing with smoke, he very justly commends Mr. Spencer Wells's plan of collecting the proceeds of individual chimneys, by means of smoke arcades, into central common shafts, where the carbon shall be burned by a gas furnace, and the smoke be discharged into the air colourless. This, no doubt, would be a great improvement upon things as they are; but whilst we are dealing with creations of the imagination, they may as well be made as perfect as possible. We ought no more to discharge smoke, coloured or colourless, into the air we breathe, than we ought to pour sewage, whether turbid, or defæcated and strained, into the water we drink. The smoke should be *washed*, and its carbonic and sulphuric acid and ammonia extracted, and used to enrich the sewage for irrigation; the unburned carbon will serve the same purpose.

How will Dr. Richardson, as Medical President of Hygeiopolis, deal with hereditary and constitutional disease? His predecessor, Sir Thomas More, if I recollect rightly, in his "Utopia," before allowing any one of either sex to marry, caused him or her to be inspected naked by a company of "grave, sad, and ancient matrons," who were to report upon bodily defects of any kind. "Warranted sound" was the word, before being allowed to add to the population. UTOPICUS.

"TEACHERS DIFFER."—SQUIRE, AITKEN, AND GARROD ON ERGOT.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Let me call your attention to the way in which a student may be perplexed by conflicting statements on matters of fact laid down by different teachers. Let me begin with ergot.

In studying pharmacy, I was taught to rely much upon the very practical work of Mr. Squire, the "Companion to the British Pharmacopœia," 1871. This tells us that ergot contains more than a third of its weight of a "fat oil." It describes the preparation of the "Extractum ergotæ liquidum" of the Pharmacopœia, which I have been accustomed to find a most valuable and energetic preparation. In this process, the ergot is first of all well drenched with ether, which is done in order that the ether may dissolve out and get rid of the fat oil, and the "extractum liquidum" is made out of the residue after the ether has dissolved out the oil, and the ether has percolated through it, and been driven out by evaporation. This energetic preparation contains neither oil nor ether; and 'tis quite clear that the ether does not abstract the active principle or "ergotine," for the residue, after digestion in ether, is that out of which the most active preparations are made.

Mr. Squire adds a *note*—"The tinct. ergotæ ætherea P. L. is quite obsolete. It contained all the fat oil which is now rejected in preparing the ext. ergotæ liquidum."

Thus unmistakably does Mr. Squire speak in his edition of 1871. Now let me turn to another teacher whom I had always been led to regard with the deepest respect, and whom your own journal has pronounced to be the author of the best work on medicine for students—Dr. W. Aitken, the well-known Professor at Netley.

Speaking of paralysis following *myelitis*, Professor Aitken says: "The remedial power of *Secale cornutum* is in some cases very great. It seems especially to resuscitate the muscular contractility of the rectum and bladder and pelvic viscera generally. It is best given in the form of

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etherial tincture, in doses of from ten to twenty drops twice or three times a day."

Thus we see that the Netley Professor recommends a preparation abandoned and obsolete because useless. Nay, further, he goes on to ascribe the virtues of the ergot to this obsolete ingredient. "In the ergot fungus," he says, "there is a large proportion of fixed oil, which has the effect of exciting the uterus to powerful and continuous contractions." (Aitken, "Outlines of the Science and Practice of Medicine," London, 1874, pp. 295 and 577.)

Finding these prophets at variance, hopelessly and irreconcilably, I turn for a decision to a third. Let us see what Garrod says in his "Essentials of Materia Medica and Therapeutics," London, 1872, p. 350.

"Ergot," he says, "contains a large quantity of fixed oil—about 35 per cent. This was at first thought to be the active principle; subsequent researches, however, have shown that the fixed oil, when obtained by expression, is inactive; and it would seem that the active principle is extracted with the oil, and remains dissolved in it, but the oil itself is not that principle."

Now see what ambiguity is here exhibited in medical teaching! Ergot oil, says Squire, is inert; the etherial preparation containing it is obsolete. Ergot oil, says Aitken, is the active principle, and the etherial tincture which contains it is the best form of the remedy. Garrod in a supernatural manner combines both statements. "The oil is inactive" and "is not the active principle," but, "the active principle is extracted with the oil, and remains dissolved in it." But ether dissolves the oil and not the active principle!

Think of our students, going to undertake the responsibilities of practice alone, and in distant lands. How shall they know what to do, when their teachers disagree on a matter of fact which ought to be determined by clinical experiment before it is taught as a truth?

Netley School has been made illustrious by certain experiments in biology and dietetics. Do the clinical records of that Hospital afford any evidence of benefit derived from the fat oil or the etherial tincture in disease? Would they give the fat oil in a case of uterine hæmorrhage, and rely on it to produce contraction? If not, why not?

I am, &c., EYES RIGHT.

TRANSFORMATION OF LIVER-CELLS INTO CANCER-CELLS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—In some interesting articles on the progress of pathology which occasionally appear in your columns, I notice the doctrine of the conversion of liver-cells into cancer-cells stated as a new doctrine (see *Medical Times and Gazette*, October 3, page 400). But it surely is familiar to all who are acquainted with that real mine of pathological lore, Paget's lectures. Let me quote from the "Lectures on Surgical Pathology" (vol. ii., page 561), published 18 3:—

"It is possible that in the mutation of structures effected in the nutrition of certain parts, the elemental structures successively formed may gradually assume the appearance and properties of those of cancer. It has often been observed, in cases of cancer of the liver, that every gradation of structure appears, from the natural to the cancerous, and that among the microscopic structures are many of which it is hard to say whether they be hepatic cells or cancer-cells. It may be that this only exemplifies the tendency of cancer structure to be conformed in some measure to those of the adjacent natural parts; but it may also be that both the fact and this well-known tendency are evidences that cancerous properties may be gradually imparted to the undeveloped blastema in a part, so that the elementary structures successively formed from it may gradually assume more of the characters of cancer."

Paget withstood the fashionable doctrine of heterology, carried to extremes.

I am, &c., DELTA.

THE MAUNSELL MEMORIAL FUND.

	£	s.	d.
Amount already acknowledged 216	0	0	
A. B., per Dr. Rogers ...	1	1	0
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Rev. T. Long, A.M. ...	1	0	0
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Dr. Nevill	0	10	0
Dr. Newland, Kingstown	1	0	0
Dr. O'Neill	0	10	0
Dr. O'Rourke, Enniscorthy	1	1	0
Dr. Petit, D. L. Asylum, Letterkenny	1	0	0
The President, College of Physicians	2	2	0
The President, College of Surgeons	1	0	0
Dr. Rowan, Kilkee ...	0	10	0
Dr. W. Shaw, Lurgan ...	1	1	0
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Dr. C. Fitzgerald	1	1	0
W. G. Smith, M.D. ...	1	0	0
Dr. James Ridley, Tullamore	1	0	0

N.B.—Subscriptions will be received by Dr. Joseph Rogers, 33, Deanstreet, Soho, London.

M., St. Bartholomew's.—The next primary examination for the diploma of Membership of the College of Surgeons will take place on Saturday, the 6th prox.

Archæologist, Liverpool.—John of Gaddesden appears to have been the first regular Court Physician, and as such attended one of the sons of Edward I. in the small-pox, and for his skill and attention was appointed a Prebendary of St. Paul's. Medical skill at that time was often rewarded by clerical preferment.

J. W.—Only *Fellows* of the College of Surgeons are eligible for Examiners.

Dr. Malcolm.—You will find a case in which the placenta was retained for eleven weeks after the birth of a premature child recorded by Dr. Schöller in the *British and Foreign Medical Review*, No. xxvii., p. 236.

An Old City Member.—The late master of Barber-Surgeons' Hall is not correct in his statement that, at the separation, the College of Surgeons took *all* the plate belonging to it. Will it surprise our correspondent and the City functionary to know that all the plate possessed by the College is the large silver cup presented by Mr. Ranby (Sergeant-Surgeon to George II.) to the Corporation of Surgeons on its separation from the Barbers' Company in the year 1745, a small tankard of John Hunter's presented a few years since by Captain Sir Everard Home, Bart., R.N., and of course the gold mace presented by George IV.?

Cuvier.—Professors Flower and Parker will jointly lecture at the College on Comparative Anatomy next year.

Inventus.—The report of the Select Committee of the House of Commons on the Hampstead Hospital question was brought before the Metropolitan Asylums Board last week, when a special committee was appointed to consider the suggestions of the report as to the erection of administrative blocks on the vacant land in the hands of the managers.

Quackery.—James Graham, a quack doctor, has been committed by the Belfast magistrate for trial to the quarter sessions for obtaining money by representing himself as a medical practitioner.

Mitford D.—Dr. James Copeland was elected a Fellow of the Royal Society on December 5, 1834.

Harold.—Many passages in the writings of Hippocrates prove that the practice of succussion must have been both a common and a successful means of diagnosis in the time of that physician.

Don.—The recent collection for the Hospital Saturday Fund amounts, up to the present time, to £5343 10s. 5d.

Clement I.—Daniel Turner, M.D., was originally a surgeon, and has the credit of having invented the cerate which is still called "Turner's cerate." He commenced his literary career by publishing in 1695 "A Vindication of the Noble Art of Chirurgery," and he continued to publish on medical subjects till nearly the close of his life, in 1741. Wadd in his "Nugæ Chirurgicæ" tells us, as did Grainger before him, that "Turner was too fond of displaying his talents upon paper; that his cases are not stated in the most delicate terms; nor was politeness amongst his excellences." His writings are now altogether disregarded.

Sergis.—The sittings of the Factory and Workshops Acts Commissioners are held at 32, Abingdon-street, S.W.

E. B., Stockport.—The first State Medicine Examination of candidates for Medical Officers of Health took place at the Senate House at Cambridge on the 5th inst. There were twenty-eight candidates entered, all of whom, with one exception, went in.

MEDICINAL PROPERTIES OF LABURNUM.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The laburnum is a tree of the genus *Cytisus*, a native of the Alps, and much cultivated in gardens in our own country on account of its beautiful pendulous racemes of yellow flowers. It belongs to the natural order *Leguminosæ*. Until lately little was known concerning the properties of this plant, but recent investigations have proved it to be a powerful poison and a valuable remedy in disease. One of my neighbours, a clergyman, once had the misfortune to find that his child had eaten a few of the seeds of the laburnum, which immediately produced symptoms something like what would have been caused by opium, and in such a degree as to cause great alarm. Emetics and strong coffee were administered, and in a short time the child recovered. I have given cats meat boiled in a strong decoction of this plant myself, and produced similar symptoms, and in one case death. The therapeutic effects of the drug are a feeling of drowsiness, followed by deep sleep and profuse perspiration, which are succeeded, on waking, by great thirst and loss of appetite. There is no nausea or vomiting, and the bowels seem to be unaffected by it. Pain is quickly relieved on its administration. In large doses the sleepiness is more intense, and it is difficult to keep the patient awake; and in very large doses coma and death are the result. The action of this drug somewhat resembles opium, except that the drowsiness is not preceded by excitement. The pupils, as a rule, are irregularly dilated, and the arms and legs are kept in a continual state of convulsive motion. The medicinal properties of this plant depend upon a poisonous substance called Cytisine, which can be obtained from the root or seeds. There is no reason why a decoction of laburnum-root should not be used regularly as a remedy in many painful disorders; and probably before long we shall see this plant ranking amongst our most valuable narcotic remedies. The way I have used it in several painful affections is in the form of a decoction of the strength of a handful of the roots to a quart of boiling water, and an ounce given for a dose to an adult.

I am, &c., HERBERT JUNIUS HARDWICKE, M.D., L.R.C.P.

Highfield, Sheffield, September 25.

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P. S.—Dr. Charles, Demonstrator of Anatomy, Queen's College, Galway, is the new Professor of Anatomy and Physiology, Queen's College, Cork.

COMMUNICATIONS have been received from—

The Secretary of the Local Government Board; Dr. Semple, London; Dr. Peters, New York; Dr. Sullivan, Havana; The Registrar of Apothecaries' Hall, London; Mr. Lowndes, Liverpool; The Secretary of the Pathological Society, London; The Secretary of the British and Foreign Anti-Slavery Society; The Honorary Secretary of the West Kent Medico-Chirurgical Society; The Secretary of the Society of Medical Officers of Health; Mr. Lawson Tait, Birmingham; Dr. Downe, St. Leonard's-on-Sea; Mr. Brunden; Dr. A. Buchanan, Glasgow; Mr. Orton, Newcastle-under-Lyme; Dr. Speedy, Dublin; Mr. Stokes, Bath; Dr. Peacock, London; Mr. Trevan, London; Dr. Eustace Smith, London; Mr. J. Chatto, London; Mr. G. Brown, London; Dr. Fort, Paris; Dr. Wilkin, London; Dr. W. G. Harbison, Baltimore; Dr. Edis, London; Dr. C. Fox, Brighton; Dr. J. Whitmore, London.

BOOKS AND PAMPHLETS RECEIVED—

Beard and Rockwell's Treatise on the Medical and Surgical uses of Electricity, second edition—Parkin on Climate and Phthisis - Fry's Royal Guide to the London Charities—Annual Report on the Health of the Parish of St. Mary Abbott's, Kensington, during the year 1874, by Dr. Orme Dudfield—Hartley on Air and its Relations to Life—Wilson's Lectures on Dermatology—Leishman's System of Midwifery, second edition—Wilmot on Blood-Letting—Lunn on the Philosophy of Voice, third edition—Monthly Report on the Health and Meteorology of the Parish of St. Marylebone, by Dr. J. Whitmore.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Westminster Review—Chicago Medical Journal and Examiner—Canada Medical and Surgical Journal—New York Sanitarian.

APPOINTMENTS FOR THE WEEK.

October 16. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

18. ***Monday.***

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. Dr. Routh, "On Hyper-Pyrexia, viewed specially in its Surgical Aspect." Dr. Thorowgood, "A Case of Acute-Pneumonia." (Opening Meeting.)

19. ***Tuesday.***

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Dr. Cayley—Hydatid Cyst of the Liver which burst into the Lung. Dr. Crisp—1. Fractured Bones of Gorilla; 2. Rickets in Young Pheasants. Dr. Peacock—1. Supra-renal Capsular Disease; 2. Ulcer of Stomach. Mr. Heath—1. Calculi of Cystic Oxide; 2. Epithelioma of Tongue and Jaw. Dr. Dowse—1. Subarachnoid Hæmorrhage of Cord; 2. Thrombosis of Internal Carotids. Mr. Butlin—Uncommon Form of Carcinoma of Breast. Dr. Greenfield—Tumour of Anterior Cerebral Artery, &c. Dr. Hilton Fagge—Carcinoma Lipomatosum of Kidney. Dr. Barlow—Tubercle of Pancreas.

20. ***Wednesday.***

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

21. ***Thursday.***

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

22. ***Friday.***

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Adjourned Discussion on Mr. Callender's Cases of Treatment of Wounds with Salicylic Acid and Mr Pick's Case of Treatment of Wound of Knee-Joint with Carbolic Acid. Mr. T. Holmes. "On a Case of Ligature of Femoral Artery with Carbolised Catgut." Mr. Haward, "On a Case of Lymphadenoma." Dr. Murchison, "On a Case of Acute Cancer of the Liver, with Pyrexia, in a man aged 24;" also, "On a Case of Abdominal (Hepatic?) Abscess without Elevation of Temperature."

Quekett Microscopical Club, 8 p.m. Meeting.

Society of Medical Officers of Health, 7½ p.m. The President will deliver an Inaugural Address "On some Directions of Scientific Work by Medical Officers of Health."

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 9.

BIRTHS.

Births of Boys, 1149; Girls, 1097; Total, 2246.
Average of 10 corresponding years 1865-74, 2135·0.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	747	650	1397
Average of the ten years 1865-74	654·6	623·5	1278·1
Average corrected to increased population	...	...	1363
Deaths of people aged 80 and upwards	...	...	34

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	1	17	3	4	..	2	2	14
North	751729	...	4	23	7	10	1	3	1	20
Central ...	334369	...	1	8	1	7	...	5	1	7
East	639111	...	4	17	...	9	4	3	1	26
South	967692	...	11	55	4	17	...	5	1	38
Total	3254260	...	21	110	15	47	5	18	6	105

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·852 in.
Mean temperature	54·3°
Highest point of thermometer	68·8°
Lowest point of thermometer	43·0°
Mean dew-point temperature	49·3°
General direction of wind	W.S.W. & S.W.
Whole amount of rain in the week	0·49 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 9, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population* middle of the year 1875.	Persons to an Acre. (1875.)	Births Registered during the week ending Oct. 9.	Deaths Registered during the week ending Oct. 9.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2246	1397	68·8	43·0	54·3	12·39	0·49	1·24
Portsmouth ...	122832	27·3	71	53	...	...	...	...	...	...
Norwich	82842	11·1	56	36	67·5	42·5	53·7	12·06	0·74	1·88
Bristol	196186	44·1	162	106	63·5	40·4	51·3	10·73	1·37	3·48
Wolverhampton ...	71718	21·1	50	24	66·4	43·3	52·8	11·56	1·25	3·17
Birmingham ...	366325	43·6	270	163	67·8	40·4	53·2	11·78	0·33	0·84
Leicester	109830	34·3	85	67	65·8	41·2	52·4	11·33	2·42	6·12
Nottingham ...	92251	46·2	54	34	65·7	41·1	52·8	11·56	0·26	0·66
Liverpool	516063	99·1	371	219	63·0	43·3	52·7	11·50	0·61	1·55
Manchester ...	356626	83·1	241	188	64·0	43·0	52·6	11·45	0·72	1·83
Salford	135720	26·8	119	69	64·4	41·9	52·1	11·17	0·67	1·70
Oldham	87437	18·7	78	46	...	...	...	...	...	...
Bradford	168305	23·8	152	99	62·0	44·0	53·5	11·95	0·38	0·97
Leeds	285118	13·2	221	122	64·0	43·0	53·7	12·06	0·30	0·76
Sheffield	267881	13·6	219	128	64·0	41·5	52·6	11·45	0·87	2·21
Hull	133932	26·8	97	64	68·0	44·0	54·7	12·61	0·49	1·24
Sunderland ...	106342	32·2	76	34	75·0	44·0	56·7	13·72	0·06	0·16
Newcastle-on-Tyne	137665	25·6	67	65	62·0	42·0	...	...	0·10	0·25
Edinburgh	211626	50·5	120	88	...	...	...	...	...	...
Glasgow	534564	88·6	338	225	...	...	...	...	...	...
Dublin	314686	31·3	159	138	67·9	32·0	53·1	11·73	0·35	0·89
Total of 21 Towns in United Kingdm	7742899	37·0	5272	3365	75·0	32·0	53·3	11·84	0·61	1·55

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·85 in. The highest was 29·80 in. on Wednesday evening, and the lowest 29·39 in. on Saturday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CAN ARSENIC CURE PEMPHIGUS?

A CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL

By JONATHAN HUTCHINSON, F.R.C.S.,
Senior Surgeon to the Hospital, and to the Blackfriars Hospital for Skin Diseases; Surgeon to the Royal London Ophthalmic Hospital.

We have discussed in previous lectures the diagnosis of pemphigus, and of the maladies which have been somewhat confusedly put together under that name. We were able to come to the conclusion—one in which, indeed, almost all writers who have had much experience of the disease share—that there is at any rate one well-marked eruption which far excels all the others in importance, and which chiefly, if not solely, claims the designation. I refer, of course, to the chronic or relapsing form, "pemphigus diutinus" of nosologists, the one in which the blebs come out freely, are distributed symmetrically on various parts, and often over a large portion of the body; which often lasts long, and which almost invariably exhibits its constitutional origin in a marked tendency to recur. It is a very remarkable and peculiar form of disease, and one which always attracts the attention of those under whose observation it comes. In our last lecture I illustrated, by the citation of cases, most of the facts as to the natural history of this form of pemphigus, to which I have just adverted. I now purpose to ask your attention to the discussion of one single question as regards its treatment, and it is this: Can we, or can we not, claim for arsenic an almost specific virtue as regards its cure?

You must note that our decision upon this point is of wider importance than may at first sight appear; for if arsenic can, as I assert, in the most definite manner make the eruption of pemphigus disappear from the skin, and in a wonderfully short time restore the emaciated patient to health, we surely have a fact which we may hope to make useful under many other circumstances. For, in all probability, the diathesis which permits the development of pemphigus, and the causes which induce its outbreak, are not by any means very rare or very special; and we may fairly expect that a remedy of proved power against them will also be found of efficacy under many other conditions of deranged health. In addition to this, I think we may also claim that if we can prove that pemphigus will submit itself to arsenic, we gain a step in our conjectures as to the probable nature of a previously inexplicable disease. Maladies which are curable by the same remedy are probably in some sort of relation to each other as regards their causes, however different they may chance to be in external appearances. Thus, if both psoriasis and pemphigus are found to be invariably influenced for good by arsenic, we seem justified in the conjecture, although their forms of outbreak are dissimilar, yet that they are probably closely related. The same remark would apply, though perhaps less definitely, to several other diseases of the skin.

Now, so far as my own experience is concerned, I should have felt myself quite justified in doing that which indeed I have done many a time in the wards, telling you dogmatically that arsenic is the one remedy for pemphigus. As I find, however, that the opinions of some other observers do not, on this point, accord with my own, and that especially one renowned teacher—I allude to Professor Hebra, of Vienna—is still in the habit of expressing his conviction that we know of no internal remedy which exercises any influence over this disease, I feel it to be my duty to attempt a somewhat detailed examination of the facts.

In the *Medical Times and Gazette* for February, 1864, I wrote a report on eighteen cases of pemphigus observed at different hospitals, but chiefly under the care of Mr. Startin at the Blackfriars Institution for Skin Diseases, and some of the conclusions given at the end of that report were in these words—"That arsenic may be esteemed almost a specific remedy even in the worst class of cases. That arsenic does not merely repress the eruption, but remedies the unknown constitutional cause on which that eruption depends, always very much benefiting the general health of the patient. That it does not prevent the liability to subsequent attacks, but that such attacks are always much less severe than the original one, and tend, if treated by the same remedy, to diminish in intensity on each successive occasion." Since that report was written, now more than twenty years ago, I have seen a considerable number of cases of pemphigus, and, with the exception of one instance in which the mucous membranes were severely involved, and in which the patient died, I have not met with a single case in which the disease resisted this treatment. Some have been cured with greater rapidity than others, and some have required a little management as regards the apportioning of dose, etc., but in none did the arsenic fail to show its specific power, and in the end to produce a cure. Thus, instead of regarding pemphigus as a very serious and usually incurable, often fatal, disease, I have come to consider it as one of the most hopeful; and since there are few greater pleasures than the successful wielding of drugs, have been always very glad to receive a new case. At the time my report, from which I have quoted, was published, I certainly did not doubt that within a very few years the reputation of arsenic in this matter would be fully established, and I have since then been often much surprised and puzzled by the statements of some of my friends as to their own want of success. I was, indeed, obliged to add, as an appendix to that report itself, a case which had been mentioned verbally to me in which the arsenic disagreed with the patient, and did not cure the pemphigus. In this case, however, and in some others of which I have since been told, I have been inclined to doubt whether the diagnosis had been accurate. Any suspicion on this score, however, cannot for a moment attach to the statements which come from the celebrated chair of Dermatology at Vienna, and I confess at once that I see no way of explaining the wide difference which there is between Professor Hebra's experience and my own. I will give you his statements in his own words:—

"In my essay upon Pemphigus, published in 1842, to which I have already several times referred, I gave the results of my own experience (then not very extensive) as to the treatment of the complaint. I stated that it could not be cured either by diuretics or drastics, nor, on the other hand, by tonics (such as bitters, quinine, or acids), full diet and wine. And now, at the end of twenty-three years, having again to express my opinion, I have only to confirm in every point that which I formerly wrote.

"For I even yet know of *no internal medicine* which has proved efficacious against pemphigus. In my experience no good whatever has resulted from the remedies above named, nor from any others; neither from arsenic, iodide of potassium, and the salts of iron, as recommended by English writers and by some Germans (Veiel, Lebert, and Plieninger); nor from long courses of mineral waters, including even the Mühlbrunnen of Carlsbad, which is particularly extolled by Oppolzer; nor, lastly, from hydrochloric, acetic, and other acids. The use of the acids was first suggested by Rayer, who professed to have cured the disease by the continued administration of lemonades containing sulphuric and nitric acids; and Bamberger has advocated the same treatment, on the ground that the acid neutralises the ammonia which he supposes to exist in the blood of patients affected with pemphigus. I can, then, say with truth that I know no way of curing pemphigus by giving internal medicine. The only treatment by which I have ever succeeded in diminishing and removing the bullæ, even for a time, and thus of apparently checking the disease, has been by *local* applications."(a)

It will be seen that these remarks of Professor Hebra's were written more than ten years (1865) after my report from which I have quoted. As my report was published anonymously in a weekly journal, I have no doubt that it never came under his notice, otherwise he would probably have given us more detail as to his want of success with arsenic. It is important to observe that his prognosis in chronic pemphigus is very grave. "At the commencement of a case of pemphigus," he says, "it is not possible to say with certainty what will be its termination." The favourable signs are, "that the bullæ, unless very numerous, are tense; that fever is absent; that the patient is not very advanced in years nor very debilitated"; but "a very bad prognosis should be given when the blebs are flaccid and but little raised, when they are present in large numbers, when they occur in an old subject, when febrile symptoms again and again show themselves, when there is loss of appetite, and when the bodily power fails. . . . *Cæteris paribus*, a pemphigus is less dangerous in its early outbreaks

(a) New Sydenham Society's translation, vol. ii., p. 206.

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than when the patient has already gone through several attacks. . . . But in general one should be prepared to expect that pemphigus will in the end terminate fatally; and therefore the prognosis should always be guarded." (b)

From such statements as these we may gain some measure of the value which ought to be attached to any real remedy for a disease so formidable.

By others who have written on the subject since my report was published, very different opinions have been expressed, but nearly all speak far more favourably of arsenic than does Professor Hebra. Those who discredit the remedy the most are Professor Bazin and Dr. Dyce Duckworth. The following are some of the most important statements of fact and opinion which I have been able to find:—In Mr. Wilson's book, after the statement that treatment must be chiefly constitutional, that the digestion must be regulated, that tonics, bitters, mineral acids, etc., are valuable, there comes the statement, "we have also derived good results from the use of arsenic"; but after this there follows, "if there be feverish symptoms we may find it necessary to have recourse to effervescent salines," etc.—expressions which do not imply any strong belief in the specific efficacy of arsenic. Dr. Hillier, Dr. Habershon, Dr. Gee, and Dr. Hilton Fagge have all recorded cases exhibiting the virtues of the remedy in a strong light, and have expressed corresponding opinions. My colleague at Blackfriars, Mr. Nayler, writes—"My experience of the use of arsenic in this form of pompholix is that it is of the greatest service in the adult, but that in infancy or childhood it is powerless to prevent a relapse. Cases have come under my care, in which, within a short time after apparent recovery, the disease has returned in its original state; and I have known other examples in which arsenic has been persevered in, but only kept the complaint in check." Dr. Dyce Duckworth has recorded in the *St. Bartholomew's Hospital Reports* two cases in which arsenic either disagreed or "signally failed to cure the disease," and adds, "In my experience I have witnessed no benefit of any kind in these cases from the employment of arsenic." Professor Bazin, of the St. Louis in Paris, writing in 1862, says of pemphigus—"Its prognosis is very serious: originally and essentially chronic, it ends almost constantly in death." And at another place, speaking of its treatment, "This affection has hitherto resisted all therapeutic means. It has been in vain that, in the hope of stopping its progress, we have had recourse successively to alkaline and arsenical preparations, to small doses of tincture of cantharides, antimonials, etc." Bazin admits, with Mr. Nayler, that often his cases have improved for a time and seemed likely to be cured, but alleges that in the end they all relapsed. He appends a very interesting narrative of a man in whose case a great variety of remedies were employed, and who retained good health, and often got all but well, but who in the end was not cured.

I will now proceed to bring before you, briefly but explicitly, the cases on which I rely as evidence in support of my proposition.

Let me, however, before doing so, add yet a word or two as to what that proposition is. I assert my belief that arsenic is a specific for the state of health upon which relapsing pemphigus depends. I do not include infantile pemphigus, which is a wholly different affair, and mostly syphilitic, nor do I include any ill-marked cases, respecting which the diagnosis is doubtful. The cases which occur in children (not infants) are often amongst the best marked, and are, of course, included, whilst those met with in the very old are often indefinite, and of uncertain character. I make no strong distinction between acute and chronic, since many of the latter were acute at first, and are simply half-cured cases, but I admit that there are conditions in the most rapid and severe in which the patient may possibly be too ill for the remedy to have a fair chance. Nor is it my assertion that arsenic will cure pemphigus without regard to dose or time; and should anyone in the future publish cases in which it has failed, I must beg them to be kind enough to state in detail the doses and the length of the trial. Although I have not for many years, either at the London, at Blackfriars, or in private practice, had a single case which has not been cured, I have had several which resisted the remedy for a time, and which might easily have been recorded as failures. It occurs to me as possible that, after all, the main reason for the difference of my results as compared with those of some others is, that my mind has been long imbued with an almost implicit faith in the remedy. I have believed that arsenic could cure pemphigus, and I have never thought of resorting to anything else. If the eruption resisted for a while, I have pushed the remedy, and increased the dose. In a case in this hospital, a little girl did not get well until I insisted that the sister of the ward should see the child take her medicine; then the pemphigus vanished. In the case of a patient brought to me by Mr. W. W. Edwards, of Bromley, we soon reduced a severe and copious eruption to a very sparing one, and got the woman into good health, but for six months we could not make the bullæ wholly disappear. Finally, however, by a considerable increase of dose it got quite well. This was the most intractable case that I have had under care (if I except the one already noticed, which was rapidly fatal). Next, let me say clearly that I do not assert that arsenic will cure pemphigus beyond risk of relapse, but rather wish it to be distinctly understood that the remarkable proneness to relapse when the remedy is suspended is one of the most positive proofs of its specific efficacy. In many cases the evidence of benefit is apparent within twenty-four hours, and in some, if the remedy be suspended, a relapse will occur within a period almost as short. This is a very remarkable fact, but you will find it illustrated, I think, in several of the cases which I am going to quote. To cure, you must persevere; to prevent relapse after cure, you must persevere. A half-cured case is, according to my experience, quite certain to relapse directly. Very probably it is this tendency which has induced some prescribers to distrust the drug. The patient may for a day or two have missed his medicine, and out comes the eruption again; and the surgeon, not being informed of what has happened, concludes that arsenic has failed, and prescribes something else. Precisely what I am suggesting once happened to myself, and it was with considerable difficulty that I got at the real facts. But although arsenic does not prevent relapse in the early periods of treatment, or even of cure, yet I firmly believe that it does so to a large extent, if given repeatedly and long enough. Each relapse after an arsenical cure is less severe than the first, and more easily treated, and finally the patient ceases to be liable. I make this statement as the result of inquiries, years afterwards, as to the state of patients who had been cured, and I am also strengthened in it by the fact that in our large out-patient practice at Blackfriars our cured cases of pemphigus do not often return to us. At a further part of the lecture I shall cite the cases published by others in which arsenic is said to have failed, and I must now ask your careful attention to the following lengthy series in which it succeeded:—

1. In the first case, a married woman, aged twenty-four (Emily E., case 1, *Medical Times and Gazette*, 1854, p. 132), had severe and universal pemphigus at about the eighth month of her first pregnancy. Arsenic was not given until she had been under care a month, and had been confined; the eruption had already improved a good deal before it was begun, but fresh bullæ were still occasionally coming out. The cure was complete after six weeks' use of Fowler's solution in doses of one minim and a half three times daily, with colchicum wine, and an alterative pill. A year later she had a relapse; the same arsenical treatment was ordered, and "a very rapid cure resulted."

2. In Case 2 the patient, a boy, began to suffer from the disease when five years old, and from that time to the age of fourteen, when he was last seen, he had had many relapses. When eight years old he was first brought to Mr. Startin, and was then so ill that he had to be carried in on a bed, the eruption involving almost the entire surface. He had been under a great variety of treatment without benefit. Mr. Startin prescribed arsenic, and with the best results; and although during the next six years the boy had a relapse of pemphigus at every spring and autumn, he never failed to derive very speedy benefit from the use of arsenic. At the date of the last note (February, 1854) he had only a few bullæ about the mouth.

3. The next patient was a girl, aged seven, who had had severe chronic pemphigus for three years. She had had much treatment, but without improvement. She was completely cured by about two months' treatment with arsenic combined with iron. She took one-minim doses of Fowler's solution three times a day for the first month, without benefit; but began to improve rapidly when the dose was increased to a minim and a half and combined with small doses of iron.

4. The next case (No. 4) was a fair-complexioned, cachectic

(b) *Ibid.*, p. 394.

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boy of nine, who, when admitted in September, 1851, had been suffering more or less for two years. It was a severe case, and had had much treatment, having been at several hospitals and also under private care. It had furnished the subject for the portrait of pemphigus published in the best of our English atlases. He took the liquor arsenicalis in doses of one minim and a half thrice daily, without iron. In two months he was much better, and in another fortnight was perfectly well. He had a slight relapse four months later, but was soon cured by the same means. Three years and a half after his first admission, it is noted that he still remained liable to slight relapses on the genitals, which were not bad enough to bring him to the hospital, but that no severe relapse had ever occurred, and that his health was quite re-established.

5. In the next, a boy of nine had had mild pemphigus, uninterruptedly, but with exacerbations, for two years. He was perfectly cured after one month's use of the same prescription as in the preceding case—viz., one minim and a half.

6. The next patient was a labouring man, fifty years old, apparently in extremely bad health. His pemphigus was moderately severe, and had first come out seven months before admission. A month's administration of three-minim doses of the arsenical solution thrice daily cured him completely, and his health improved under it.

7. In the next case, a very anæmic servant-girl of twenty-five was admitted with severe pemphigus of one lower limb. She had had it (usually only on the legs) each spring and autumn for two years previously. In the present attack no improvement took place after a fortnight's treatment with iron, but rapid improvement followed the use of three-minim doses of Fowler's solution. She was, however, lost sight of before quite cured, and as the former attacks had usually subsided spontaneously after some weeks, the improvement in the present relapse may not have been due entirely to the arsenic.

8. Next comes the case of a fair-complexioned, healthy-looking girl aged nine years. Her pemphigus was severe and had lasted six months, in spite of treatment at various hospitals. She was cured by one-minim doses of arsenical solution in a few weeks. A relapse a year later was quickly cured by the same means.

9. J. A., a delicate, fair-complexioned boy, of nine years old, was literally covered by a most severe eruption of pemphigus, which had lasted, without abatement, for seven months, in spite of much treatment at hospitals. At the end of a fortnight's use of one and a half-minim doses of arsenical solution every bulla had disappeared, and he looked quite a different person. A single bulla afterwards formed on the arm while under treatment, but with this exception he remained perfectly cured while under observation.

10. The next case is a very satisfactory one. John B., aged fourteen, attended the Skin Hospital with pemphigus, which had been present almost interruptedly for two years and a half. It had not seemed to be influenced by season. He was quite well after six weeks of arsenical treatment. Six months later he had a relapse, which was again cured in a few weeks by arsenic.

11. This case occurred in a little girl of seven, a fair-complexioned child. When brought to the Skin Hospital she was pale and emaciated, and covered all over by bullæ or their scabs. The eruption had been out for ten months, and during more than six months of this she had been an in-patient in a general hospital, where every kind of treatment, excepting arsenic, had been tried, but without avail. She began to improve during the first week after Mr. Startin ordered arsenic (mjss. doses); a relapse occurred during the treatment, but after that she steadily improved, and was quite well in four or five months.

12. In the next case the recovery cannot be certainly put down to the arsenic, as the treatment was very imperfectly carried out. The patient was an infant, aged fifteen months, suffering from severe pemphigus of a few days' duration; she was well in about three months. Arsenical solution in half-minim doses had been ordered from the first, but the mother only gave it occasionally, and often omitted for several weeks at a time.

13. In the next instance, a man aged fifty-four was under the care of Mr. Joseph Tyler for severe pemphigus of several months' duration. For the first three weeks Mr. Tyler gave no arsenic, and the pemphigus increased. Then he ordered three-minim doses of Fowler's solution, and steady improvement followed, and in three months and a half the patient was all but cured. A relapse now occurred, apparently from exposure to cold, but perseverance with the remedy for another two months effected a complete cure.(c)

Case 14 was in a little girl of seven under care at the Metropolitan Free Hospital in 1860. She had had a severe attack lasting four or five months, then an interval of freedom for a week or two, and then a relapse of six weeks' duration, for which she came to me. It was severe and getting worse. She was tolerably healthy-looking, but languid and feeble. Two-minim doses of arsenical solution were given three times a day. Not a single fresh bulla appeared, and she was perfectly well in a fortnight. A month later, shortly after leaving off the arsenic, a slight relapse occurred, and several months afterwards another; both were rapidly cured by the same medicine, and she is known to have remained well for six months after the last-mentioned relapse. I have mentioned this case again in a lecture on Pemphigus in the *London Hospital Reports*, vol. i., p. 163 (1864). It is stated that she had a relapse in October, 1863, and was cured in a week by arsenic. In March, 1864, her next relapse occurred, and I then showed her to the class during the lecture. Arsenic was given in three-minim doses, and she was well in a month. She then ceased attendance, and in three weeks again had a severe relapse, which was again cured by the same remedy in combination with iron. This time, however, the cure was not quite so rapid, but "the specific influence of the arsenic in preventing the formation of bullæ, and the tendency of the latter to return when it was suspended, were most convincingly demonstrated."

15. The next case is less conclusive. Elizabeth B., aged five, had had pemphigus every spring and autumn, and also sometimes in very cold weather, for four years. It was not severe. She was better after a week's use of one-minim doses of the arsenical solution, very few fresh bullæ having appeared; she did not attend again.

16. The following one is interesting because we have subsequent notes of the patient's condition, and although the record of treatment is imperfect, we may consider it certain that he took arsenic. Alfred K. was eleven years of age when admitted under Mr. Startin's care, August, 1854. His pemphigus was then only of a fortnight's duration, and was moderately severe. There is unfortunately no note as to treatment or subsequent course at that date, but in 1861 I saw him again, and noted that formerly "he was cured at the Skin Hospital." He had had an attack in the early part of every winter since 1854; they were mild, and usually lasted from two to four weeks, affecting the hands, and occasionally the feet, but not occurring elsewhere. In June, 1867, he again came under my care at the London Hospital with an eruption of erythema annulare (multiforme) on the forearms and backs of the hands; a few patches had occurred over the tips of the elbows and on fronts of knees (psoriasis positions). The patches showed a tendency to vesicate at their edges, but there were no positive vesicles. The eruption had been out a week, and it is to be noted that he had for several weeks before been under medical (homœopathic) treatment for pain in the chest.

Case 17 contains detailed notes of the history of a little boy (age not stated) who had his first attack of pemphigus in July, 1859, and was taken to Mr. Startin after it had lasted ten weeks; he took arsenic and iron, and was well in three weeks. Seven or eight months later, he was admitted with a relapse of a week's duration—rather a severe one; the same treatment was followed by almost complete cure in six weeks. On admission, the urine contained a great excess of urea.

18. The next case reported is that of Louis I., a healthy man of thirty-six, who was admitted with copious universal pemphigus, which had been out for fourteen weeks. Under the use of arsenic and iron he steadily improved for three weeks, when he left off the medicine, and immediately the eruption relapsed. "On resuming the arsenic he gained ground, and was soon well." Several months later no relapse had taken place.

19. Arthur L., five years and a half old, was Dr. Ramskill's patient in May, 1860, for severe pemphigus. He had had it for two years, with frequent temporary recoveries lasting a month or so. Liquor arsenicalis in doses of a minim and a half had a rapid and decided effect, and the eruption was nearly well in three weeks.(d)

(To be concluded.)

(c) The above cases will be found recorded in more detail in the *Medical Times and Gazette*, New Series, vol. viii., pp. 131-135, Feb. 11, 1854.

(d) These cases are published in more detail in my "Supplementary Report on Pemphigus,"—*Medical Times and Gazette*, 1861, vol. i., pp. 223-226.

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COMMENTARIES ON DISEASE IN CHILDREN.

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Lecture X.—Chronic Catarrhal Pneumonia and Unabsorbed Pneumonic Deposits—Pneumonic Phthisis.

The principal form of chronic lung disease in the child arises, as it does in the adult, from the presence in the organ of cheesy deposits—the result of a modified process of fatty degeneration taking place in the products of inflammation. These cheesy deposits may be the remains of an ordinary croupous pneumonia, the consolidation having failed to be completely absorbed. This, however, is rare. It is more common to find an acute catarrhal pneumonia, leaving behind it an unabsorbed mass which undergoes the process of caseation, and leads to pulmonary phthisis. The most common form of consumptive disease, however, is the consequence of a chronic catarrhal process—the catarrhal inflammation running a tedious course, stuffing the alveoli with newly-formed cells, plugging the smaller bronchi, and establishing more or less solid nodules in the tissue of the lung. These in most cases extend themselves by a repetition of the same process, and, by the changes which they undergo, lead to the most serious consequences.

In chronic catarrhal pneumonia, the mucous membrane secretes a peculiarly viscid and concentrated fluid, which is loaded with corpuscular elements. In the smaller air-tubes, the channel is often completely plugged by the quantity of secretion; the basement-membrane disappears, and the corpuscles permeate the walls of the tubes. In the vesicles, the epithelial cells swell, become detached from the wall, and separate from one another. Their nuclei then divide, an active corpuscular proliferation is set up, and the alveoli become filled with large spheroidal cells, which contain large vesicular nuclei. These changes are accompanied by certain other alterations in the bronchi and pulmonary tissue. The peribronchial connective-tissue becomes increased, so that the walls of the finer air-tubes are thickened in places. The plugging of the smaller bronchi causes atelectasis of the air-vesicles to which they lead. As a consequence, there is a greater rush of air to the parts of the lung which still remain pervious, and this causes a cylindrical dilatation of many of the minuter bronchi, with marked stretching and thinning of their walls. The collapsed state of the vesicles induces congestion. This is soon followed by effusion of fluid into the air-cells, so that the part becomes œdematous. At this period the affected portions of lung are seen as dark reddish-brown patches, moist, smooth, and of doughy consistence. The consolidation is still capable of removal by absorption of the newly formed cells, in which case nothing would be left but some thickening of the pulmonary tissue at the spot, with a little compensatory emphysema around it.

If absorption do not take place, the contents of the vesicles next undergo caseation. The newly formed cells accumulate in the alveoli, and become closely packed together. They atrophy and undergo a partial fatty change, which, under the microscope, gives a cloudy appearance to the cell, and is indicated to the naked eye by a yellowish-white sharply circumscribed opacity in the centre of the deposit. Within the area of the caseating mass the pulmonary tissue is destroyed, with the exception of the elastic fibres and coats of the larger arteries, which still remain entire.

At first the inflammation and its accompanying infiltration are limited to the circumference of the smaller bronchi; and on section of the lung we find a varying number of grey transparent nodules, whitish at the centre, varying in size from a poppy-grain to a millet-seed. Each of these is situated in the middle of a lobule. The intervening lung-tissue may appear normal to the eye, but it is always more or less congested and collapsed, or is œdematous, or merely emphysematous and pale. Immediately surrounding the nodule is often a zone containing a reddish-grey glutinous infiltration. Gradually the grey nodules increase in size, and become distinctly cheesy; adjoining nodules unite; and finally the whole lobe may become infiltrated and caseous. Sometimes the inflammatory change spreads more abruptly from a large bronchus to the whole extent of lung which it supplies, so that the whole or greater part of a lobe may be at once invaded by the catarrhal and caseating process. This form is the old "tubercular infiltration" of Laennec.

The preceding description applies to cases of both acute and chronic catarrhal inflammation, the pneumonic process being more rapid in one case than in the other. A cheesy mass is, however, sometimes the consequence of an attack of ordinary croupous pneumonia. In all cases of croupous inflammation of the lung, the stage of yellow hepatisation is accompanied by a certain amount of catarrh of the alveolar walls. In fact, the principal cause of the change in colour of the hepatised part from dark red to reddish-yellow is stated by Rindfleisch to be the hindrance to the passage of blood by the infiltration of new cells in the interstices between the vessels. In ordinary cases this proliferation of epithelium is limited in amount, but sometimes the production of corpuscular elements is so great that the fibrinous pneumonic exudation becomes enclosed in a thick mass of new cells, and the whole undergoes caseation at the same time. By the post-mortem inspection of an affected lung, it is easy to discover what were the chances of a successful termination to the disease. Thus, if the part attacked by pneumonia be found to be sunken, dense, greyish, and slightly granular on section, allowing little fluid to be squeezed out on pressure, and showing under the microscope merely small dwindled cells without any excess of fat-globules, or signs of fatty degenerative metamorphosis, we may be sure that absorption was impossible, and that the chances of recovery in the case had been very small indeed.

After the process of caseation is completed, the cheesy mass may remain without alteration for a considerable time; but, sooner or later, certain other changes take place in it. The period during which a cheesy deposit may remain indolent varies in different cases; but it may be stated generally that the larger the size of the mass, and the more quickly it has been formed, the more imminent is the risk of softening at its centre. Nodules slowly formed by the aggregation of smaller masses seldom soften before they reach the size of a hazel-nut; while rapidly developed caseating deposits, even of single lobules, may undergo rapid softening. This is seen in cases of "acute phthisis," where cheesy deposits of all sizes, and all undergoing a simultaneous softening, may be seen scattered over the lung. In children softening is less common than it is in the adult, and cavities in the lung are more rarely seen. The softening process begins in the centre of the nodules, and is excited by the mere addition of fluid to the mass. The dead, dwindled cells are thus loosened, together with the molecular *débris* in which they lie. The softening is usually preceded by ulceration of the wall of the afferent bronchus—that, namely, which supplies the part, and lies in the centre of the nodule. The cheesy matter, when softened and converted into a pus-like pulp, is evacuated through an opening in the air-tube. Certain putrefactive changes then set in, and small fragments of cheesy matter separate from the newly formed cavity, and are expectorated. These, on examination, are found to contain elastic tissue and shrunken cells. Their appearance in the sputum is a sure sign that the cavity is continuing to extend itself. As a rule, when softening begins in a lung containing many cheesy deposits, more than one cavity is formed, and these often open into one another. Sometimes, after the cheesy matter has been removed, the cavity may contract by the formation of fibroid tissue in its wall, and become almost—or, if originally small, quite—closed, the sides cohering as a thick fibroid cicatrix. This is often combined with much proliferation of connective tissue in the lung, so that the part becomes indurated and its bronchi dilated.

Although the changes above described are those most commonly met with in cheesy deposits, yet the masses do not necessarily soften and break down. In exceptional cases a different transformation may take place. Thus, if the nodules are of small size, they may become calcified by the deposition within them of phosphate and carbonate of lime. Afterwards the petrified mass may become encapsuled, and remain embedded in the lung; or it may set up suppuration in the tissue around, separate from it, and be expelled through a perforation in a bronchus. Sometimes the whole caseous mass becomes converted into fibroid tissue, and then a condition is left such as has been described under the name of fibroid induration of lung. (See *Medical Times and Gazette*, September 4, 1875.)

The presence in the lung of the caseous products of catarrhal pneumonia is often the cause of secondary changes of a like character occurring in other organs. Thus, the disease is

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generally confined at first to one side of the chest, but when the softening process invades a caseous pulmonary mass, secondary deposits soon begin to be formed in the opposite lung which had been previously healthy. Again, ulceration of the lung is often found combined with the same lesion in the mucous membrane of the intestine. The parts affected are those in which ulceration also occurs in typhoid fever—viz., Peyer's patches and the solitary follicles in the neighbourhood of the ileo-cæcal valve. The follicles become enlarged by a proliferation within them of their corpuscular elements. A cheesy degeneration then takes place, and the caseous follicles soften from without inwards. In this way a sharply circumscribed ulcer is left, which is surrounded by a zone of connective tissue swollen by corpuscular infiltration. The ulcer extends its boundaries by a caseation and softening of the infiltrated tissues; and in this way neighbouring ulcers unite and form large oval lesions of surface, of which the long axis is always placed transversely across the direction of the bowel.

Another result of a softening cheesy mass is to set up a true secondary tuberculosis; and in this way the grey granulation may be found after death disseminated over the body, mixed up with the other pathological products proper to the disease.

So long as a small deposit remains completely inactive in the lung, it need give rise to no symptoms at all. If it be near the surface, a physical examination will detect its presence; but unless it cause pyrexia, there is no interference with nutrition, and, if it excite no irritation in the tissue around, there is no cough. In the present paper the symptoms produced by cheesy deposits and the changes occurring in them will alone be discussed. Tuberculosis and the consequences arising from the formation of the grey granulation in the lung have been already described in a previous paper (see *Medical Times and Gazette*, May 2, 1874). A caseous pneumonic deposit is the ordinary form of pulmonary consolidation, and the changes which occur in it as the softening process invades the mass constitute pulmonary phthisis—pneumonic phthisis, as it has been called, from its origin—the ordinary form of consumption of the lungs.

Children in whom this form of pulmonary disease is found do not necessarily present in their physical conformation any special peculiarities of build. They are not all, or nearly all of them, narrow-shouldered, or pigeon-breasted, or shallow in the chest. On the contrary, in children as in adults, we constantly meet with an unabsorbed pneumonic deposit in cases where the thorax is perfectly formed, and where the general structure and appearance are suggestive of anything but "consumption."

Much has been written about the peculiarities of chronic pulmonary disease in children, and the difficulties of its diagnosis, but these difficulties have been greatly overrated. It is true that the thorax is of small size, and that sounds from the throat are readily transmitted to the chest, but if the child's mouth be open during the examination, the transmission of sounds is in a great measure prevented. It is also true that little trust is to be placed in the amount of vibration of the chest-wall, for in young children vocal fremitus is always weak, and is generally absent altogether. But these are comparatively slight disadvantages. On the other hand, the resonance of the voice furnishes as important evidence in the child as it does in the adult. Most children will say "No" when desired. It is a word they understand, a sonorous word, and one which can be pronounced without trouble. From it we can form as sufficient an idea of the state of vocal resonance as we can possibly desire. Again, by gentle percussion with two fingers, the most minute variations in the sonoriety of the chest can be detected without difficulty. The great secret of examining the chest in children is to have the patient raised up to a convenient height. To bend down to a child as he sits on his mother's lap, or in a low cot, is to examine him under very disadvantageous conditions. The child should be always seated upon a table or high stool, so as to bring his body nearer to the ear of the observer.

There are two sources of error which it is important to avoid. In the first place, it is necessary to remember that the breath-sound in a child is naturally loud and coarse (puerile respiration), and that therefore mere loudness and harshness are not the results of disease. In a child, elevation of pitch in the breath-sound is the most valuable indication of alteration from a healthy state. The change is first noticed in the inspiration, but it very soon spreads to the expiration as well, and we then have what is called bronchial breathing—that is to say, both inspiration and expiration lose their breezy quality, and become harder, drier, and higher pitched, and the expiration gets louder and more prolonged. In fact, in young subjects, bronchial breathing seems in many cases to be the first alteration from a healthy state of breath-sound. Mere prolonged breathing is very common in children at all parts of the chest, and especially at the apices; and it is of importance to be aware (as a second source of error) that enlarged bronchial glands assist greatly in conducting sounds from the throat and trachea—so that in cases where the enlargement is considerable, blowing breathing with very long expiration may be heard at the apices of the lungs, although the lungs are themselves quite healthy. In children who suffer from enlarged tonsils, and even in children in whom no morbid condition of the fauces can be discovered, the same peculiarity is often noticed, especially when the lips are closed. On this account it is important to have the child's mouth open during examination of the chest. There is often great irregularity in the breathing of a child. The respirations may vary greatly in depth from time to time; and even in comparing the two sides, the intensity of the breath-sound is often found to be greater on one side than it is on the other. On this account, mere weak breathing in a child, however local it may appear to be, is of no consequence so long as its quality remains unaltered. If, however, the breathing become bronchial as well as weak, it must then be looked upon as a sign of disease.

The symptoms and signs of chronic catarrhal pneumonia are those of a slowly growing consolidation of the lung, which gives rise to pyrexia, and, by the consequent interference with nutrition, occasions some loss of flesh, and eventually, perhaps, extreme emaciation. Until, however, the disease is far advanced, the general symptoms are comparatively mild unless there be much pyrexia, and are far overbalanced by the local symptoms and by the intensity of the physical signs. A child may have cough for a long time without exhibiting any other symptoms; but if, in addition to the cough, we find elevation of temperature at night, followed by slight loss of flesh, we have great reason to fear that the catarrhal condition of the mucous membrane of the finer tubes has spread to the alveoli, and that destructive changes have begun. When thus chronic from the first, the seat of the pneumonia is the same in the child as it is in the adult—viz., almost invariably at the apex of one lung. In a very short time after the symptoms have been noticed, we find the percussion-note at the apex at one side to be highed-pitched; the breathing becomes faintly bronchial, and a click or two is heard at the end of a deep inspiration. The alteration in the percussion-note is usually observed first at the supra-spinous fossa. There is, however, here a source of fallacy which it is well to be aware of. On account of the inequality of breathing in early life, and the deficiency of expansion of the upper part of the chest, young children are liable to slight collapse of the apices of the lungs. Such collapses are usually seated at the posterior aspect of the lung, and give rise to slight dulness at the supra-spinous fossa, with weak bronchial breathing, and often a little crepitation at the end of inspiration. If, therefore, the temperature at the time of examination be not elevated, we should hesitate about inferring, from such signs alone, the existence of a caseous deposit, but should wait to correct our first impressions by the results of a second investigation. In the case of collapse the physical signs seldom persist longer than two or three days, and if the child be old enough to regulate his breathing as required, a few deep inspirations will usually cause the dulness to disappear at once.

The caseous deposit is at first limited strictly to one apex, the other being perfectly healthy. The temperature at this time rises to about 101° in the evening, and generally falls again to below 100° in the morning. The appetite is often impaired, and the bowels are very apt to be relaxed, for children suffering from catarrh in any form are easily affected by the slightest chill, and therefore the sensitive intestinal mucous membrane is very frequently involved in the derangement. The presence of a caseous deposit in the lung seems to keep up an irritable condition of the whole mucous membrane, so that bronchitic râles of the dry variety are very frequently to be heard, and these often persist for a long time although the general symptoms are undergoing progressive improvement.

W. T., aged nine years, was born of a consumptive family on the father's side; the mother's family was healthy. The boy had had whooping-cough and measles, but recovered completely, and remained in good health until Christmas, when

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he began to cough, especially at night. Towards the end of January, after a severe wetting, the cough got worse, and he was thirsty and feverish; his appetite, too, began to fail, and he complained of pains in the chest and limbs. From that time he seemed to grow daily worse, until February 19, when he was admitted into the East London Children's Hospital.

On admission the boy was pale and rather thin. His sternum was a little prominent, and there was slight flattening in each infra-mammary region. The two sides expanded pretty equally. The heart's impulse was in natural site. Some want of resonance was found at the right apex, both before and behind, and the respiration was high-pitched and rather bronchial (with the mouth open). Sonoro-sibilant rhonchi were heard not only here but all over the right side, both at the back and the front, and also—although to a less extent—on the left side. With this exception, the physical signs generally were natural. Heart's sounds were healthy. The boy's temperature was always over 100° at night, and it sometimes rose to 101°. In the morning, after the first three days, it generally fell to 99°. During the first week the pulse varied between 102 and 108, but afterwards it became slower. The respirations were 28 to 30.

After the boy had been in the hospital a few days he began to perspire copiously at night, but the sweating was greatly diminished by half-drachm doses of tinct. belladonnæ given at bedtime. The physical signs gradually improved, and on March 18 the right apex was resonant except at the supra-spinous fossa, where the percussion-note was slightly high-pitched. Respiration, however, was natural. The dry râles still persisted over both lungs. The patient gained in weight. On March 3 he weighed 3 st. 11¼ lbs., and on March 18 4 st. 1 lb. After March 3 the temperature was always under 100° at night, and the respirations never rose higher than 26 in the minute. The boy left the hospital on March 28.

This case was one of chronic catarrhal pneumonia affecting the apex of the right lung. After the boy's admission into the hospital, absorption very quickly took place, and on his discharge there was left merely a little thickening of the tissue of the lung at the seat of disease. In this case, on account of the rapidity of its removal, it is unlikely that caseation of the deposit had taken place; for although it is probable that a cheesy mass may undergo absorption under favourable conditions (especially in a child), yet the process of removal must necessarily be slow.

(*To be continued.*)

ORIGINAL COMMUNICATIONS.

CHOLERAIC COLLAPSE: ITS ANALOGY TO STOKERS' COLLAPSE.

WITH REMARKS ON THE ETIOLOGY OF MALIGNANT CHOLERA, AND ON SOME OF THE THEORIES OF CHOLERAIC COLLAPSE, ETC.

By J. TEMPERLEY GRAY, L.R.C.P. Lond.

(*Continued from page* 421.)

I HAVE before alluded to that unknown and indeterminable quantity—*vital resistance*—which is a matter of idiosyncrasy (Trousseau), and is said to be very different in different people. With regard to malignant cholera, it may fairly be questioned if any amount of resistance can cope with an adequate dose of the morbid poison, the different effects depending mainly upon the difference of dose. I do not, however, dispute the existence of unexplained individual peculiarities, which, till they are better understood, may be put down to idiosyncrasy; at the same time, I think that apparently different powers of resistance can sometimes be otherwise and variously explained. First, with regard to cholera, there is a real resistance where a person is protected by having had a previous attack of the disease. That some persons may be attacked twice is as true of cholera as it is of small-pox, but many of the alleged repeated attacks have no doubt been repeated attacks of simple cholera. The protective influence of a previous attack was many years ago enunciated by Jameson; and though the opinion is not generally entertained, it is supported both by theory and by experience. It is possible that the period of protection may be more limited in cholera than in other specific diseases; but why, in theory, malignant cholera should be altogether an exception to the rule of protection which is established concerning all other diseases of the class to which it is considered to belong, is unexplained, if not inexplicable. Experience, moreover, has shown—as affirmed conjointly by Griesinger, Pettenköfer, and Wunderlich—that troops that have already suffered from cholera obtain thereby, for a long time, a "diminished predisposition or even immunity."(a) Secondly, in many cases, apparently different powers of resistance may be accounted for by the different habits of life of different individuals, which affect their liability or non-liability to receive the morbid poison. Thus, the man who is careless about personal cleanliness when in attendance on, or in any way brought into contact with, cholera patients; the man who is careless about the cleanliness of his food and its receptacles, who uses perhaps the same vessels as the sick, etc., will appear to have less powers of resistance, because he is more liable to be attacked than the man who is particular about these matters. Thirdly, there is an accidental element; of two men apparently under precisely similar circumstances, one may accidentally get a dose of the poison to which he may succumb, while the other escapes, not because he has resisted the influence, but because he has never been called upon to resist it. If due weight be given to the varying effect of a varying dose of the morbid poison, there can be little doubt that this convenient refuge for the inexplicable idiosyncrasy will, in respect of malignant cholera, be less frequently resorted to. As general conclusions—there does not appear to me to be any proof whatever that impure air, impure water, and all the other so-called external causes, are other than, it may be, the exciting causes of simple cholera, or, at times, the media of the exciting (specific) cause of malignant cholera; neither is there proof that internal conditions of the body in any way predispose to this disease; and the circumstances being the same, everyone is equally liable to be attacked, except those who have previously, and perhaps not too remotely, suffered from the specific disease; the hypothetic influence of idiosyncrasy as a protective becoming less and less apparent as our knowledge increases.

A "block in the lungs" is often the immediate antecedent of death during collapse, and embarrassment of the pulmonary circulation is a not uncommon feature of the state of collapse. Dr. Johnson considers this to be due to the direct action of a morbid poison in the blood upon the pulmonary arterioles, causing their contraction, the resulting embarrassment of the pulmonary circulation being "the essential *cause* of choleraic collapse." If this were the case, it ought to be manifested as a constantly preceding or early symptom of collapse, whereas it is not usually observed till late in the disease, coming on, as has been well remarked by one objector to Dr. Johnson's theory, after the morbid poison may be supposed, in accordance with one part of that theory, to be largely eliminated from the system. Moreover, its accession and increase are generally more or less gradual, not sudden and spasmodic, occurring in sequence to other phenomena which may then become associated with it, though it is not by any means their constant concomitant; when complete it implies death. Granting, however, *argumenti gratiâ*, that spasm of the pulmonary arterioles may exist, it has its analogue in cramp of the voluntary muscles—which, occurring in malignant cholera, Dr. Johnson likewise attributes to the direct influence of the morbid poison, although it is a not infrequent accompaniment of simple cholera, and consequently may be produced in an analogous disease without any such agency. Cramp of the voluntary muscles is, in fact, a constant effect of interrupted circulation, and, occurring in the course of malignant cholera, it can be sufficiently accounted for in this way. Clearly, too, in this case, the deficient supply of blood cannot be dependent upon any obstructive spasm of the muscular arterioles (which would cause loading of the left heart), but must be due to other causes, such as absolute diminution of quantity, diminished fluidity, or diminished propelling power of the heart itself. If, then, the spasm or cramp of the voluntary muscles be considered an effect of impeded circulation, it would not be very outrageous to suppose that even spasm of the pulmonary arterioles, if we must have it, might also be so produced as a final ante-mortem *effect*. Muscular cramp, as it occurs in cholera, is precisely analogous to the rigidity which is produced in a muscle when its supply of blood is stopped by tying the vessel which conveys it. Cramps, indeed, appear very much to resemble the rigor mortis, the main difference being that in the former the processes of nutrition are merely suspended, whilst in the latter they have ceased altogether. The muscular

(a) "Abs. Med. Sc.," vol. xliv., p. 347.

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rigor induced artificially by tying the nutritious artery of a muscle disappears on removing the ligature, unless it has been retained so long as to destroy the vitality of the muscle. In the latter case the analogy is perfect, the rigidity of the muscle being a veritable local rigor mortis. Again, it is well known that sometimes, in cholera, the cramps begun during life continue after death, merging into the ordinary rigor mortis. To pursue this subject to its legitimate conclusion would be irrelevant.(b) It is sufficient, if it be received as a fact, that involuntary muscular contraction (spasm or cramp) is produced whenever the supply of blood to a muscle is interrupted. If, then, it could be proved that spasm of the minute pulmonary arteries existed as at least a late concomitant of choleraic collapse, why should it not be attributed simply to an arrest of arterial nutrition—dependent alike in stokers' collapse, and in that of cholera, upon the conversion of the blood into an uncirculable fluid by the abstraction of water, and independent of any special spasm-producing power of a morbid poison? Whilst putting this as a possibility, I hope to show further on that there is no necessity to assume the existence either of a morbid poison in the blood, or of a spasm of the minute pulmonary arteries, however excited, to account for every degree of obstruction of the pulmonary circulation, and simultaneous diminution or absence of the systemic circulation—such obstruction in a varying degree being a feature, but not the cause, of choleraic collapse.

Dr. Johnson lays much stress upon the diminished weight of the lungs after death during the collapse of cholera, considering it "the only trustworthy index of the amount of blood in their minute vessels."(c) But as Dr. Sutton, an authority acknowledged by Dr. Johnson, states,(d) even when "the lungs were congested throughout, of a deep claret colour, they weighed less than normal," and further, that "on section, they (the lungs) were dry," we may infer that in these cases the loss of weight was due solely to the loss of water. The lungs lose weight in common with all the tissues of the body, for all the tissues lose weight, though in different degrees, when there is a great drain of water from the blood. One gallon of cholera dejecta contains on an average less than two ounces of solids; it is, therefore, clear that if the body were to lose one-fifth of its weight in a few hours (Niemeyer), this would be represented by the evacuation of about three gallons (30 lbs.) of water and six ounces of solids.(e) The lungs, indeed, sometimes lose half their weight, but so also does the spleen; and any explanation of the former loss should be equally applicable to the latter, though it is not pretended, as far as I know, that there is any contraction of the minute splenic arteries to account for the splenic loss of weight. If, however, the body lose one-fifth of its whole weight, it is obvious that this loss must be sustained by its parts in unequal proportions—the bones, for example, will lose little weight; the softer tissues, as the lungs, much. Hence I am of opinion that the loss of weight sustained by the lungs is chiefly due to dehydration, though the absolute deficiency of blood in the lungs in some cases, as testified by Parkes, Johnson, Sutton, and others, may in certain cases—without being a pathological rule—aid in diminishing their weight.

Vomiting and purging often continue during the collapse or sub-collapse of cholera. When they cease in this stage, Dr. Johnson(f) considers that the cessation is "probably the result of the almost entire arrest of the circulation through the lungs." Impeded circulation through the lungs may exist whilst the discharges continue; it may exist when they cease; but since the state of the lungs mentioned as the cause of the cessation is all but that of dissolution, the order of the phenomena must surely be—first, cessation of the discharges, and, finally, arrest of the pulmonary circulation; the latter being sequential to the former, though not perhaps necessarily so. It seems, indeed, probable that both the failure in the transmission of blood through the lungs and the cessation of the discharges are the result of a common antecedent to which they are correlative—namely, an hydræmia. If we remember the state of the blood in extreme cases—that in consequence of the outpour of water which has occurred, the body has become, so to speak, dried, mummified,—the opinion does not seem deserving of the reprobation it has received, that in some such cases the vomiting and purging cease because there is no more liquid to flow: just as certain natural secretions—saliva, tears, sweat, and urine—are said to cease in cholera because "the blood actually does not contain the materials for these secretions."(g) Hence vomiting and purging in some cases may be looked upon as evidence of the incompleteness of the collapse. In the deepest collapse they are wanting, or, if present, consist of previously effused fluid or of recent ingesta.

The alleged persistence of the secretion of milk during collapse is equivocal; its existence may only imply that what has been previously secreted has not been reabsorbed from the mammary sinuses during the short period which an ordinary attack lasts, just as the fluid contained in ovarian cysts is not absorbed during choleraic attacks; or, more analogically, as the urine in the bladder is not reabsorbed, the mammary sinuses bearing a like relation to the lactiferous cells that the bladder does to the kidneys. If, however, it should be argued that there is an actual continuance—persistence, and not simply existence—of the lacteal secretion, it is not, after all, a matter of so much importance as it has been made, and the supposition that it may occasionally continue in consequence of the attraction to the gland caused by sucking, is, perhaps, as reasonable as any that have been advanced. It is surprising, amid the profound puerility which has been displayed in framing hypotheses to account for the existence of this secretion during an attack of cholera, that no one has thought of propounding the simple conception that the morbid poison may *promote* this secretion; that it may, in fact, act as a lactagogue as well as a hydragogue purgative, or, at any rate, water the milk! This hypothesis, however whimsical it may seem, is quite as intelligible and as rational as most of those that have hitherto been proposed.

In the raid against the "non-essential" symptoms, vomiting and purging, it appears to be ignored by some that at all events they must cease before there can be complete recovery. We are told by Dr. Johnson(h) that "the discharges *always* continue during recovery from collapse," and that consequently they cannot be the cause of collapse. This would be a strong argument against Snow's theory, even though we might doubt the "always," were it not manifest that in this instance no differentiation is made between the exudation of watery fluid and its discharge by vomiting and purging. Elsewhere, Dr. Johnson has attempted to explain the action of castor oil by this very differentiation—that the exudation into the intestinal canal and its external expulsion are not one and the same thing. It is necessary to reiterate that external discharges afford no positive criteria that osmosis is going on internally at the same time. There may be exudation and no vomiting or purging; or exudation may have ceased, and the acts of vomiting and purging may simply expel the fluid previously effused, or such fluids as may from time to time be ingested. It is obvious that the occurrence of irritative vomiting and purging of the latter kind *during* recovery from choleraic collapse in no way militates against Snow's theory, or makes it the least less certain that these evacuations must cease before recovery can be complete. Mr. E. Ambrose Fitzgerald, however, in his monograph on cholera, says—"I am of opinion that if the vomiting and purging were suppressed at the outset, no patient could survive collapse for twenty-four hours, much less for seventy," some of his patients who recovered not having passed urine for that time. Yet a little further on he says—"I have noticed it over and over again, that, in proportion as the pulse and urine returned, so did the vomiting and purging cease"; and again, "when once the pulse and urine were restored, the vomiting and purging did not fail to subside." There is another way of stating this—viz., that as long as the vomiting and purging continued, the state of collapse continued; as they abated, *pari passu*, the pulse and secretion of urine were restored. This, however, is not always the case. There are clearly two modes of cessation of vomiting and purging during collapse—one, where the cessation takes place with a failing or extinct radial pulse, in which case it is ominous of evil; another, where it happens with an improving pulse, in which we are justified in auguring

(b) Kühne considers the rigor mortis to be due to the coagulation of myosin in the substance of the muscles, this coagulation following the cessation of nutrition. This opinion is not incompatible with those advanced above; for the albuminoid deposit constitutes the contraction, according to this view, and the cause of this—namely, the cessation of nutrition—is the real cause of the rigor mortis.

(c) *Lancet*, vol. i., 1866, p. 736.

(d) Ninth Report of the Medical Officers of the Privy Council, p. 418.

(e) Taken at twelve parts in 1000, exactly 840 grains. If the absolutely *dry deposit* found by Dr. Parkes in one case—viz., four grains in one pint—be taken as a type, the quantity in a gallon would be thirty-two grains.

(f) "Notes on Cholera," p. 109.

(g) Niemeyer, *op. cit.*, p. 637.

(h) *Lancet*, vol. i., 1867, p. 589.

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favourably as to the result. In the latter case, the cessation is coincidental with recovery from collapse. Doubtless, also, there are two concurrent conditions under which there may be cessation of the watery exudation—one, where it may be rightly said to be arrested, by or without medicinal treatment, and in which it may be presumed that there is still sufficient intercellular fluid in the blood to permit in some degree its circulation; another, where it ceases because the blood has become so dehydrated that no more watery exudation can take place. The former mode of cessation is that of recovery with an improving pulse; the latter is indicative of extreme collapse, with imminent danger of total failure both of the pulmonary and of the systemic circulation. Bearing in mind these two distinct modes of cessation, we can understand how the opinion, founded on the theory of elimination, that the vomiting and purging are positively beneficial, has some show of support in actual practice. As long as there is vomiting and purging of recently effused fluid—not of fluid ingested,—the blood must be circulating or circulable, and the proper inference to draw is, not that the evacuations are useful, but that their continuance indicates a state which, serious though it may be, is not by any means the worst. Niemeyer,(i) indeed, says that the cessation of the evacuations before death "is not due to cessation of the transudation, but to paralysis of the intestinal muscles," and that consequently "the continuance of the evacuations shows that the intestines are not yet paralysed, and so justifies a more favourable prognosis." This explanation may be applicable to those cases in which a large amount of fluid exudation has been found in the intestines after death, although there had been no evacuations for some time before that event. The condition of paralysis has not, however, been proved to exist, and spasmodic contraction of the lower bowel—which would be consistent with the general tendency to muscular spasm—would equally account for the retention of exudation. Moreover, as in many cases the amount of fluid found in the intestines after death is inconsiderable, there can be little doubt that the cessation of discharge in extreme collapse is often nearly synchronous with the cessation of exudation. At any rate, when the evacuations cease during collapse, after their active or prolonged continuance, without other signs of amendment, it is to be feared that their cessation can only be regarded as an accessory indication of the completeness of the collapse.

Syncope is not so rare in malignant cholera (k) as some authorities would have us believe, though certain facts appear opposed to the opinion that cardiac paralysis is a common or an essential feature of choleraic collapse, as maintained by Niemeyer, Sutton, and others. The weakened præcordial impulse and feeble radial pulse support the idea of cardiac debility, of which they might be the result, though they may be otherwise accounted for. If the normal impulse be "a resultant of bulging of the ventricles and of locomotion of the heart"—the alleged forward movement being "nothing more than anterior surface-pressure from swelling of the ventricles"(l)—the diminished bulk of the circulating fluid may be sufficient to account for the diminished præcordial impulse. This, at least, will apply to the left ventricle, in which the amount of blood to contract upon being less, the "bulging" or "swelling" constituting the impulse must be less also. Again, it must be admitted that the pulse at the wrist may be weak or imperceptible if the arteries contain but little blood, whilst the heart *may* be still contracting strongly, though without perhaps the amount of bulging requisite to produce a normal impulse. Dr. Parkes says that the "inference which was drawn from the state of the cavities in the greater number of cases was, that the right side had continued to receive blood till in some cases it had become full and distended, while the left side had continued to contract, in some cases even violently, on the last drop of blood which had entered it." The facts on which this inference is based are not to be doubted. Though there may be exceptions to the rule, the description first clearly given by Dr. Parkes of the most usual state of the cavities of the heart after death in choleraic collapse has been confirmed by many subsequent observers. The interpretation of the facts may be various. Cardiac debility may not afford the only or the best explanation of the feeble pulse of cholera; but the condition of the cavities does not prove cardiac strength, for it is consistent either with a state of strength or of debility. If the pulmonary circulation be obstructed, the right heart may become full and distended, from inability to propel its contents through the vessels—an inability which, in whatever degree it may be associated with cardiac paresis, is no proof of it. The contracted state of the left heart, on the other hand, is not evidence of absolute strength; on the contrary, if we take into consideration the diminished bulk of the blood-current, and the diminished nutrition of the heart itself, with the absence of antecedent auscultatory signs of strong rhythmical contraction, it seems more probable that the contraction observed post-mortem is of the nature of spasm (tonic), not, indeed, from the direct action of any morbid poison, but of the same kind as I have before referred to when speaking of cramp—a local ante-mortem rigor from arrested nutrition, prolonged into a rigor mortis. Before this supposed final contraction could occur, it is evident that the power of the heart must have been weakened as an *effect* of impeded circulation through its own tissue; the fluency and bulk of the blood having become diminished, the heart itself must have ceased to be efficiently nourished. It may, therefore, be considered as the culminating point of a dynamical affection of the heart—an evidence of weakness from insufficient nutrition rather than of strength (and so far supporting Dr. Sutton's views)—which has terminated in fatal spasm, not in paralysis; the relationship, however, between the two conditions being probably not very distant. The state of the left heart is, however, that which would be produced by ante-mortem "perversely excited contraction" or spasm, not the flaccid state indicative of destroyed contractility which we should expect to find in true cardiac motor paralysis.

(To be continued.)

(i) *Loc. cit.*, p. 639.
(k) See Murray, "Pathology and Treatment of Cholera," p. 19; and Professor Haughton's Address, *Lancet*, vol. ii., 1868, p. 273.
(l) Walshe, "Diseases of the Heart," third ed., p. 28.

TREATMENT OF GONORRHŒA AND OTHER DEEP-SEATED AFFECTIONS BY A REVERSED CURRENT.

By J. PERROT PRINCE, M.D., M.R.C.S. Eng.

In the treatment of gonorrhœa I think the profession will generally concede that in using injections, caustic, escharotic, or astringent, the prime difficulty is the almost certainty of the contagious matter being, by means of the current of injected fluid, deposited at a point in the urethra beyond where it originally, or rather previous to the use of the injection, existed; or, supposing the canal to have been freed from purulent matter by recent micturition, as would undoubtedly be done if the surgeon's directions were strictly followed, will there not be set up a very active irritation, if not absolute inflammation, in a hitherto healthy portion of the membrane above the diseased point by means of the caustic or escharotic properties of the solution injected, which solution cannot be limited to the diseased extent when an ordinary injection-syringe is used? In truth, the treatment of gonorrhœa by injections with the syringe now in use is more productive of strictures than would be the disease if left to run its own course; and no doubt in many instances the severity of the symptoms are the result of the injected fluid either of itself setting up new inflammation, or having planted the poison where otherwise it would never have reached.

I fully concede the benefit to be derived from the use or application of such medicinal agents as are employed in the composition of the solutions ordinarily injected, providing they could be divested of the necessary attendant disadvantages of the mode of application; and in consequence of being convinced that local treatment is the only proper and reliable course to pursue, I have devised a syringe, as shown by the accompanying diagrams. The tubes are made of various lengths, curves, and sizes, all adjusting to the same barrel. The advantage of the variety will be easily understood when the action of the instrument is taken into consideration. The syringe should, after being charged with the solution to be injected, and besmeared with carbolised oil (the urethra having been washed out by immediately-preceding urination), be introduced as an ordinary catheter up to a point just above where the disease is determined to have reached; then the piston forced in, as with the ordinary penis syringe. Allow it to remain a few minutes after discharging the contents, in order that the solution injected may act on the diseased surface; then gently withdraw. The advantages which it possesses are that the current of fluid is thrown downwards by

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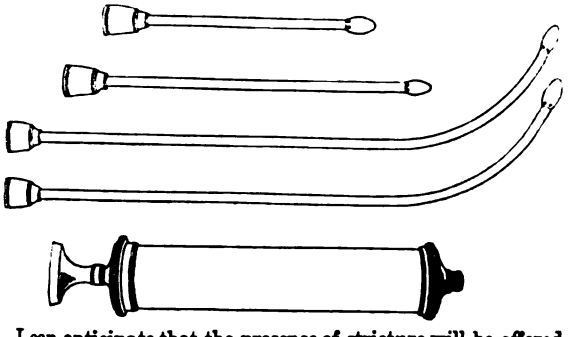
the side of the neck of the instrument and out at the meatus, thereby not only cauterising or stimulating the membrane, but removing by a washing-out process any matter remaining in the pouches or folds of the urethra. The simply removing such purulent matter from the point where it has been secreted is not, however, the important feature, but, when it has been removed perforce of any injection, that it should be removed entirely from the channel, or, if any portion is left, let it be on a surface already diseased, which can be truly said of all of that portion of the urethra between the highest point attained by the disease and the meatus urinarius. Another advantage is derived from the bulb preventing the injected fluid passing beyond it, in cases where we choose to inject with very moderate force, in order that the solution may longer remain in contact with the diseased surface.



I can anticipate that the presence of stricture will be offered as an obstacle to the use of this instrument, and I have purposely caused some of the tubes to be made conveniently small, but unquestionably in many instances the use of the smallest will be quite impracticable, and other measures will have to be adopted. In the great majority of cases, however, uncomplicated by the previous use of the old syringe, the disease will be found sufficiently near the orifice of the urethra to make the shortest tube available; and where, in cases of moderate stricture, some little dilatation can be practised quite conveniently.

I present the consideration of this instrument to the profession, and feel confident that an honest and proper trial will yield the same satisfactory results as have been invariably obtained from its use by me.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE LONDON HOSPITAL.

NEW OPERATION FOR FIBROUS ANCHYLOSIS OF KNEE-JOINT.

Last week, Mr. Maunder executed the first step towards straightening the limb of a child about six years old, in a case in which the patella was firmly fixed to the lower surface of the femur. By the aid of a tenotomy-knife the fibrous tissue attaching these two bones to each other was divided subcutaneously, and the patella was then freely movable upon the femur. On the fourth day, no evil consequence having resulted, extension by a weight was begun. Some months ago, Mr. Maunder performed a similar operation on an adult with the most gratifying result.

ST. PETER'S HOSPITAL.

STONE IN THE BLADDER—LITHOTRITY—CURE—PATIENT'S CONDITION FOUR YEARS AFTER THE OPERATION.

(Under the care of Mr. TEEVAN.)

James H., aged sixty-one, pipemaker, was admitted into St. Peter's Hospital on May 9, 1871, suffering from stone in the bladder.

History.—Two years ago, passed several small stones like shot. Last summer, blood escaped from penis a few times after micturition. In October, began to experience much pain when making water, so that he was obliged to hold the penis between his hands and to squeeze it in order to relieve the pain. Urine was sometimes discoloured. On two occasions had temporary attacks of retention. Suffered much pain when he rode in a cart or slipped off the kerbstone. Last November he applied to Mr. Teevan at the hospital, when he was sounded and a stone detected. The patient would not then enter the hospital, as his employer wished him to try the effect of herbs. No history of stone in family. Patient born at Cheshunt, his father at Berkhampstead, and his mother at Cheshunt. Father died of kidney disease. Patient suffered from rheumatism, but not gout.

Condition on Admission.—Patient's sufferings have increased so much of late that he wishes to be operated on. Is constantly wanting to make water, and the act is attended with much pain. Is unable to work, and passes restless nights. Blood escapes from penis now and then. Has lost flesh lately, and is pale, thin, and very haggard-looking.

May 8.—Lithotrity with a scoop; stone one inch in diameter. The *débris* brought away showed that it was composed of lithic acid.

9th.—Some small pieces have passed away, as also a little blood. Not in any pain. Patient had a slight rigor in the evening.

15th.—Lithotrity, followed by a mild shivering attack the next day, and the loss of a little blood. Not much stone came away after this crushing.

22nd.—Lithotrity.

Next day much stone passed, and on May 25 and 29 the operation was repeated, and followed on each occasion by the appearance of much stone in the urine.

June 5.—Another crushing.

8th.—At 3 a.m. eleven pieces of stone were passed consecutively in a few seconds.

10th.—Is quite free from all his old pains. Feels very comfortable, and says that the stone must all be gone.

25th.—Discharged. Considerable irritation along urethra, and frequent desire to micturate.

March 22, 1875.—To-day the patient called at the hospital. He stated that when he had been three weeks out of the institution, all urethral irritation and frequency of micturition disappeared, and that he resumed work. Has been very well all the time that has elapsed since he left the hospital, and has been able to work the whole of the period. About three months ago he began to experience difficulty in making water, and was unable to expel the last drops without much trouble. An examination showed that there was no stone in the bladder, and that the patient's complaint depended on an enlarged prostate. He was taught how to pass a catheter for himself, and desired to use it night and morning.

September 6.—Patient quite comfortable.

STONE IN THE BLADDER OF A MALE CHILD ONLY TWENTY MONTHS OLD—LITHOTOMY—CURE.

(Under the care of Mr. TEEVAN.)

William George E., twenty months old, was admitted into the hospital on July 13, 1874, suffering from stone in the bladder.

History.—He had been brought to the out-patients' room a few days previously by his mother, who complained that the child began to experience difficulty in making water about five months ago, and that three months ago he commenced crying every time he urinated, and that the act of micturition was always accompanied by the escape of fæces. Child born at Greenwich. No information could be obtained regarding the father or mother.

Present Condition.—Child is very emaciated and sickly-looking. Cries out every time he makes water, when the bowel also descends.

On July 20, Mr. Teevan, at 3 p.m., introduced a No. 6 rectangular staff, and having given it to Mr. Walter Coulson to hold, extracted by the lateral operation a pyramidal-shaped phosphatic calculus weighing one drachm. At 10 p.m. the pulse was 140, and temperature 99°.

On July 21, at 10 a.m., pulse was 173, and temperature 99·3°. Patient quite comfortable, and free from any tenderness in the hypogastric region. Urine commenced to pass through the penis on July 31, and on August 8 the wound was quite healed. The patient left the hospital on August 21, much improved in health and not suffering from incontinence of urine.

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STONE IN THE BLADDER—LITHOTOMY—CURE.

(Under the care of Mr. TEEVAN.)

Albert W., aged nine, was admitted into the hospital on December 12, 1874, suffering from stone in the bladder.

History.—About one year ago patient began to make water very frequently, attended with pain, which was much increased by walking. Never passed blood. About five years ago suffered from prolapsus ani. Patient was born at Sheffield, the father at Lostwithiel, and mother at Gainsborough. An uncle of the boy was operated on for stone.

Present Condition.—At the present time patient wants to make water very frequently, about every ten minutes at night, but only about every hour during the day. Often has erection. There is a muco-purulent deposit in the urine. Boy is pale and rather thin.

On December 21, at 3 p.m., the patient was put under the influence of ether by Mr. Knott. Mr. Teevan introduced a rectangular staff (No. 8) and gave it to Mr. Heycock to hold, and then extracted, by the lateral operation, a phosphatic stone weighing two drachms. At 9 p.m., Mr. Erith, the house-surgeon, found the pulse to be 140, and temperature 101°.

22nd.—10 a.m., pulse 112; temperature 98·4°.

23rd.—10 a.m., pulse 114; temperature 99°.

24th.—10 a.m., pulse 120; temperature 99·4°.

25th.—10 a.m., pulse 128; temperature 98°.

26th.—Water came through penis to-day.

31st.—Left testicle inflamed without any apparent cause. At 9 p.m., pulse 132; temperature 100°.

January 1, 1875.—Pulse 124; temperature 100·8°.

4th.—Testicle much better. Pulse 120; temperature 99·3°.

5th.—No urine comes through wound.

Patient left the hospital on January 17, quite well and not suffering from incontinence.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, OCTOBER 23, 1875.

THE REGISTRATION OF FOREIGN DEGREES.

A cry is being raised by some who are the holders of foreign medical degrees for the recognition and registration of those distinctions as qualifications by the General Medical Council. The claimants got so far during the last session of that august body as to present a formal petition, signed by a number of foreign graduates resident in Great Britain, for that registration. The Council, however, refused to consider the application, or rather, did not think themselves justified in so far acceding to its prayer as to apply for the necessary powers. At present the Act under which the Council exists does not give them the power to register any foreign degrees procured after 1858, whether by examination or otherwise.

The foreign graduates, however, not satisfied with their cold reception by the Council, have lately begun to agitate again for registration, and it may be as well briefly to examine into the justice and value of the claim. The fact of the claim having been set up at all arises, probably, from the desire, apparently inherent in the breast of a majority of medical men, to be able, with some show of reason, to style themselves "Doctors." As in Great Britain the attainment of an M.D. degree involves a considerable expenditure of time, trouble, money, and brains, there possibly are some practitioners who are unable to possess themselves of the coveted title, and are driven to the Continent of Europe, or across the Continent to America, to seek an *Alma Mater* which will receive them into her arms on easier and less exacting terms. We do not intend to discuss here the advisability or non-advisability of any greater facilities being afforded by British universities for the attainment of their medical degrees, but merely to consider the grounds on which those who have graduated in foreign countries base their claim for registration.

No one has, we believe, yet endeavoured to obtain registration for a foreign degree unless its holder already possessed a registerable British diploma, but the request has been merely for the official recognition of the foreign distinction as an extra qualification.

Foreign degrees are divisible into three classes, viz.:—1. Those obtained after residence and examination at a University. 2. Those obtained after examination without residence. 3. Those obtained without either examination or residence, simply by the disbursement of a certain quantity of the current coin of the realm. The last-mentioned class we can put aside altogether as not worthy of discussion, the value of diplomas obtained in such a manner being about that of the paper on which they are engrossed, and we are not aware that any of their holders have yet had the audacity, even in their most sanguine moments, to imagine that they would ever procure official recognition for them. The editors of the "Medical Directory" very properly exclude such worthless distinctions from their pages, though admitting foreign degrees when obtained after proper examination.

It is, therefore, only with the first and second of the three classes above named that we have anything to do, as it is the holders of those only who are clamouring for recognition.

There is no doubt that the claimants have some ground for their request. The degrees granted by such universities as those of Paris, Berlin, Brussels, Vienna, Heidelberg, etc., are by no means to be despised as testimonials and guarantees of the amount of professional skill and knowledge possessed by their holders; and it must be admitted that when a man has spent either time or work, or both, in procuring a degree, it seems hard that he cannot have it officially recognised by the Council. The plea, however, on which the Council rest their refusal to register is that they have no control over the course of study pursued at foreign medical schools, and therefore they cannot be sure that the degrees which those schools grant represent the acquisition by their possessors of the amount of professional knowledge which the Council consider essential for a competent medical man. This plea, it must be owned, is a very good one, and is in its way unanswerable. It must be remembered, however, that the holders of these foreign degrees do not, as we have said, require or expect the registration of those degrees alone, but only as supplementary to British qualifications of which they are already the possessors. Therefore

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it may be, and is, argued by the claimants that the Council already possess a guarantee for their fitness for the practice of their profession, and the degree for which they desire registration can only be regarded as a kind of supplementary honour.

But now the question immediately arises, "*Cui bono?*" What object will the foreign graduates gain by the registration of their degrees? A man who has obtained a degree from any university in the world (provided always that degree has been obtained after a sufficiently searching examination), has an incontrovertible right to place that degree after his name, and to put "Dr. So-and-So" on his cards and his door-plate. If he possess a British qualification, he also has a right to register that qualification, and practise his profession on the strength of it. What more, then, can he require? He is an M.D. and a registered medical man, and yet he must needs make a fuss and raise an agitation because he cannot have his M.D. registered, though that registration can confer upon him no advantage which he does not already possess. To clamour, then, for an official recognition which will be of no use to him, seems to us very like raising a storm in a teacup, and making much ado about nothing. We by no means desire it to be thought that we in any way disparage the value of good foreign medical degrees: we are fully aware that there are many men who, owing to circumstances, are unable to obtain a medical degree in Britain, and we are far from blaming them for going abroad for one. There are many eminent and respected members of our profession who have done the same; and no man who has legitimately obtained a foreign degree need be ashamed of it. But we cannot see the object of clamouring for registration; and we trust that those who are doing so will see the force of our remarks, and cease to agitate for a privilege which, if granted, would be of no practical value to themselves or anyone else.

CORONERS AND JURIES.

Since the ennunciation of the extreme economical views of the Middlesex bench of magistrates respecting the making of post-mortem examinations in cases where a coroner's inquest is necessary, the metropolitan coroners appear to have vied with each other as to who shall gain the first place of merit for holding cheap inquests by dispensing with medical evidence. As a rule, juries have been very docile, and, at the suggestion of the coroner, have returned verdicts more or less in accordance with the probabilities of the case. Now and then, however, a jury, composed of men of more than average intelligence, have declined to be parties to this slipshod, rule-of-thumb system, and have absolutely refused, in defiance of the coroner, to return a guesswork verdict.

The latest instance of the kind that has come under our notice occurred in the court of Mr. Donaldson, Deputy Coroner for East Middlesex. In addition to the conflict between the coroner and jury, there are several other points of medical interest to which we shall refer hereafter.

The jury were summoned to inquire into the circumstances attending the death of a man named John Howard, who died about six weeks ago after a few hours' illness. It appears that the deceased had been employed for several years as a constable in Victoria-park, and a few days before his death had been served with a summons to appear at the Wor hip-street Police-court to answer a charge of indecently assaulting a little girl, thirteen years of age, whilst he was on duty in the park. According to the evidence adduced at the first inquiry, deceased came home to dinner the day before his death in his usual state of health. After dinner he was taken suddenly ill, became insensible, and remained so until his death, which occurred on the following morning at half-past five. During his illness three medical men were sent for, and Mr. E. Davey, of Old Ford-road, first attended, but, hearing that Mr. Taynton, of Grove-road, Bow, had been sent for, retired from the case. Mr. Taynton was absent from home, and his unqualified assistant—Mr. Batchelor, said to be a medical student—took charge of the case; but being unable to give a certificate of death, applied to his principal's father, Mr. H. Taynton, of the Commercial-road East, who gave a certificate to the effect that deceased died of brain disease of *four days' duration*. These facts, and a rumour that the deceased had taken poison for the purpose of committing suicide on account of the charge hanging over him, coming to the knowledge of the coroner, he ordered an inquest to be held. At the first inquiry the jury expressed dissatisfaction at the irregularity of the proceedings, and adjourned for the production of medical evidence, and for a copy of the certificate given. They also wished to have a post-mortem examination of the body, but it had been buried under a warrant from the coroner, who refused to forward a memorial for its exhumation to the Home Secretary. At the adjourned inquiry Mr. Taynton was present, and acknowledged having given the certificate on the representation of his son's assistant; this he knew was irregular, but he felt warranted in doing so on the representations made to him. After hearing Mr. Taynton's statement, the foreman of the jury spoke very strongly on the conduct of the coroner in attempting to limit the field of inquiry. He said that he and his brother-jurymen had been summoned to ascertain the cause of death of John Howard, and during the previous inquiry they had been grossly insulted by the coroner; the jury had already expressed a wish that the Home Secretary should be memorialised to have the body exhumed for the purpose of a post-mortem examination being made; and the coroner had, he said, attempted to frustrate them, by stating that he should on application forward his depositions to the Home Secretary, and these would show that there was really no necessity for exhumation; they (the jury) were summoned to ascertain the cause of death: this they could not do by accepting the certificate of a gentleman who had never seen the body. As to the question of expense to the county and the feelings of the magistrates, these were questions which did not concern them as a jury. He hoped his fellow-jurors would ignore the coroner, and insist on having the body exhumed. After this harangue, which was received with applause, the coroner ordered the court to be cleared, and the jury consulted for about ten minutes. Ultimately, the foreman of the jury said that they could not come to a verdict as to the cause of death, and insisted on the body being exhumed for the purpose of post-mortem examination. The inquiry was then adjourned. On the following week the jury met again for the fourth time. Since the previous meeting the body had been exhumed, and a post-mortem examination made by Mr. Phillips, surgeon, of Spital-square, who now stated that he found some effusion on the surface of the brain. The stomach looked healthy, and he could not find any trace of poison. In his opinion, death had resulted from the bursting of an abscess in the spleen, by which about a pint of matter had escaped into the abdominal cavity. One of the jurymen here said this was not particularly satisfactory. Mr. Davey had given an opinion to the effect that death resulted from apoplexy; Mr. Taynton had certified that death arose from brain disease of four days' duration; and now they were told that the cause of death was the bursting of an abscess in the spleen! After a brief consultation, the foreman of the jury said that they could not arrive at a verdict until the contents of the stomach had been analysed, and they adjourned for the fourth time. The following week the jury met again, but were obliged to adjourn as the analysis had not been completed. Last week the jury again assembled for the sixth time, and Dr. Tidy's report on the analysis of the

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stomach was read, in which he stated that there was a total absence of organic or mineral poison. The Deputy Coroner having summed up the evidence received at the various sittings, the jury consulted for some time, and ultimately stated that they could not, after receiving such conflicting medical testimony as they had done, ascribe death to natural causes, but were of opinion that it was their duty to return an open verdict, as the evidence before them did not guide them to a conclusive issue. The jury were also of opinion that Mr. Taynton, sen., was greatly to blame for giving a certificate of the death of a person he had not seen during his illness, on the representation of an unqualified person (Mr. H. T. Batchelor), who was a medical student officiating for Mr. Taynton, jun., during his absence from town. The jury were further of opinion that the Deputy Coroner (Mr. Donaldson) acted with culpable neglect in the first instance in giving an order for the interment of the body without a post-mortem examination having been made, and in the absence of medical evidence.

Few words are required by way of comment on the above extraordinary inquiry. The jury certainly treated the coroner with scant courtesy, but we cannot but approve of their determination to sift the case thoroughly; and, judging from the facts as published, we think they were justified in strongly objecting to the conduct of the coroner. There can be no doubt also that Mr. Taynton was greatly to blame for giving a certificate of death in a case of which he knew nothing beyond what was told him by his son's unqualified assistant. To him, as well as to other practitioners in the East-end of London—many of whom are, we understand, in the habit of giving certificates of death in cases attended by unqualified persons,—we trust that the above case will act as a caution. Nothing can possibly be said in defence of the practice; and if it is found to continue, the Medical Council or the Government will be compelled to make an example of some of the offenders.

TYPHOID FEVER IN GLASGOW.

The recent outbreaks of typhoid fever in certain districts of Glasgow have been the occasion of a very carefully prepared report, which was submitted by Dr. Russell, Medical Officer of Health for Glasgow, to a meeting of the Police Board held on the 18th inst. The object Dr. Russell has in view in this report is to demonstrate the origin and distribution of the fever from the use of infected milk, and the facts which he adduces in favour of the milk theory are certainly very striking, if not convincing. The districts which have suffered most severely are the Washington-street district on the north side of the river, and the Pollokshaws-road and Kingston districts on the south side.

Washington-street contains 150 dwelling-houses, with 625 inhabitants, who are for the most part cleanly and well-to-do. There are only thirty-five water-closets in it, and 127 sinks, and it has previously enjoyed a good reputation as a healthy locality. Dr. Russell seems to have expended special labour in the investigation of the epidemic in this and the three adjoining streets, every family having been visited, and the source of their milk-supply ascertained.

The result of this inquiry shows that of 367 individuals. who used milk from a particular dairy (X), no fewer than fifty-five were attacked with undoubted typhoid fever, and fourteen with "suspicious symptoms"; out of 116 who only partially used milk from this dairy, three were seized with typhoid fever, and sixteen with "suspicious symptoms"; whilst of 579 not using milk from dairy X, only one was seized with fever, and none had "suspicious symptoms."

This epidemic seems to have broken out in the last week of August.

Dr. Russell succeeded in tracing the milk-supply of dairy (X) to a farm (Y) in the parish of Eastwood, which seems to be occupied by two families. The wife in one of the families was seized with typhoid fever on August 2 (about three weeks before the outbreak in the Washington district), and a week afterwards her daughter succumbed to the same fever. The farm then seems to have fallen into the charge of the other resident family.

The boiler-house in connexion with this farm contains three boilers, one of which is used for washing clothes, another for scalding dishes, and the third for cooking the cows' meat, and they are all built close together. The floor is paved with loose flags, and beneath these is a well, the water of which is used only for washing dishes, the drinking-water being brought from a well at some distance. In one of the boilers in this boiler-house, clothes belonging to the fever patients were washed on August 3, 10, and 27. The water in both wells is proved by analysis to be "not above suspicion," and it appears that the well beneath the boiler-house floor is within nine feet of a sink and cesspool, and twenty feet of a liquid manure well.

Near this farm thirty-six individuals reside, and of sixteen of these who use the above farm's milk exclusively, four were seized with typhoid fever in the course of the first fortnight in September; whilst of fifteen who used it only partially, and five not at all, none were ill.

Dr. Russell has been unable to sift the other epidemics so closely, on account of considerable difficulty experienced in eliciting the facts. He has, however, ascertained that, of 199 cases of typhoid fever in the southern district, ninety-eight got their milk from dairies which were supplied either in whole or in part by the farm near Eastwood. It must be admitted, however, that the Southern district has not such a healthy reputation as the Washington district, bad smells being frequently complained of.

The precautionary lessons which Dr. Russell draws from his investigations are two:—1. The authorities of rural districts should make a special inspection of dairy-farms, paying particular attention to the water-supply, the internal arrangements of boiler-houses, the sites of manure depôts, etc.; and 2. Milk agents should see to the purity of the milk which they sell, and that it is supplied by clean and tidy farms.

The Police Board have adopted Dr. Russell's report, and the local authorities around Glasgow are to be communicated with, requiring them to enforce the precautionary measures embodied in the report.

The epidemic of typhoid fever is now on the decline in all parts of Glasgow, and, notwithstanding its prevalence, the death-rate has been comparatively low, the numbers for the last five weeks being 22, 25, 21, 22, and 21 respectively.

THE WEEK.

TOPICS OF THE DAY.

The returns which have come to hand regarding the recent outbreak of cholera at Simla show that 340 cases were reported, of which 183 proved fatal. It is, however, asserted that these returns are incomplete, and that they do not include all the cholera seizures and deaths. The disease has now entirely disappeared, and various suggestions are being made as to the proper measures to be adopted for improving the health of the station. Dr. Cunningham, the Sanitary Commissioner to the Government, proposes the total abandonment of Simla for at least three years as the only course likely to prove effectual; but the objections to this step are so manifest that they need not be entered into. Another theory accounts for the sickness on the score of overcrowding, and it seems likely that Government may so far adopt this view as, for the future, to leave in Calcutta, throughout the year, several of the offices which have hitherto been removed to the hills each hot season.

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There has also been a rumour of an intention to transfer the summer seat of the Government to Raneekhet, near Nynee Tal, in the North-West Provinces; but although this station possesses great natural advantages, there is not much probability of its supplanting Simla just at present.

It is somewhat singular to notice that, even in the face of the heavy fines which are conscientiously enforced, the practice of sending bad meat to market is still persisted in. Last week, Frederick Easby, of Wade's Mills, Herts, was summoned for sending to the Metropolitan Meat Market the carcases of two sheep which were unfit for food. A fine of £5, with £2 2s. costs, was inflicted. A similar fine, with the same amount of costs, was levied on George Hummerston, butcher, of Anstey, Herts, for two quarters of diseased beef. In the course of the case, the manager to Mr. Lambert, at whose shop the meat was exposed for sale, was called for the defence, and created some amusement by maintaining that the animal had died a natural death. On explanation, it appeared that what he meant by a "natural death" for an ox was that the animal had been duly slaughtered.

After a discussion extending over two days, the Town Council of Birmingham have unanimously resolved to avail themselves of the provisions of the Artisans' and Labourers' Dwellings Improvement Act. Their scheme will involve the purchase of forty-five and a half acres of land, situate in the centre of the town, and, of course, covered with buildings. New streets will take up about seven acres of this, and the remainder will be cleared and built upon. In carrying out these works about 9000 persons will be dislodged; but houses will eventually be erected on the ground for the accommodation of a still greater number. The estimated cost of carrying out the scheme is £530,000, which may be reduced to £100,000 if the Corporation decide to wait until some of the leases expire. Under the guidance of the present Mayor (Alderman Chamberlain) the Town Council of Birmingham are actively engaged in other schemes also for the benefit of the borough. For some time they have been engaged in arranging for the acquisition of the gas and water supply, which has hitherto been in the hands of private companies. Arrangements have been made for the purchase of the works and business of the two existing gas companies; and it appears, from a statement made by the Mayor, that an improvement has already been made in the quality of the gas, and that it is expected that in January next the price of it will be reduced. It is probable, also, that at the beginning of next year the Corporation will be in possession of the business of the Birmingham Waterworks Company.

At the Clerkenwell Police-court, a gentleman was summoned last week for having conveyed his son, who was suffering from scarlatina, in a cab from the College at Cambridge-gardens, Notting-hill, to the Fever Hospital, Liverpool-road. The defendant, in replying to the charge, said he did not know that he was breaking the law; and the magistrate inflicted a penalty of 40s. The cab, it appeared, had been immediately taken to the police-station and disinfected.

Dr. Courteney, of the Limerick Lunatic Asylum, has made a rather remarkable communication to the governors of the institution at their meeting. He states that during the past month five nurses belonging to the establishment have been attacked with gastric fever, caused by taking milk supplied from cows affected by the foot and mouth disease, which has been so prevalent of late.

The last report of Dr. Whitmore, the Medical Officer of Health for Marylebone, presents rather an alarming picture of the sanitary condition of his district. Scarlet fever has been very prevalent at the West-end of London for some time; but it is a serious matter to find, from the report in question, that the deaths from this disease during the past two months have been four times greater than the average of the last nineteen years. Dr. Whitmore further explains that this high death-rate is not solely consequent upon causes beyond human control, but is mainly due to the most deplorable neglect, stupidity, and ignorance. He furnishes a number of practical suggestions for the compulsory isolation of persons found to be suffering from infectious diseases, which he strongly urges the Government to carry out by an early amendment of the Sanitary Acts. Seeing that the epidemic has made such rapid and increasing strides, it is not unreasonable to inquire whether the local authorities in St. Marylebone have done everything in their power to check its spread. Before seeking to amend the present law, it would be satisfactory to know that the most energetic action has failed to arrest the progress of the disease, and that nothing but more stringent legislation will suffice to stamp it out entirely.

The report of the Nightingale Fund for the year 1874 which has lately reached us, shows that at the close of that year there were twenty-five probationer nurses in the school at St. Thomas's Hospital, during the course of 1874 thirty-four were admitted, and of the whole number (fifty-nine), twenty-one having completed their training received appointments, two resigned, six were discharged as unsuitable for the work, and two were dismissed. The funds appear to be in a satisfactory condition, as a balance of £309 4s. 1d. has been carried forward after payment of all expenses.

The result of the court of inquiry recently held at Aldershot Camp, under the presidency of General Herbert, to investigate charges of alleged neglect against four military surgeons, for not placing an efficient guard over a lunatic soldier who had committed suicide, has just been made public. Henceforth soldiers suspected of being insane are to be sent to the Royal Victoria Hospital at Netley. The four soldiers at present suffering from dementia are to be forwarded there at once, in compliance with the orders of the Principal Medical Officer at the Camp, and of Sir Thomas Steele, the General in command.

At a recent inquest, held at Kilburn before Dr. Hardwicke, on the body of an infant under two years of age who was killed by being trampled upon by a cow in her father's dairy, Dr. Ring stated that, although there were contusions on the body, he could not positively state the cause of death without a post-mortem examination, which he accordingly made. The coroner remarked that he did not wish it to be said that he would not have post-mortems, but he did not see the necessity in this instance. Neither was one necessary in the majority of cases where external appearances showed the cause of death. Medical men could, and ought to, form an opinion; and they might be sure that, next year, the question would arise elsewhere. The jury concurred in the remarks of the coroner, and found a verdict of "Death from accidental causes."

CHARGE AGAINST JERVIS-STREET HOSPITAL, DUBLIN.

An inquest was held at the City Morgue, Dublin, on October 14, by Dr. N. C. Whyte, on the body of a child named William Ormond, who died in Jervis-street Hospital on the 11th inst. The father of the child alleged that death had been caused by neglect and unskilful treatment on the part of the Hospital officials. In his evidence he stated that in July last the child got a fall which injured his knee. He was removed to Jervis-street Hospital two days afterwards, where he remained until his death. The father said that, in his opinion, the child was "brutally murdered" in the Hospital. The coroner reasoned with him as to the strength of his language, remarking that at the most it could be only a case of unkind treatment, but he could not permit such an imputation as that of murder against the gentlemen of the Hospital, who could have no object other than the recovery of the child. The

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father refused to withdraw his statement that the case was one of "brutal murder." Dr. Kelly was examined, and deposed that the child was admitted to the Hospital under the care of Surgeon Collins, suffering from inflammation of the thigh-bone, just above the knee-joint, caused by a hurt. The inflammation went on until the bone became involved, and an abscess formed. After a consultation, the doctors of the Hospital agreed that amputation of the limb was the only means of saving the child's life. The boy's father, however, strongly objected to this course. Witness then consulted Mr. O'Donnell, the magistrate, as to whether amputation should take place, notwithstanding the father's objection. Mr. O'Donnell told him that without the father's consent it would be wrong to do it, but that if any fatal consequence ensued through the con-compliance of the father, he (the father) would incur very grave responsibility. In the course of the child's illness the leading artery was cut by a portion of the dead bone becoming detached, and hæmorrhage followed. Several operations were performed by the doctors, and as a last resource the iliac artery had to be tied, with the consent of the father. This was done on October 4, and the child died on the 11th. In the whole course of the treatment nothing had been done without frequent consultations of the entire surgical staff of the Hospital. The greatest care had been taken, and the child received every attention. In the course of one of the operations, Dr. Collins received a wound which resulted in blood-poisoning, and in his absence through illness, he (the witness) made a post-mortem examination, which bore out the diagnosis of the doctors, that death resulted from exhaustion and inflammation. Mr. Stapleton, Dr. Collins, the resident pupils, and several other medical men, were present at the inquiry. After a short deliberation the jury returned a verdict that death had been caused by injuries resulting from an accidental fall; and the jury added, that, in their opinion, the deceased had been treated in the Hospital with skill and care, and had received a more than ordinary amount of attention.

UNIVERSITY OF CAMBRIDGE.

The following gentlemen having been examined and approved, will receive the certificate in State Medicine, viz.:—Messrs. P. H. Bird, F.R.C.S. Eng.; T. Britton, M.D.; A. Carpenter, M.D.; J. Cunningham, M.B. and C.M.; S. Drew, M.D.; A. Dunlop, M.D.; B. N. Earle, M.B.; G. H. Fosbroke, M.R.C.S.; C. Harrison, M.D.; W. McBeath, M.D.; H. H. Mason, M.R.C.S.; J. Morison, M.D.; E. Nicholson, M.R.C.S.; H. H. E. Phillips, M.D.; C. E. Saunders, M.D.; S. T. Steele, L.R.C.P. Edin.; E. H. W. Swete, M.D.; G. Turner, L.R.C.P. Lond.; and A. S. Underhill, M.B. and C.M. Mr. J. Simpson, M.D., was examined and approved in Part I. only. The following is a copy of the certificate awarded to these gentlemen, viz.:—

"Know all men by these presents, that ————, having been duly examined by ————, the examiners in that behalf appointed by the Chancellor, Masters, and Scholars of the University of Cambridge, and having approved himself to the aforesaid examiners by his knowledge and skill in sanitary science; to wit, in chemistry and physics, in the causes and prevention of epidemic and infectious diseases, and in the means of remedying or ameliorating those circumstances and conditions of life which are known to be injurious to health, as well as in the laws of the realm relating to public health,—is certified to be well qualified in respect of his knowledge and skill aforesaid to fulfil the duties of a medical officer of health: in testimony whereof the Vice-Chancellor of the said University, by the authority of the said Chancellor, Masters, and Scholars, has hereto set his hand and seal," etc.

The next examination for a certificate in State Medicine will be held on June 13, 1876, and any gentleman whose name is on the Medical Register may present himself for the examination, provided he has reached the age of twenty-four years. The following gentlemen have been appointed Examiners in Medicine and Surgery:—First M.B. Examination: R. Apjohn (Caius College), J. W. Hicks (Sidney College). Second M.B. Examination: Henry Power, F.R.C.S. Eng.; J. N. C. Davies-Colley (Trinity College). Third M.B. Examination: Dr. Barclay and Dr. Bradbury. Master in Surgery Degree: Timothy Holmes, M.A., F.R.C.S., and Christopher Heath, F.R.C.S. At the same congregation, on the 14th inst., Mr. J. W. Ogle, M.D., was appointed assessor to the Regius Professor of Physic.

THE ISLINGTON POOR-LAW MEDICAL DISTRICTS.

At the meeting of the Islington Board of Guardians last week, the report of the special committee appointed to consider the inequalities in the medical districts gave rise to a very animated discussion and close division. The Board having at a previous meeting decided to divide the St. Peter's district, the committee recommended that the district be divided equally, and that two medical officers be appointed at a salary of £70 per annum each. Mr. Gardner, the present medical officer, having refused to accept the arrangement, so far as it applied to him, the committee recommended that the engagement with that gentleman be determined, and six months' notice be given. The adoption of the report was moved by Mr. Cufflin, and was met by an amendment that the report be considered *sine die*. A brisk discussion followed, in the course of which Mr. Stonelake denounced the whole proceedings of the committee, and said that they had been actuated by a feeling that medical officers had no right to complain of hardships. They had resolved to punish Mr. Gardner for daring to write to the Local Government Board. They were going to cut down the salary of a good officer, who had been overworked, in order to bolster up the old medical officers in sinecures at the expense of the ratepayers. On a division being taken, the numbers were found to be equal, but the chairman gave his casting-vote in favour of the adoption of the report. There is a very general feeling in Islington that Mr. Gardner has been treated very inconsiderately by a section of the guardians. He has been worked very hard and paid very badly in comparison with the other medical officers of the union. It remains to be seen whether the Local Government Board will sanction the dismissal of Mr. Gardner; the probability is that they will recommend the Board to retain the services of one who has done the work for more than three years without a single complaint from any of the patients.

THE PATHOLOGICAL SOCIETY.

The first meeting of the present session of the Pathological Society was held on the evening of Tuesday last under the presidency of Mr. George Pollock. The attendance of members was, as usual, very large. In the ordinary matter-of-fact way, without address or other prelude, the proceedings began with the reading of the minutes of the last meeting; and thereafter the President presented to the Society a copy of the new volume of the *Transactions*. The extent and value of the contents of vol. xxvi., and its elegant appearance, are as worthy as ever of the active and prosperous Society, and reflect much credit on the secretaries, Dr. Green and Mr. Wagstaffe.

The specimens of morbid anatomy exhibited during the meeting were perhaps of more than ordinary interest. Dr. Cayley showed a specimen of hydatid disease of the liver bursting into the lung, and causing death by obstruction of the air-passages—a case indicating strongly the necessity of an operation for evacuation. Dr. Peacock brought forward a case of supra-renal capsular disease with skin-bronzing, which seemed to confirm in every respect the existence of an "Addison's disease"; a specimen of ulceration of the stomach; and a third, of malformation of the aortic valves. Four specimens were shown, by Drs. Dowse and Greenfield, of disease of the vessels of the brain and cord, including an almost unique one of aneurism of the anterior communicating artery, which

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proved fatal by rupture. A very remarkable example of extensive syphilitic disease of the liver, heart, and lungs from an infant was shown by Dr. Coupland, and attracted much attention. Dr. Hilton Fagge related a peculiar case of typhoid fever, and exhibited the larynx, which presented very extensive ulceration, while the intestine was but slightly diseased. A colloid tumour of the mamma was shown by Mr. Butlin.

A NEW LUNATIC ASYLUM FOR SURREY.

At a meeting of the Surrey magistrates, held on the 19th inst., at the Sessions House, Newington-causeway, the subjects of lunacy in Surrey, and the need of an additional asylum, formed the principal features of discussion. A report had been made by a committee of magistrates recommending the erection of a new asylum, and this report had been sent to the boards of guardians in the county. A good deal of opposition has been raised against the proposed scheme, and at a meeting of delegates from parishes it was urged that further inquiry should be instituted before so large an expenditure as that contemplated was incurred, and that an asylum on a smaller scale would meet the necessities of the case. The committee had, however, declared that, all things considered, they could arrive at no other conclusion than that a new asylum was the only means by which the difficulty (the providing for the continuous increase of pauper lunatics) could be met. At the meeting of the magistrates it was proposed—"That a sub-committee should be appointed to confer with the Lunacy Commissioners on the question"; but, after a long discussion, this proposition was rejected, the report was carried, and a committee was empowered to select and purchase a site for the new asylum, at a cost not exceeding £12,000.

ANATOMICAL SCHOOLS.

From the annual return of the number of medical students who are now pursuing their professional studies at the eleven recognised metropolitan hospitals, which has just been forwarded to Mr. Charles Hawkins, F.R.C.S., the Government Inspector, it appears that there is the large number of 1754, against 1725 last October session, distributed amongst the following institutions, viz.:—1. St. Bartholomew's Hospital, with 326, of which number 116 are new entries; 2. Guy's Hospital, 311, including 91 fresh men; 3. University College, 283, including 84 new entries; 4. St. Thomas's, 188, including 47 new entries; 5. St. George's, 144, including 42 new entries; 6. The London, 116, including 26 new entries; 7. King's College, 115, including 30 new entries; 8. The Middlesex, 97, including 32 new entries; 9. St. Mary's, 87, including 30 new entries; 10. Charing-cross, 61, including 26 new entries; 11. The Westminster, 26, including 11 new entries;—making a total of 1754, against 1725 last October. The total number of new entries is represented by 535. The returns from the provincial schools have not yet been received.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

At the annual general meeting, held in the College Hall, Kildare-street, Dublin, on Wednesday evening, October 13, 1875, the following office-bearers were appointed for the ensuing session:—*President:* Samuel Gordon, M.B. *Vice-Presidents:* Lombe Atthill, M.D.; Sir Dominic J. Corrigan, Bart., M.D.; William Stokes, M.D.; Alfred Hudson, M.D. *Council:* J. Hawtrey Benson, M.D.; John Magee Finny, M.D.; Thomas Fitzpatrick, M.D.; Arthur Wynne Foot, M.D.; Thomas Wrigley Grimshaw, M.D.; Thomas Hayden; James Little, M.D.; Stephen Myles MacSwiney, M.D.; John William Moore, M.D.; Christopher J. Nixon; John Mallet Purser, M.D.; Walter George Smith, M.D. *Honorary Secretary:* George F. Duffey, M.D. A resolution was adopted to the effect that the annual general meeting should in future be held on the last Wednesday in October of each year.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

At the annual stated meeting of the College, held on Monday, October 18 (St. Luke's Day), the following officers were elected for the coming year:—*President:* Samuel Gordon, M.B. *Vice-President:* Lombe Atthill, M.D. *Censors:* Lombe Atthill, M.D.; Arthur Wynne Foot, M.D.; Thomas Hayden; John William Moore, M.D. *Treasurer:* Aquilla Smith, M.D. *Registrar:* J. Magee Finny, M.D. *King's Professor of Medical Jurisprudence:* Robert Travers, A.M., M.D. *Examiners in Midwifery:* Edward B. Sinclair, M.D.; and Fleetwood Churchill, jun. *Representative on General Medical Council:* Aquilla Smith, M.D. *Librarian on Foundation of Sir Patrick Dun:* Hugh J. Fennell. *Agent to the Trust Estates:* Charles Uniacke Townshend, Esq. *Law Agent:* Charles Woodward, Esq., A.B.

DR. HENRY BENNET.

This well-known physician has, after thirty-two years' practice, definitely retired from London. It will be remembered that sixteen years ago, when Dr. Henry Bennet, in the full tide of success as a gynæcologist, was compelled by severe and advanced lung-disease to retreat from London, he settled down on the shores of the Mediterranean, and created almost, or evolved, and developed, Mentone as a winter health-resort. The benefit to his own health was so great that he has since been able to give his summers to practice in England. From practice in England he now finally retires, but continues at Mentone during the winter, to guide others in that search after health in which he himself has been so eminently successful.

RICHMOND INFIRMARY.

The seventh annual report of the Committee of Management of the Richmond Infirmary for the year 1874 has been forwarded for our inspection. The Committee express their feelings of thankfulness at the success which the Infirmary has attained in ministering to the wants of the sick in the neighbourhood, who fully appreciate the kindness and care bestowed upon them. The income of the year (including a balance of £55 1s. 8d. brought forward from last year) amounted to £1490 11s. 5d., and the expenditure to £1283 12s. 11d., thus leaving a good balance to be carried to the credit of the year 1875. This sum principally results from a considerable increase in the number of annual subscriptions, and the liberal contributions collected on the local Hospital Sunday, which amounted to £413 17s. 7d. The Infirmary would seem to be very well managed, and to be, as a natural consequence, in a prosperous condition.

THE MORTUARY QUESTION.

The Strand District Board of Works has recently addressed a circular letter to the other metropolitan district boards, suggesting co-operation, with a view of obtaining power for the Metropolitan Board of Works to construct public mortuaries throughout London. When the letter was read to the members of the Poplar Board at their meeting last week, the chairman said that the best answer would be that Poplar has had a mortuary for many years, and the Strand District Board could get one if they liked, without going to the Metropolitan Board of Works.

SIR J. J. TREVOR LAWRENCE, BART.

This gentleman, who is about to offer himself as a candidate to represent Mid-Surrey in Parliament, is the only surviving son of the late Sir William Lawrence, the first baronet, so long connected with St. Bartholomew's Hospital. Sir Trevor, who has issued his address, is a Conservative. He obtained his diploma of membership of the Royal College of Surgeons in 1853, soon after which he entered her Majesty's Indian army.

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INCREASE OF SCARLET FEVER IN LONDON.

At the last meeting of the Metropolitan Asylums Board a letter was read from the Local Government Board, stating that Dr. Bridges had reported that scarlet fever cases were on the increase, and that the hospital at Homerton was nearly full. The Board also suggested the expediency of using the Small-pox Hospital for fever patients if the necessity arose. The Small-pox Hospital is fit to receive fever cases, but the Hospital Committee are unwilling to use it for such purpose unless compelled to do so.

THE VICTORIA-PARK CHEST HOSPITAL.

On Sunday morning, the 10th inst., the Rev. Canon McCaul, Chaplain to the Lord Mayor, preached a sermon at St. Michael Bassishaw on behalf of the City of London Hospital for Diseases of the Chest, Victoria-park. The service was attended by the Lord Mayor, the Lady Mayoress, and several City dignitaries, and at its conclusion £27 15s. was collected in aid of the funds of the Hospital.

DOCTORS' FEES AT INQUESTS.

At a coroner's court at Holloway, last week, Mr. Derry Jones, of Upper-street, Islington, who had been obliged to attend an inquest a second time, asked for an additional fee, but Mr. Danford Thomas, Deputy Coroner, said that he could allow only one fee for attendance during the whole inquiry, no matter what was the extent of it. Formerly no fees were allowed, but Mr. Wakley got a clause inserted in the Medical Act, providing for the payment of medical witnesses.

STATE MEDICINE AT CAMBRIDGE.

The next examination in State Medicine at Cambridge will begin on Tuesday, June 13. Any person whose name is on the Medical Register of the United Kingdom may present himself for it provided he is twenty-four years of age. Information respecting the examination may be obtained by application to Professor Liveing, Cambridge.

NAVAL MEDICAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on the 12th inst., Sir Edward Hilditch, Inspector-General, in the chair, the sum of £90 was distributed among the various claimants.

The Grand Prix Biennial of the French Institute.—At a meeting of the five Academies constituting the French Institut, the bestowal of the prize of 20,000 francs on M. Paul Bert, for his researches in compression of the atmosphere, as recommended by the Académie des Sciences, was unanimously agreed to. The following are the prize-holders since the institution of the Grand Prix:—In 1861, M. Thiers, Académie Française; 1863, M. Oppert, Académie des Inscriptions; 1865, M. Würtz, Académie des Sciences; 1867, M. David, Académie des Beaux Arts; 1869, M. Henri Martin, Académie des Sciences Morales; 1871, M. Guizot, Académie Française; 1873, M. Mariette, Académie des Inscriptions; and 1875, M. Bert, Académie des Sciences.—*Gaz. Heb.*, Oct. 15.

Case of Hirsuties Gestationis.—Dr. Slocum relates the case of a lady who had borne three children at full time, and had an abortion at six or eight weeks. On each occasion there has been a growth of beard on the sides of the face and under the chin, the hairy growth becoming perceptible soon after the cessation of the menses, and continuing until the uterus had resumed its normal condition after childbirth. The appearance of the hair is preceded by heat and itching, which return again after its fall. The hair is thick-set fine and soft, and from one to one and a half inches long at the time of childbirth. Its growth then seems to stop, and after from four to six months it falls, and the face resumes its former smoothness. At the time of her abortion, the growth of hair was very noticeable, but she became so soon pregnant again that the growth continued until the second conception was completed.—*New York Med. Record*, July 10.

THE SOCIAL SCIENCE CONGRESS.

Health Department.

In concluding our reports of the meetings of the Social Science Congress, we would direct special attention to the very able and original address by Dr. Richardson, published *in extenso* last week. The question for debate on Monday was—"What are the advantages or disadvantages of water-supply being lodged in the hands of local authorities?"

Mr. Rendle, of Lambeth, read a paper on "The Supply of Water by Private Companies," severely animadverting upon the parsimonious conduct of the companies. Such a necessary of life ought to be taken out of the hands of trading companies, and managed by the representatives of the public. The intermittent system is bad, because the empty pipes suck in poisonous gases from the surrounding soil, etc., and because the storing of water in a neglected cistern, exposed, as too often it is, to contamination from without, is a most dangerous practice. Why should London be behind the age in neglecting to obtain a constant supply, as many provincial towns have done? He condemned the permissive clause in the Sanitary Act, which states that "a local authority *may*, if it thinks fit, provide a constant supply." He strongly protested against the monopoly of water companies, and their large dividends out of the ratepayers' pockets. He commented upon the mock liberality of charging less for those having extra water for their gardens. Why supply so much for so little, and so little for so much?

Mr. Chadwick stated that the Society of Arts having given much careful attention to the subject, concluded that it was impossible to control waste by the constant supply. He alluded to the success which in Manchester, Liverpool, and other places had attended the transference of the water-supply to the municipal bodies, and specially mentioned the increased facility thus given for the extinction of fires.

Professor Wanklyn considered that the London waters, if a little more carefully filtered, would be very useful for drinking purposes; and he urged that existing companies be compelled by law to do their duty.

Dr. Farr recommended vigilance on the part of the ratepayers to prevent the companies obtaining excessive profits, upon which ultimately they might press their claims for undue compensation, after the manner of the telegraph companies.

Dr. Carpenter, of Croydon, thought that when new works were established they should be undertaken by the local bodies, but that the old companies should continue to supply water as heretofore. He did not approve of the proposal to make over existing water-supplies to the control of municipal authorities. He considered the same evil was at the root of both boards, viz., a desire to save money.

Mr. Wilson described the plan adopted at Melbourne by the municipal authorities, whereby a large profit is made, and fires are so speedily extinguished that the premium on assurances has been considerably reduced.

Mr. Cooper, who had been requested to analyse the water at Oxford, found that it was more impure after leaving the filter-beds than before.

A resolution was passed recommending the Council to appoint a special committee to examine and take action on the supply of water being lodged in the hands of local authorities in the interests of public health, security of life and property, and public economy.

In the afternoon of Monday, papers were read by Mr. Powell, Dr. Child, and Dr. Taaffe, having special reference to the recent Sanitary Acts, with further suggestions by way of improvement. General approval was expressed at the progress made with the Artisans' Dwellings Act, Adulteration of Food, Purification of Rivers, etc.

Mr. Powell expressed regret that Government did not extend security against infection to those attending schools. Compulsory attendance is fraught with peril unless there be security that infected children are not thereby brought into the school.

The object of Dr. Child's paper was to show that there are certain sanitary evils affecting labourers' cottages which cannot be dealt with under the existing law, viz.:—Sites which are improper and unhealthy, or which are too confined in space. The latter was exemplified chiefly in the case of "squatters' cottages," or those which were originally such. Under the

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existing law these can be closed as unfit for habitation, but the remedy is worse than the disease, inasmuch as to close cottages tends to overcrowd others. Dr. Child proposed an Act which shall compel an adjacent owner to sell a given portion of the land adjoining such cottages (say one rood), provided that the owner of the cottage can buy it within a limited time (say six months). Failing this, the cottage-owner is to be compelled to sell his cottage, and the adjoining land-owner to have a right to buy it; provided also that he do so within six months. In each case the cottage is to be either rendered fit for habitation, or else pulled down within a further space of six months.

Dr. TAAFFE in his paper alluded to the plan he had adopted for estimating the death-rates, which is probably also the one used by the Registrar-General. For estimating the population of the whole of Brighton or one of the districts, he makes use of Chambers' Logarithm Tables. To find the population of St. Peter's District, for instance, in 1874, the logarithm of the number of the population in 1861 was deducted from the logarithm of the number of the population in 1871, the remainder divided by 10, and the quotient multiplied by 3¼ to bring the estimated population up to the middle of 1874. In order to calculate for 1875-76-77, etc., it is only necessary to multiply the quotient by 4¼, 5¼, 6¼, etc. The population having been estimated, this was the easiest method he knew of finding the death-rate.

Mr. SYSON could not speak so favourably of recent sanitary legislation. The clauses in the Sanitary Act relating to polluted wells were inoperative, because the expense of remedying the evil devolves upon the local authority. He thought private Acts were far superior to any general legislation on the subject, and he regretted that the local Acts should be swept away. There is still much diseased meat in the markets because the medical officer of health is debarred by technicalities from taking sufficiently active measures to prevent it. Neither is any distinction at present made between the common and the ordinary lodging-house.

On Tuesday, October 12, Mr. COOPER read a paper on "Food," recommending the use of arrowroot and cornflour to a larger extent than is usual with the British public. He thought the consumption of animal food was excessive. He protested against the administration of stimulants and narcotics to children, and while recommending more starchy food for adults, urged its total abandonment for infants' food.

Mr. CORNISH having expressed approval of the views entertained by Mr. Cooper, moved—"That the Council be requested to communicate with the authorities of the Science and Art Department of the Privy Council, and suggest the desirability of making foods, their use and preparation, a subject of examination."

Dr. HARDWICKE made some suggestions for the better analysis of air, and exhibited an apparatus designed by himself for analysing air before and after passing through a column of water, which retained all the organic impurities.

Mr. HARRY LEACH read a paper on the "Duties and Responsibilities of Port Sanitary Authorities." He showed that, at the present time, quarantine had, off the coast of the United Kingdom, practically ceased to exist, except in cases of plague and yellow fever, two diseases almost unknown in these latitudes. He further showed how the shipping, especially of such a large and extensive district as that of the Port of London, may directly aid the importation of disease from port to port along our coasts, and also from town to village, by means of the inland canals, with which latter most of our chief ports are directly connected. The magnitude of port sanitary work was shown by the fact that, at the present time, our merchant fleet consists of 37,000 vessels, requiring 331,000 men to man them; that our emigrant ships carry from 200,000 to 300,000 persons annually; that there are from 10,000 to 20,000 coasters, and 40,000 fishing smacks on the registers; and that the total floating population may be calculated at more than half a million.

Dr. BAYLIS read a paper on the necessity for Government aid in the construction of County Main Sewers for draining villages and small towns having the same water-shed. By this arrangement much expense would be saved, and a single system of filter-beds only required for purifying purposes before discharging the effluent water into a neighbouring stream. He illustrated his arguments by a reference to the West Kent Main Sewerage Act of 1875, formulated by the Bromley Union. This Act provides for the construction of a main sewer from the village of Beckenham to land in the parish of Dartford adjoining the Thames; and a second main sewer from the village of Orpington, joining the first-named sewer near the bridge carrying Bourne-street over the river Bourne. A filtering bed is also provided at the terminus or outfall. These main sewers will be constructed to receive not only the sewage of the Bromley rural district, but are available, upon equitable terms, for the use of all the neighbouring districts and parishes.

Dr. HAVILAND read a paper on the "Vital Statistics of the Coast-line of England," and exhibited a series of maps by which it appeared that the most favoured spots were those lines of sea-coast where the sea winds had freest access to the country and along the course of tidal rivers. With regard to cancer, it appeared that the riparian districts of rivers that periodically flooded themselves, having alluvial deposits on their banks, had the highest rate of mortality; but with regard to consumption, the rate of mortality in the same districts was very low. Dr. Haviland also explained the geographical distribution of typhoid fever and scarlet fever. The former, he said, was indigenous in rural districts, while the latter was imported into them. Where a high constant death-rate prevailed, it often arose from the improper disposal of sewage. Where cancer was most prevalent, consumption was least so.

On Thursday, October 14, Dr. WANKLYN read a paper on "The Variations in the Composition of River Waters," with special reference to the waters of the Nile, giving a remarkable variation in the proportion of chlorine, and the constancy of hardness in flood as compared with slack water.

Dr. CORNELIUS FOX read a paper on "The Pollution of Rivers." As the question of the pollution of rivers is primarily and essentially a sanitary one, and secondarily a commercial or pecuniary one, why should not the same principles be applied in dealing with it as with all other sanitary evils which involve exactly similar considerations? To quietly sanction, he said, the pollution of 3,000,000 gallons of river-water daily by five firms, as at Bradford, and to complacently allow 75,000 tons of cinders to be annually deposited in the river Irwell, is, of course, suicidal policy. Whilst, however, condemning an extreme degree of pollution, he did not, like many, think that it would be wise to be too exacting as to purity. 1. What harm do these streams corrupted by sewage and trade products do? Noxious odours sometimes or always arise and annoy those who live near them, or those living at a distance who approach them. If human beings are exposed frequently to unpleasant smells, a deleterious influence is exerted on their health. It is a well-established rule, to which there are some apparent exceptions, that there is a greater mortality amongst those who are exposed continually to offensive odours than with others who are not so circumstanced, and that the diseases from which the former suffer are of an asthenic type, and tend to death rather than to recovery. A certain amount of *vis medicatrix naturæ* is lost by them, and its want is felt at critical periods of sickness when most needed. Evaporation is constantly in a greater or less degree proceeding from the surface of water, and organic impurities contained in the water, if excessive, are mechanically conveyed into the air during this process of vaporisation. It is prejudicial to health to frequently breathe air polluted by emanations from very foul water. Unpleasant smells are danger signals, and although it is absurd to fear an attack of illness whenever we have our olfactory nerves offended, yet there can be no hesitation in saying that the continual exposure of the human frame to polluted air tends to engender ill-health, even if it does not create disease. The quantities of solid impurities thrown into some streams are so great as to fill up their beds, thus creating inundations of their banks higher up. These solid matters produce a silting up of rivers, and an obstruction to navigation by the accumulation of offensive banks of mud. On public grounds these evils should be rendered impossible. 2. How are the streams to be prevented from inflicting injuries?—the injuries being the pollution of the air (for no one ever thinks of drinking such water), the destruction of all kinds of fish, or an obstruction to navigation, and to the escape of surplus water during flood. My answer is simply and solely the following:—Let our scientific chemists ascertain the point at which a stream begins to be so impure as to contaminate the air lying over it, and here let a line be drawn. Let them ascertain the point at which a water becomes so impure as to prevent life and multiplication of the less particular of the finny tribe, and here let another line be drawn. Let them ascertain the amount of

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suspended impurities a stream may contain, without depositing in its course sufficient to offer at some future time an obstruction to the ready escape of flood waters and to navigation, and here draw a third line.

Dr. Parker Rhodes and Dr. Payton read papers commenting upon recent sanitary legislation, with suggestions for further progress in this direction.

At the conclusion of the meetings of the Health Section, a cordial vote of thanks was accorded to Dr. Richardson for presiding at all the meetings of the Section.

The Sanitary Exhibition was held in the Corn Exchange, adjoining the Dome, and some very useful inventions were exhibited. A large portion of the room had been allotted to exhibitors of school furniture, books, etc., and other appliances of an educational and economic character. We shall pass over without comment those exhibits previously described in our columns. Mr. Banner showed by experiment the advantages of a patent cowl, invented by himself, for ventilating drains, to those having a capped head, which prevented the upward draught so necessary for removing sewer-gases from the house-drain. Other exhibits of Mr. Banner were patent self-acting and self-emptying traps, and disinfecting apparatus. Mr. James Adams exhibited a model of a patent self-cleansing revolving screen for the purpose of separating the solid and decomposing matters of sewage so as to render the effluent water fit to run off into any stream or river not used for drinking purposes. This apparatus is tubular, of the same diameter as the sewer from which it derives the sewage to be purified. The outer wall of the tube is of perforated zinc, and the lining of fine wire gauze, both supported with lattice framework. The whole apparatus is made to revolve at an incline, so that the fluid is strained off at the upper part, and the solid particles are collected at the outlet. Clogging of the meshes is said to be prevented by the revolutions of the cylinder. This method of treating sewage is now being adopted at West Ham, and it seems a useful invention. Several of the exhibits are more ornamental than scientific. Mr. Bostel exhibited air-pump ventilators, by which a continuous powerful upward current is produced without down-draughts.

FROM ABROAD.

Morphinism.

Under the designation of "Die Morphiumsucht," or "Morphinism," Dr. Lewinstein, Sanitats-rath of Berlin, read a paper in the Medical Section of the German Scientific Association, held at Gratz, which is reported in the *Allgemeine Wiener Medizinische Zeitung* for September 28. After relating a case of acute morphia-poisoning recently under his care, in which recovery took place after three decigrammes of morphia had been hypodermically injected, he passed on to the proper subject of his address—the effects of chronic poisoning by this drug. The diseased condition thus produced, he observed, although it has become developed only within the last decennium, has assumed an extension which threatens to become formidable. With the exception of the induction of fatty degeneration, in all its main features it greatly resembles the condition induced by chronic alcoholic poisoning, so that there is even a delirium tremens morphii, analogous to the alcoholic delirium. While alcoholism especially affects the lower grades of society, however, the victims of the morphia disease are found amidst the circles of the educated. By reason of the abuse of this drug, grave disturbances in the functions of the entire nervous system are induced; and the original causes of the production of this diseased condition, and of its extension, are the doctors themselves, who have accustomed patients to resort to the use of injections for the relief of painful affections of more or less short duration. Morphia, which they often inject for themselves, soon becomes a necessity to such persons, who, having discovered that by its aid every psychical and somatic uneasiness can be banished, fly to its use just as the alcohol-drinker does to his dram. It is resorted to for the mere relief of melancholy, domestic troubles, or business anxieties, and the intervals are for ever shortening during which it can be done without.

In illustration, Dr. Lewinstein related the cases of a married couple, who recently came under his care in consequence of their addiction to the use of morphia of several years' standing. The husband, thirty-eight years of age, and of strong build, formerly an officer, had ten years since commenced the use of morphia for the relief of rheumatic pains; and during the last five years he had been in the habit of injecting for himself one gramme of the acetate daily. His wife had employed the injections for biliary colic, from which she had suffered for a short time; and when the war of 1870 came, she resorted to them for the relief of the anxiety she felt for the fate of several members of her family. During the last four years she had employed four decigrammes of morphia daily. In consequence of the condition of "morphinismus" that was developed, the male patient suffered from sleeplessness, increased reflex excitability, hyperæsthesia, neuralgia, muscular contractions, and dryness of the tongue. There was no constipation, and mydriasis was present in place of contraction of the pupil. His face was of a remarkably deep red colour, and so great was the transpiration that he was obliged to change his linen several times a day. Intelligent and well-educated, he felt himself incapable of any occupation. His wife, thirty-three years of age, exhibited a greyish-leaden colour of the face, and her pupils were scarcely as large as pin-heads. Menstruation had ceased for four years, and she was the subject of hyperæsthesia and neuralgia, together with very violent attacks of shivering of a tertiary type. In both patients there was loss of appetite, and an especial distaste for animal food. In both the memory and intellect remained clear. The whole of the morphia was at once stopped as regarded the male patient, and his wife at the end of a fortnight had ceased to use it. We have not space to follow the histories of these cases subsequent to the withdrawal of the morphia, the result being a temporary aggravation of all the symptoms, and subsequent amelioration, so that at the end of four weeks the male patient had increased 2250 grammes in weight, and the female patient 2000 grammes, her menstruation also having become re-established.

Examining a long series of these cases, however, Dr. Lewinstein finds that scarcely 25 per cent. recover, the greater portion relapsing. In two cases death followed on the marasmus that had been induced, two were terminated by suicide, and five became drunkards. The treatment of the affection chiefly consists in the withdrawal of the morphia, and this is best effected suddenly rather than progressively, the economy supporting an energetic procedure of this kind more easily than one more gradually conducted. The treatment of such patients requires much personal devotion on the part of practitioners, and is a difficult and thankless task. In the worst cases of this kind the deprivation of the morphia is not possible, unless they can be treated as prisoners. Complete isolation is then necessary, as is constant watching by educated persons inaccessible to bribery. Windows and doors must be carefully closed against the outer world. Articles of clothing, the furniture, and cupboards must be repeatedly examined; for it is a characteristic of these patients that, even when they enter an establishment voluntarily to be cured of their propensity, they bring with them a good supply of morphia and several syringes! All promises, the most solemn assurances, and the word of honour given by these patients, should be distrusted by their attendants. The morphia disease depraves the character of its subjects, and the best educated and most intelligent persons do not hesitate to resort to any means of deception in order to conceal the morphia they have or to obtain a new supply. If the physician be energetic, watches his patient without intermission, and has honest attendants under his control, the worst part of his task is over at the end of the first week. Twelve hours after the deprival of the morphia a collapse usually ensues, and the patient may be allowed to keep his bed. If he passes over the first forty-eight hours without moaning and repining, and is able to eat, while his countenance seems fresh, he has, in spite of all his denials, obtained a supply of morphia; and the persistence of contraction of the pupils with the absence of diarrhœa will soon confirm any suspicions that may be aroused. During the first six days, the patient should not be debarred the use of strong and stimulating wines; and even women then require large doses of alcoholic drinks. Prolonged baths may be employed for the relief of neuralgia or for promoting rest at night, and if too great collapse does not exist they may be accompanied with cold douches. The diarrhœa which always ensues immediately on the arrest of the morphia, if it become exhausting, may be treated by large enemata of blood-warm water. The supply of wine or beer is to be limited when the patient

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is able again to take regular nourishment; and his general condition will indicate the various means of restoring his strength. Above all, however, it is necessary for the patient from the third week of treatment to engage in bodily and especially in mental exertion, in order to arouse his dormant capabilities.

Experience teaches us that the internal use of morphia, and its hypodermic injection as long as this is performed by the medical attendant, do not give rise to this morphia disease. This disease has only become known and prevalent since practitioners have abandoned the injection to patients, their friends, midwives, etc. The excuse we so often hear assigned, that the practitioner has not time to perform these injections, will not hold good; for in this case he should content himself with its internal administration, the effects of which, although slower, are, if given per anum or on an empty stomach, as complete as when used hypodermically. In the hands of the practitioner these injections are a blessing, while in those of lay persons they prove a curse.

REVIEWS.

Winter and Spring on the Shores of the Mediterranean. By James Henry Bennet, M.D. Fifth edition. London: J. and A. Churchill, New Burlington-street. 1875.

A fifth edition speaks for itself. It is only substantial merit that is rewarded with a like success, and we offer Dr. Bennet our best congratulations on the appearance of the present issue. "*Vires acquirit eundo*" may well be said of a book which numbers 650 pages in the fifth, against 450 in the third edition, and that, too, with smaller type. The additions not contained in the fourth edition are chapters on Sardinia, Tunis, and Malta, while there is a fuller account of Sicily, which the author has lately revisited. The Mentone district still has the largest amount of space devoted to its description, and certainly it is dealt with *con amore*: everything connected with its natural history and its climate is microscopically accurate; nor in portraying its advantages does Dr. Bennet altogether forget to enumerate its defects.

In the same way, while we recognise to the full the value of the work before us, there are one or two points in which it seems to us to be open to criticism, not of a hostile, but of a friendly nature. In the first place, Dr. Bennet, with a not unnatural prejudice in favour of Mentone, almost entirely ignores the existence of other health-resorts on the northern shores of the Mediterranean. It is only by a few passing words that we know there is such a place as Cannes; it is not described, although it is easy to see that Dr. Bennet has no unfavourable opinion of it. On the eastern side of Mentone, San Remo—a most rising health-resort, and at present the most formidable rival of the former—has only a meagre half-page of text devoted to it; nor is there any allusion to the possibility of other towns still further east—for example, Alassio, Albenga, and Pegli—receiving at no distant period a share of public favour.

Turning to the account of Mentone itself, we think that a plan of the town giving the position of the various hotels might have been introduced without any invidious recommendation of individual houses. Even those who have been there before, two or three winters ago, like to know what new hotels have been built since they left, and it is a great thing for invalids who have never been at Mentone before to have some idea what hotels are near the sea, and which at some little distance, or which are in the east and which in the western bay. Another point to which we think attention should be called is Dr. Bennet's method of finding out what are suitable winter resorts for invalids by comparing the state of the vegetation in places which he visits in April with that which he leaves behind a little earlier in his carefully cultivated and exceptionally situated garden on the St. Louis rocks at Mentone. We are inclined to doubt the value of observations made in this manner in mid-spring as guides to the nature of any special climate in mid-winter. Moreover, we must know something of the aptitude of the inhabitants of a district for cultivation before we condemn its climate on the evidence of a stunted vegetation. It does not follow either that the conditions which suit delicate plants will always suit delicate people. As an instance of the errors which it is possible to fall into by visiting a place in April instead of in winter to ascertain its "health value" at the latter time, we may mention a statement of Dr. Bennet's at page 515, to the effect that at Algiers "the sky is whitish, owing to watery vapour in the atmosphere, and not dry and blue, as on the north Mediterranean shore." We can only say that in December and January, during a visit to Algiers, we saw for days together skies more intensely blue than in a much longer experience we have ever seen on the Riviera, and we have before us notes taken at the time which corroborate our recollections.

To our mind, the newly added chapters of Dr. Bennet's book have scarcely as much medical value as the older ones. They are of great interest, not only from the accuracy of the descriptions they contain, but also from the fact that they contain the personal impressions of an undoubted authority on climate. Still we cannot but think that it would be better if Dr. Bennet's rather *à priori* estimate of what are and what are not good winter climates were a little more strongly supported by the ascertained results of what may be termed the physiological test—the test of subjecting invalids to the climates in question, and of observing how they are affected thereby.

In conclusion, while we recommend some slight reserve in accepting Dr. Bennet's opinion about climates other than the Riviera, we strongly advise everyone who means to visit any of the places of which it treats, to read the present edition of his book. It contains an amount of general topographical information not to be found elsewhere; the style is pleasant and chatty, the maps and illustrations are numerous and good, and every part of it has been most carefully revised.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

Wednesday, October 6.

William S. Playfair, M.D., Vice-President, in the Chair.

Edward Chaffers, F.R.C.S. (Keighley) and Amos Rogers, L.R.C.P. Ed., were elected Fellows of the Society.

Before entering upon the ordinary business of the evening, Dr. Playfair alluded to the loss sustained by the Society by the death of its Honorary President, the late Sir Charles Locock, who had rendered valuable aid to the Society when it was first formed by accepting the Presidency, and by taking a special interest in furthering the aims of the Society. He announced that the unanimous feeling of the Council was in favour of asking Dr. Arthur Farre to accept the vacant post—which was received with acclamation by the Fellows present.

Case of Long Impaction of a Pessary in the Vagina.

Dr. Gervis exhibited a pessary removed from a patient aged fifty-six. Fifteen years previously it had been introduced into the vagina to relieve prolapsus of the womb. Four years ago she began to feel a weakness in the lower back; two years ago her legs became weak, and she was unable to walk without assistance; for six months she has been nearly bedridden. For the last six months she has had discharge from the vagina, occasionally tinged with blood and highly offensive. She can neither stand nor walk, and is able to move her legs in bed with difficulty, being attacked two or three times during the night with cramp in them. On examination, a large round metallic pessary was found embedded in the vaginal walls, and was removed by the aid of bone-forceps, a considerable quantity of brownish purulent discharge, horribly offensive, escaping. All the paralytic symptoms were relieved after its removal.

Dr. Cleveland remarked that, apart from the interest attaching to the long impaction of a foreign body in the vagina, there was the notable fact that a quantity of highly offensive putrid matter must have been locked up for a considerable time without the supervention of septicæmia. The case tended to show, in connexion with the recent debate before the Society, the necessity for the co-existence of some peculiar condition of the general system before absorption of morbid matter, followed by blood-poisoning, could be effected.

Dr. Bantock had met with a similar case to that given by Dr. Gervis, the pessary being oval in shape, and composed of horsehair covered by indiarubber.

Dr. Rogers referred to a case he had before mentioned to the Society, of a black boxwood pessary which had been left in eighteen years, and had been forgotten by the patient.

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Dr. Edis also alluded to a similar case he had brought before the Society, where a large oval pessary, the size of a goose's egg, had been left in the vagina for eleven years,—the case having been supposed to be cancer.

Dr. Playfair thought these archaic instruments would soon be out of use. Most of us had seen them. He wondered why the ulceration had not extended into the bladder and rectum. As regards Dr. Cleveland's remark, he (Dr. Playfair) had noticed that fetid matter of intense virulence might be present, provided there was an absence of an absorptive surface of a freshly formed wound.

Dr. Gervis, in reply, stated that in removing the pessary a slight laceration took place. The fetid fluid passed over it, and yet there was no septicæmia.

Syphilitic Placenta and Fœtus.

Dr. Hayes exhibited placenta and still-born fœtus from a patient, aged twenty-two, affected with syphilis. The placenta was pallid, soft, and friable—the villi packed with fat globules. The fœtus appeared healthy. There were two questions involved in explanation of the death of the fœtus—whether it resulted from syphilis, or from fatty degeneration of the placenta.

Report on Specimens.

A report by Drs. Aveling and Hayes on Mr. Wallace's case of monstrosity was read, as also on a specimen exhibited at a previous meeting.

Complete Inversion of the Uterus.

Mr. Fredk. H. Gervis communicated a case in which this accident occurred immediately after labour. The patient, aged forty-one, was delivered of her sixth child after a slow and tedious labour. The placenta was adherent. After waiting twenty minutes it was felt projecting through the os, and was gently drawn down, when the uterus was found to be inverted. The placenta was immediately peeled off. The hæmorrhage was slight, but on looking up at the patient she was found to be in a state of syncope and apparently dying. Brandy and ammonia were administered, and after she had rallied somewhat, the inversion was reduced, counter-pressure being applied externally to the cervical ring. Galvanism was applied to contract the uterus after its return. The patient recovered perfectly.

Dr. Galton remarked that the mode of reduction mentioned by the author, although successful in this case, was one hardly to be recommended in general. The author described the reduction as effected by pressing two or three fingers up into the fundus of the uterus. This plan would necessitate the passage of four folds of uterine tissue through the os instead of two folds, which would alone require to be passed through were the reduction accomplished by the more mechanically correct and usually recommended method of grasping the whole body and returning first the part latest in coming down.

Dr. Grigg inquired whether there were any severe cramps and pains in the thighs as well as shock. He remembered a case in his own practice where the uterus came down with the greatest ease without any traction having been exerted.

Dr. Bantock thought the treatment was confirmed by the result. He did not agree with the preceding speaker, Dr. Galton, in thinking that the uterus was doubled up by pressing of the fundus, for Dr. Gervis had stated that the body of the uterus felt hard. It appeared to him that the reduction began at the cervix.

Mr. Gervis explained that the uterus was exceedingly rigid and hard, and it was difficult to get a fold of it. Whether the fundus or the cervix went up first, he did not know. In a previous confinement she had had severe cramps.

Dr. Cleveland thought the whole question of inversion of the uterus of such an important character, that he hoped he might be excused for inquiring more minutely as to the amount of traction on the cord that had been used. He could conceive that, owing to the administration of ergot before the expulsion of the placenta, especially if it happened to be adherent, the uterus might take on that irregular and spasmodic action, which, with only moderate traction on the cord, might eventuate in inversion. He did not, however, for a moment doubt that Mr. Gervis would satisfactorily answer his question.

Dr. Gervis remarked, with reference to Dr. Cleveland's suggestion as to the production of inversion, that so accurate an observer as Dr. Tyler Smith had in one instance seen the uterus invert itself, and it was now generally allowed that this accident could arise quite independently of traction. He would like to ask whether any Fellow present had ever seen the inverted uterus re-invert itself. He had read recently of such a case, but imagined it must be, at all events, an occurrence of extreme rarity.

Dr. Hayes observed that when we consider what difficulty sometimes occurs in getting the placenta away, the cord giving way first, it was scarcely probable that Mr. Gervis could have exerted sufficient traction to produce the inversion.

Dr. Aveling remarked that inversion may be caused by *vis a tergo*, and even post-mortem from the development of gas in the abdomen.

Dr. Grigg mentioned a case occurring five days after labour where no ergot had been given.

Dr. Rogers had only seen one case, which he replaced by means of an air-pessary. He thought Dr. Gervis's plan was the best.

Dr. Gervis referred to a case reported in one of the early volumes of the *Transactions*, where the uterus had re-inverted itself.

Dr. Wiltshire admired the courage and candour of Mr. Gervis in bringing forward his case. After fifteen years' experience in practice, he would scarcely use immoderate traction; still, the process of inversion might have been commenced before. It was a question whether it was not better to peel off, and not to pull. The Fellows ought to be much indebted to Mr. Gervis for bringing the case forward.

On Lateral Obliquity of the Fœtal Head in Normal Labour.

Dr. Galabin read a paper on the occurrence in normal labour of lateral obliquity of the fœtal head. After entering into the views formerly accepted, that there is normally a lateral obliquity of the fœtal head to the plane of the pelvic brim, he asserted his belief that the conclusion indicated by theory is confirmed by observation—namely, that in easy labours there is no perceptible lateral obliquity, but that if the head meets with considerable resistance, an obliquity is produced in most cases of such a kind that the right parietal bone lies deepest in the plane of the brim.

Dr. Playfair thought the Society was very much indebted to Dr. Galabin for his erudite paper. The point at issue was one of great interest, and he had failed to satisfy himself whether obliquity really existed or not, or whether Dr. Galabin's suggestions were sufficient. He (Dr. Galabin) had neglected to mention a very elaborate treatise on the subject by Dr. Hodge, who had given much attention to the subject.

Dr. Gervis quite concurred in all the President had said as to the value of Dr. Galabin's paper. It was, however, difficult to discuss such a paper without reading as well as listening to it. It would appear to favour the opinion that there was no necessary contradiction between the two opposite views, but that obliquity of the head, depending upon some undue pelvic resistance, was essentially a character of a labour in some degree abnormal; while in perfectly normal labour, the equilibrium between the propulsive force and the resistance of the parturient passages being (as Dr. Galabin expressed it) stable, obliquity did not occur. If further research proved this view accurate, it would account for much of the present dissonance of opinion.

Dr. Galabin thanked the Society for their patient attention. The subject was more interesting with a fœtal skull and a pelvis than in describing dry mechanical details.

Note on a Dissection of a Pregnant Uterus.

Dr. J. Braxton Hicks read a paper on a dissection of a uterus pregnant about three months and a half, the placenta being prævia, and fibroids extensively developed in the uterine walls. Attention was directed to three points—first, whether there was a circular sinus at the margin of the placenta; second, the distribution of the curling arteries in the decidua serotina; third, whether there was any change induced by pregnancy in the fibroma. The first was doubtful, and is a point yet to be carefully examined. As regards the second, the decidual processes, consequently the separation into lobules, commence later than the third and a half month, and there is no proof that any branch from the supplying vessels of the serotina pass into the intervillal space. As to the third point, the fibres were about four times larger than in the ordinary fibroma, very much more distinct, and separable from one another. A few had attained the size of the colossal fibre of the ordinary pregnant uterus.

Dr. Edis observed that if the fibres in the fibroma increased during pregnancy, there was no reason why they should not equally be involved in the process of involution following parturition, the same as with the ordinary uterine fibres.

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ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 12.

Sir JAMES PAGET, F.R.S., D.C.L., in the Chair.

THE PATHOLOGY OF CHOREA.

DR. W. H. DICKINSON read a paper on the above subject, of which the following is an abstract:—After some prefatory remarks, the author proceeded to describe the morbid appearances found in seven fatal cases of chorea. The cases were related, as nearly as could be judged, in the order of their acuteness, those being placed first in which death ensued earliest. The state of the nervous centres in each was thus epitomised:—Case 1: Duration two days. Injection of vessels of all classes in brain and cord; most marked in the corpora striata, the arbor vitæ of the cerebellum, and in the dorsal region of the cord. Traces of erosion widely distributed. Hæmorrhage into, and distension by serum of, central canal. Case 2: Duration twenty-one days. Similar injection of brain, with the addition of superficial hæmorrhages, and exudation around arteries of corpora striata. Injection of cord, and periarterial erosion in dorsal and lumbar regions, marked in the grey matter. Case 3: Duration twenty-four days. Injection of vessels of brain of every class, most about optic thalami; some extrusion of corpuscles. Injection of cord and hæmorrhage into grey matter of dorsal and lumbar regions, symmetrically with regard to the two sides. Case 4: Duration fifty-seven days. Injection of brain, chiefly venous, and of corpora striata. Injection and erosion of cord, with large hæmorrhage into cervical grey matter, and smaller elsewhere. Case 5: Duration sixty-four days. Venous injection of brain, especially of corpora striata, wherein were also periarterial exudations. Arteries in convolutions near Sylvian fissure surrounded by blood-crystals and *débris*. Injections and scattered erosions of cord. "Sclerosis" of grey matter in dorsal and cervical regions, placed with bilateral symmetry. Case 6: Since last attack thirteen days. Two precedent attacks, the last a year ago. Recent injections, such as in the other cases, of bodies at floor of lateral ventricles and of cord. Older changes, periarterial degenerations, and scattered spots of "sclerosis" in substantia perforata and convolutions at beginning of left Sylvian fissure. Case 7: Duration four years. Spots of "sclerosis" numerously set in substantia perforata and grey matter of corpora striata, symmetrically with regard to the two sides. In cord, large exudations into grey matter and fissures, chiefly in cervical region. This summary was enough to show that the changes were remarkably constant in kind and place. In *kind*, the changes were all (allowing sclerosis to be so) directly connected with vascular disturbance. The injection was general to vessels of every kind, but most marked in the arteries. When the sources of exudation or of hæmorrhage could be determined they were always arterial; the degenerations were usually periarterial, and the spots of sclerosis similarly placed. The first visible change would seem to be injection or distension of the arteries, this being succeeded by extension of their contents to the irritation or injury of the surrounding tissue. In place, the changes affected both brain and cord—the cord perhaps the more severely. Whether in brain or cord, the changes on the two sides were generally symmetrical, both being often affected at the same spot, in the same manner, and nearly to the same extent; and in instances where no symmetry was apparent, a tendency to it could be traced, as in the existence of vascular distension on one side corresponding to hæmorrhage on the other. In the cord the changes attained their maximum in the posterior and lateral parts of the grey matter, and in the upper portions of the cords. Regarding arterial repletions as the origin of the pathological changes, the source of this vascular state was discussed. The embolic theory was shown to be inconsistent with the character and distributions of the morbid appearances. To elucidate some of the points in question, the clinical history of the disease was adduced as represented by a tabulation of twenty-two fatal cases (all examined after death), and seventy cases under observation during life only. The prominent fact brought out by these cases was the frequency of mitral endocarditis in connexion with the disease. This existed in seventeen out of the twenty-two fatal cases, while there was stethoscopic evidence of it in forty out of the seventy non-fatal cases. It was thus shown that endocarditis was associated with chorea independently of the frequent origin of the chorea in rheumatism, and when the nervous disturbance could be definitely traced to mental causes. Thus, while in rheumatic cases endocarditis often preceded the chorea, it was equally evident that chorea in other circumstances preceded and caused the endocarditis. This duplex relation between the nervous and the cardiac disorders was discussed, with the conclusions that chorea was not in any way—neither embolically nor otherwise—a result of endocarditis, though often associated with it, as having a common origin in rheumatism, while endocarditis was continually a result of chorea, set up possibly by the muscular irregularity of the heart, and the mitral regurgitations thereby occasioned. In conclusion, chorea was regarded as depending upon a widely spread hyperæmia of the nervous centres, not due to any mechanical mischance, but produced by causes mainly of two kinds, one being the rheumatic condition, the other comprising various forms of irritation (mental and reflex) belonging especially to the nervous system. Given the irritant—mental, reflex, or rheumatic,—the course of the disease had been sufficiently traced in hyperæmia and its results. The spots of perivascular change were widely scattered through that large region which lies inferiorly to the cerebral convolutions, between the corpora striata and the lower part of the cord, the district of the motor and sensory, as distinguished from the mental functions. The result, chiefly in muscular excitement rather than in paralysis or loss of sensation, was associated with the character of the lesions, which were points of irritation rather than planes of sections, and calculated not so much to cut off as unnaturally to excite nervous function. In looking at the nature of the lesions, proceeding as they do from vascular distension to perivascular change, it was not possible but to connect them with those of a large group of nervous disorders, prominently with those of diabetes. In diabetes the changes are of similar origin and character, though usually seen at a later stage, and attended with more excavation. They are, however, somewhat differently disposed in the two disorders: in both they are widely distributed—in diabetes the stress falling upon the brain, in chorea upon the cord. Every period of life has its own regions of nervous susceptibility: in childhood the motor; in adolescence the emotional; in advancing years the mental, and coevally, or nearly so, that part of the nervous mechanism which instigates glycosuria. Much the same mental impression may make a child choreic, a girl hysterical, or a man diabetic, and thus, both in external origin and in the nature, though probably not in the site of the organic changes, we see resemblances and alliances between nervous disorders, which in their symptoms betray little similarity.

DR. BROADBENT said that Dr. Dickinson had given the most complete account of the morbid changes found in chorea which existed. He did not question the facts, which were of the highest value, but he put upon them a different interpretation. It was difficult adequately to discuss so long and elaborate a paper, but the remarks he had to make would turn chiefly on the two points—the seat of the change in the nerve-centres which gave rise to the choreic movements, and the nature of the lesion. It would conduce to clearness if he stated, to begin with, the difference between Dr. Dickinson's views and those he held. Dr. Dickinson, as he understood him, considered the pathology of chorea to be a generally distributed hyperæmia of the nervous centres, special prominence being given to the existence of this in the cord. He would himself say that chorea was a *symptom* of change (possibly of various kinds) in a particular part of the nervous system—the corpora striata,—such change stopping short of destructive lesion, which would give rise to hemiplegia. That, in fact, just as the common form of hemiplegia was due to structural lesion of the corpus striatum, which might be from hæmorrhage, embolism, tumour, etc., so chorea was due to changes in this ganglion of slighter character—capillary embolism, Dr. Dickinson's hyperæmia, etc. Accompanying chorea there were other symptoms of disorder of the nervous system to which Dr. Dickinson did not appear to have given due consideration—delirium, imbecility, aphasia (or at least speechlessness), impaired sensibility; these were not by any means always proportionate to the violence of the movements. When these symptoms occurred in association with chorea, Dr. Broadbent would attribute them to similar change in other parts of the nervous centres to that which in the corpora striata gave rise to choreic movement, referring, thus, the chorea to the corpora striata, the delirium and imbecility to the

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hemispheres, the asphasia to the third frontal convolution, the impaired sensation to the thalami. The impairment of sensation was best shown in hemichorea when the sound side could be used for comparison; but in severe general chorea, sometimes, when the skin was worn into holes by the continued friction, there was little evidence of suffering. The phenomena of hemichorea he considered to establish conclusively that the choreic movements were not due to changes in the cord. It was inconceivable that these changes could involve one-half of the cord along its entire length and be strictly confined to this half. Again, when sensation is impaired, as is not uncommon, it is on the same side as the movements, whereas, if the spinal cord were the seat of the lesion, sensation and motion ought to be affected on opposite sides. Further evidence against the spinal cord as the source of the irregular movements was the fact that tickling did not provoke unusually violent reflex action, as might be expected were the cord in a condition of undue excitability. Positive indications of the corpora striata as the seat of the change to which the choreic movements were due were the following:—The striking parallelism between hemichorea and hemiplegia, as regards the affection of the face, arm, and leg, but especially in the fact that the parts of the body which escape paralysis in hemiplegia are bilaterally affected in hemichorea. The bilateral association of nerve-nuclei which brings bilaterally associated muscles into relation with both corpora striata, permits these muscles on the paralysed side in hemiplegia to be reached by stimuli from the uninjured corpus striatum, and also permits them on the sound side in hemichorea to be affected by the irregular discharges from the affected corpus striatum. Dr. Broadbent, again, had seen a case in which there was, first, chorea affecting one side of the face and the corresponding arm and leg; then that side of the face was paralysed, the choreic movements continuing in the arm and leg; and finally, as recovery took place, the chorea returned in the face. Here an aggravation of a condition which gave rise to chorea produced paralysis, and the only interpretation the facts would permit of was, that the hemiplegia of the face and the hemichorea of the limbs were due to change of the same kind and in the same situation, which could only be the corpus striatum. Another case which he could only mention was one in which injury on one side of the head gave rise to pain in the head, peculiarities of conduct and temper, hemichorea on the opposite side, and double optic neuritis. Dr. Dickinson's cases, he thought, might be shown to support his conclusion that the choreic movements had their origin in the corpora striata, and not in the cord. In the first case the chorea had been comparatively slight, while the hyperæmia of the cord was marked. In the last case, again, the patches of sclerosis were mainly in the corpora striata, and in all the cases the ganglia at the base of the brain were much affected. As to the nature of the change, he would have felt bound to accept implicitly Dr. Dickinson's statement, that no embolism was present, had he not spoken of embolism of the large arteries. Everyone who considered chorea to be due to embolism, meant embolism of capillaries and minute arterioles. This would not be easily distinguished after hardening, and in thin sections. Special search was required: the small vessels had to be drawn out of the brain substance, and then, on examination, the small, loose, decolorised fragments of fibrin were seen obstructing them. Dr. Broadbent had only had one post-mortem after death by chorea following acute rheumatism, and there capillary embolisms were found in great numbers, especially in the vessels of the corpora striata. Many cases have, however, been recorded. He quite agreed with Dr. Dickinson that chorea frequently appeared to be distinctly and directly traceable to fright, but he could not frame any explanation of the endocarditis found to be present under these circumstances. He could not understand how it could be due to irregular action of the cardiac muscles, and, indeed, he considered that too much stress had been laid on irregularity of the heart's action, as indicating its participation in the chorea. It had always appeared to him that the irregular action of the heart was for the most part secondary to irregularity of the respiratory movements. Dr. Broadbent, in conclusion, said that he was conscious he had failed to do justice to Dr. Dickinson's communication, which could be properly discussed only after careful study. It was one which must always be referred to when the pathology of chorea was considered.

Dr. West, in thanking Dr. Dickinson for his paper, said he had only seen three post-mortems of cases of the disease; but the broad results described were such as were found in conditions allied to chorea, as in trismus nascentium. But chorea might prove fatal, and no such changes be found, or, if found, be not at all in accordance with the activity of the disease. If chorea might be a result of rheumatism without heart disease, why did we not see it more frequently? He did not remember a case of chorea after rheumatism without heart affection. There was a strange connexion between the disorders; sometimes the chorea appeared first, and the rheumatism afterwards. There was often a loss of mental power after chorea, and a paralytic condition of the limbs. He did not think the malady due to embolism.

Dr. Hughlings-Jackson, after adverting to the great practical value of the Author's paper, and after confessing that the opinions on the pathology of chorea expressed in it deserved greater consideration than his, since the author had done more work closely bearing on the matter most directly in issue, nevertheless urged strongly the hypothesis of embolism. He did not wish, however, to appear as a mere blind advocate. Although in two cases of chorea he considered that he had found emboli in small cerebral arteries, yet he admitted that a highly competent observer, his colleague Dr. Gowers, had discovered no such change in another of his (Dr. Jackson's) cases, nor did Dr. Gowers find any in the case of a choreal dog (chorea of veterinarians). Another highly competent observer, Dr. Ferrier, failed to discover blocks in the case of a child who had acute choreal symptoms during tubercular meningitis. But, on the other hand, there were the positive observations of such men as Tuckwell of Oxford, and Bastian. Dr. Bastian had found plugging in three cases—as he considered, most likely by the process of thrombosis. Dr. Bastian, however, believes that in some cases there is no organic change. There were other facts supporting the doctrine. Hence Dr. Hughlings-Jackson urged that the question was still an open one. He was glad to hear that Dr. West considered clinical investigation one of the best ways of investigating the problem. He wondered that Dr. Dickinson should call the hypothesis "attractive," as he (Dr. Jackson) feared that the believers in it had always been very few; it would probably be less attractive still after the publication of the author's paper. There were three distinct lines of evidence in support of the hypothesis of embolism. In the first place, embolism was just the pathological process which would theoretically account for the production of that condition of nervous tissue which must exist in such a disease as chorea. As to the general nature of this condition, there could be no difference of opinion; the nerve-tissue was "over-acting," or "excitable," or "unstable"; there were frequent nervous discharges. This over-expenditure implied increased nutrition. Now, significantly, the process of embolism was one which led to increased afflux of blood in those organs (brain, retina, etc.) which had what Cohnheim calls "terminal" arteries. This is accepted doctrine. Every physician knows that in their first stage, renal, splenic, and pulmonary infarcts are *red*, and embolism or thrombosis is the accepted explanation of ordinary "*red* softening" of the brain. There was, indeed, from blocking of arteries, not simply hyperæmia, but also extravasation of blood. Prévost and Cotard, by injecting tobacco-seeds into a dog's carotid, produced red-softening of the animal's brain. In some cases of plugging of a branch of the retinal artery, hæmorrhages were to be seen by aid of the ophthalmoscope in the early stage of the embolic process. Dr. Hughlings-Jackson handed round two coloured drawings—one from Prévost and Cotard's book, depicting *red* softening from artificial emboli (tobacco-seeds), and one from Knapp's celebrated paper on a case of plugging of a branch of the retinal artery; in the latter were depicted, in the field of *an obstructed artery*, numerous large hæmorrhages. Dr. Hughlings-Jackson thought then that the appearances resulting from the process of embolism were not unlike those Dr. Dickinson found in some of his cases. The next line of evidence was made up of clinical facts. The frequency of rheumatic fever and of heart disease showed that there was very often a condition for embolism in persons who had chorea. Those who urged that there was no embolism must admit that there was often the very condition for it, or for thombosis. If a child of from five to twelve, and the subject of heart disease, or one who had only had rheumatic fever, were to become hemiplegic without convulsion or loss of consciousness, the diagnosis of embolism would be made by most physicians. Nay, were there no history of rheumatism and no heart disease, embolism or thrombosis would be the most likely explanation of most cases of hemiplegia in the child. Where, then, was the great

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unlikelihood of hemichorea occurring under such conditions being due to embolism; or, as Bastian supposes, to thrombosis? Dr. Hughlings-Jackson next adverted to the exceptional occurrence of chorea in adults. That most of the patients were puerperal women was, he considered, significant, because hemiplegia in such persons was mostly owing to arterial plugging. There were certain clinical objections to the doctrine. Thus Jaccoud and Anstie urged that if hemichorea were due to embolism, it would, like hemiplegia from embolism, be most often right-sided; whereas they, as also Austin Flint and Trousseau, declare hemichorea to be most often left-sided. Out of about eighty cases recently investigated by himself and Mr. G. E. Herman, Dr. Hughlings-Jackson found that of twenty cases of hemichorea fourteen were right-sided. But taking from this series of cases those only beginning in the right side, and noticing, too, one-sided preponderance of the movements, the two sides suffer about equally. Then Dr. West said that the right side suffered more; but the preponderance was, he found, very trifling. Jaccoud's objection, at all events, was not decisive. Another objection to the hypothesis was that recovery followed very quickly in most cases of chorea. This objection was, perhaps, partly founded on the erroneous supposition that the hypothesis implied there to be blocking of *large* arteries in chorea. But even granting, for the sake of argument, that there were considerable destructive lesions, the objection had no validity. It was plain that patients recovered, even from hemiplegia, due either to clot or softening, and there was post-mortem evidence that in many of these cases recovery did not follow because plugs in vessels were absorbed, or because clot was absorbed. Recovery would follow when the damage to the convolutions and motor tract was not repaired. Dr. Hughlings-Jackson mentioned a case of complete hemiplegia where recovery followed; yet at the examination of the brain, after sudden death of the patient in a bath, Dr. Gowers found old softening of the outer half of the corpus striatum and of many of the adjacent convolutions. Again, it was notorious that much of the cerebral hemisphere might be destroyed without there resulting any striking permanent symptoms. Why, then, should recovery from hemichorea bear so strongly against the hypothesis of embolism? But it might be said, Supposing one proves this point, does there not enter a fatal difficulty? If one says that the convolutions and motor tract may be extensively *destroyed* without there being any permanent symptoms, what becomes of the doctrine that chorea is owing to discharges of those parts? Dr. Hughlings-Jackson said he had not shirked this difficulty. Some years ago he had, as he thought, disposed of it in stating what he called the principle of Compensation in nervous organs. He would not restate it, but mentioned that an essentially similar hypothesis as to the constitution of the nervous system had been stated by M. Taine in his work "On Intelligence," and recently by Carville and Duret, who ascribed the hypothesis to Vulpian. The facts bearing on localisation made up the third line of evidence. The difference of opinion as to the localisation of changes was mostly as to whether they were seated in the cord, or in the higher parts of the nervous system. About twenty years ago, Dr. Russell Reynolds brought forward evidence to show that the corpus striatum was the seat of disease in chorea. Dr. Hughlings-Jackson held that clinical facts pointed to the conclusion that either this centre, or, as he thought was more probable, the convolutions adjoining it, was in fault in chorea. [Dr. Hughlings-Jackson thinks that the convolutions near to the corpus striatum are evolved out of that centre; that, indeed, so to speak, they *are* that centre, "raised to a higher power,"—or, in other words, that they represent the same muscles, but in more intricate combinations.] He believed that hemichorea was one of the motor analogues of that form of hemiplegia which was dependent on destruction of the corpus striatum. The same parts suffered most in the two affections; moreover, they suffered and also recovered in the same order. West says of chorea, the arm usually suffers first and recovers latest; so it was in hemiplegia. Then, hemichorea was often associated with weakness of the parts affected, and very strikingly it occasionally degenerated into complete hemiplegia, "resembling hemiplegia from a decided lesion of the brain" (Todd) There were also cases of post-paralytic choreal movements—choreal movements *following* hemiplegia (Weir Mitchell and Charcot). With regard to the counter-hypothesis, Dr. Todd (who believed the pons Varolii was diseased in chorea) said that the hemiplegic nature of the affection was inexplicable on the supposition that its seat was in the cord. The affection of the face in chorea was left unexplained. That the spinal cord is a centre of co-ordination of movement is not denied; but the question is, Does it serve in such co-ordinations as are seen to be elaborate even in the disorderly movements of chorea? The nature of the movements in chorea (a profusion of real movements—smiles, frowns, and gesticulations) was strong evidence that the part diseased served in highly special and complex co-ordinations, and thus that it was a part very high up in the nervous system. In no other affection were such special and complex movements seen. Dr. Hughlings-Jackson, however, brought forward certain facts which would, no doubt, be considered to tell against the localisation above the cord. It had been said by several distinguished and most trustworthy French observers that the choreal movements of a dog's fore-limb persisted after division of the spinal cord in the cervical region. Dr. Hughlings-Jackson admits the correctness of these facts, and he has previously reported a case in which this was so for the short time the dog lived after section of the cord. In the face of such apparently formidable facts, he would urge that the lower we go in the scale of animal life—first, the less complex become the movements (the choreal dog's movements are successions of one movement, not successions of many *different* movements, as in the choreal child); and, secondly, the more have the inferior parts of the nervous system to do with the most elaborate movements the animal has (the headless frog goes through elaborate movements with a spinal cord only). As to the harmony of the several lines of evidence, Dr. Hughlings-Jackson said that (adopting the metaphor of a distinguished opponent of the hypothesis of embolism) it might fairly be said that an embolus had a very strong "instinct" to travel into the Sylvian artery; that is, into the very region which the other facts—those as to localisation—pointed to. As stated early in the remarks, the process of embolism was the very one to account for that unstable condition of nerve-tissue which must exist there or somewhere in chorea. Dr. Hughlings-Jackson thought fright was only the *exciting* cause of chorea. [Dr. Weir Mitchell, who is now in London, informs Dr. Hughlings-Jackson that chorea is comparatively rare in negroes, although they frequently suffer from rheumatism and heart disease. This fact tells against the hypothesis of embolism. Dr. Mitchell intends to make a fuller inquiry into this matter.]

MEDICAL NEWS.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the Senate of the University, held in St. Patrick's Hall, Dublin Castle, on Friday, October 15, the following degrees in Medicine and Surgery and diplomas in Midwifery were conferred by his Grace the Duke of Leinster, Chancellor of the University:—

The Degree of Doctor in Medicine.—First Honour Class: John Isaac Lynham, Galway; James Morehead, M.A., Belfast. Second Honour Class: Daniel Allen Charles, Belfast; Richard Francis Starkie, Cork; George Lemon Walker, Cork; Daniel Wilson, M.A., Cork. Upper Pass Division: John Shaw Hayes, Galway; Thomas William Kyle, Belfast; Thomas Dalton Popham, Cork; William Robert Thomas, Galway. Also Passed; Roger Bickerstaff, Belfast; John Stephen Dobbyn, Galway; Geo. Dougan, Galway; Thomas Gilbert Emerson, Galway; Samuel Fergus, Belfast; Turner Johnston Fisher, Belfast; C. Collingwood Fitzsimon, Galway; Edward Foley, Cork; Frederick C. Gresham, Cork; James Hamilton, Belfast and Galway; Percy Herbert Johnston, B.A., Cork; William Thomas Johnston, Belfast; Edward John Kennedy, Cork; Hugh Cunningham Kirkpatrick, Belfast; Joseph M'Clelland, Belfast; George Stanley Murray, Galway; George Frederick Nicholson, Galway; Michael O'Brien, Galway; M. Roderick O'Connor, Cork; Patrick Joseph O'Sullivan, Galway; John Philip Park, Belfast; Martin Quirk, Galway; David R. Ross, Galway; John James Adams, Belfast; William Armstrong Burges, Cork; William F. Carmody, Cork; Robert Erskine, Belfast; Robert Ealer, Belfast; John Coady Flood, Galway; James J. Gorham, B.A., Galway; Henry Hamilton, B.A., Belfast; William R. Huggard, Galway; Robert Moore, M.A., Belfast; Joseph O'Sullivan, Cork; Christopher Pearson, M.A., Cork; David Robertson, Belfast.

The Degree of Master in Surgery.—Roger Bickerstaffe, Belfast; Daniel Allen Charles, Belfast; George Dougan, Galway; Thomas Gilbert Emerson, Galway; Robert Erskine, M.D., Belfast; James Hamilton, Belfast; Percy Herbert Johnston, B.A., Cork; Edward John Kennedy, Cork; Hugh Cunningham Kirkpatrick, Belfast; John Isaac Lynham, Galway; William J. B. Lyons, M.D., Belfast; George Stanley Murray, Galway; M. Roderick O'Connor, Cork; Patrick Joseph O'Sullivan, Galway; John Philip Park, Belfast; Thomas Dalton Popham, Cork; Martin Quirk, Galway; David Robert Ross, Galway; Richard Francis Starkie, Cork; William Robert Thomas, Galway; George Lemon Walker, Cork: Daniel Wilson, M.A., Cork; John J. Blackhall, M.D., Cork; Thomas Clarke, M.D., Belfast; William Davis, M.D., Galway; Gerald H. Fitzgerald, M.D., Cork; Samuel Edgar Martin, M.A., M.D., Belfast; H. Charles Wilson, M.D., Belfast; Wm. Armstrong Burges, Cork; William Francis Carmody, Cork; Robert Ealer, Belfast; John Coady Flood, Galway; James J. Gorham, B.A., Galway; Henry Hamilton, B.A., Belfast;

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William R. Huggard, Galway; Robert Moore, M.A., Belfast; Joseph O'Sullivan, Cork; Christopher Pearson, M.A., Cork.

The Diploma in Midwifery.—Roger Bickerstaffe, Belfast; Daniel Allen Charles, Belfast; John Donovan, M.D., Cork; George Dougan, Galway; Robert Erskine, M.D., Belfast; C. Collingwood Fitzsimon, Galway; James Hamilton, Belfast and Galway; John Shaw Hayes, Galway; Percy Herbert Johnston, B.A., Cork; William Thomas Johnston, Belfast; Thos William Kyle, Belfast; Thos Lumsden, M.D., Cork; John Isaac Lynham, Galway; William J. B. Lyons, M.D., Belfast; Pierce Mansfield, B.A., M.D., Cork; James Moorehead, M.A., Belfast; M. Roderick O'Connor, Cork; Thomas Dalton Popham, Cork; Martin Quirk, Galway; Richard Frederick Starkie, Cork; George Lemon Walker, Cork; Daniel Wilson, M.A., Cork; Thomas Clarke, M.D., Belfast; William Irvine Faulkiner, M.D., Belfast; Samuel Edgar Martin, M.A., M.D., Belfast; William Armstrong Burges, Cork; Robert Ealer, Belfast; John Coady Flood, Galway; James J. Gorham, B.A., Galway; Henry Hamilton, B.A., Belfast; Robert Moore, M.A., Belfast; Christopher Pearson, M.A., Cork.

The Peel Prize in Composition, limited to the competition of undergraduates in Medicine, was awarded to A. A. Woods, Belfast, for his essay signed "Nil Nisi Clavis."

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 14:—

Collier, Herbert, Bohemia House, Turnham Green.
Ellis, Joseph Watson, Willingham, Cambridgeshire.
Flood, John, Penton-street, Islington.
Mathias, James, Penycoed, Blacnyffos, South Wales.
Norris, Richard Hill, Birchfield, Birmingham.
Walmsley, Francis Henry, Higher Broughton, Manchester.

The following gentlemen also on the same day passed their primary professional examination:—

Blake, George Farncombe, Queen's College, Birmingham.
Jackson, Robert Alexander, University College.
Merriman, William Semple, Manchester Roy. Coll. Med.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DOYLE, CHARLES WILLIAM, M.B., C.M.—Resident Medical Officer to the County Dispensary, Norwich, *vice* S. F. Bagnall, resigned.

GADDES, THOMAS, L.D.S.—Assistant Dental Surgeon to the National Dental Hospital.

MOSS, CHARLES, M.R.C.S.—Administrator of Anæsthetics to the National Dental Hospital.

SCOTLAND, THOMAS, M.B., C.M.—Medical Officer for the First District of Newcastle-on-Tyne Union.

SYMPSON, T., F.R.C.S.—Honorary Surgeon to the Lincoln Lunatic Hospital, *vice* J. Snow, F.R.C.S. Eng., deceased.

BIRTHS.

BREND.—On October 11, at 6, Argyll-road, Kensington, the wife of William Brend, M.R.C.S. Eng., of a daughter.

BUTLER.—On October 13, at Ormonde House, Guildford, the wife of T. M. Butler, M.R.C.S. Eng., of a son.

CHETWOOD.—On October 17, at 10, King-street, Finsbury-square, the wife of William Chetwood, M.R.C.S. Eng., of a son.

CLARKE.—On October 17, at 12, Mansfield-street, Cavendish-square, the wife of W. F. Clarke, F.R.C.S., of a son.

MANTELL.—On October 13, at St. Lawrence Villa, Honiton, Devon, the wife of Surgeon-Major Alfred A. Mantell, M.D., Bengal Army, of a son, stillborn.

ROGERS.—On October 14, at Stanford-road, Kensington, the wife of Hildyard Rogers, M.R.C.S., of a daughter.

SCHÖN.—On October 13, at Warley Lodge, Brondesbury, N.W., the wife of J. E. Schön, M.R.C.S. Eng., of a son.

SKIMMING.—On October 17, at Tudor Lodge, East Molesey, the wife of Robert Skimming, M.D., F.R.C.S.E., of a son.

WINKFIELD.—On October 15, at Forest Lodge, Shirley, the wife of W. J. Winkfield, L.R.C.P., M.R.C.S., of a daughter.

MARRIAGES.

FULLER—BROADBENT.—On October 13, at St. George's, Hanover-square, Edmond Frank Brewster, fourth son of the late H. P. Fuller, M.R.C.S., to Harriet Rushforth Henrietta Southall, only daughter of the late John Broadbent, Esq., and stepdaughter of Alfred Youle, Esq.

POWNE—BEETE.—On October 14, at the parish church, Ilminster, Somerset, Benjamin Lambe Powne, M.R.C.S., of Chard, Somerset, to Martha Antoinette, fourth daughter of Robert Crosby Beete, Esq., of Ilminster, formerly one of the judges of British Guiana.

SOUTHWELL—JONES.—On October 13, at St. Stephen's, Westbourne-park, Charles J. Southwell, Esq., of Stoke Newington-green, to Emily, widow of the late James Jones, M.D., of Harley-street, Cavendish-square, W.

THOMSON—COX.—On October 6, at Beechwood, Lochee, William Thomson, M.D., of Peterborough, to Jessie Methven, only daughter of George Addison Cox, Esq., of Invertrossachs, Perthshire.

DEATHS.

BELLAMY, ANNE, widow of Thomas Freeman Bellamy, surgeon, of Birmingham, at Redditch, on October 13, in her 89th year.

BERNARD, ANNIE MAUD, only daughter of J. H. Bernard, Deputy Inspector-General, at the Royal Naval Hospital, Malta, on October 10, aged 16 years and 11 months.

BUNCE, JOHN STRUDWICKE, M.D., F.R.C.S., late of Woodford, Essex, at Norwood, on September 29, aged 59.

DETTMAR, CAMILLA, wife of Henry Dettmar, Esq., and eldest daughter of the late W. J. Allison, M.R.C.S., of Ilford, Essex, at Radley Lodge, Roaherville, on October 17, aged 53.

DICKSON, ROBERT, M.D., F.R.C.P. Lond., at Harmondsworth, Slough, on October 18, aged 70.

HUNT, WILLIAM JAMES, M.D., M.R.C.P., Medical Superintendent of Hoxton House Asylum, on October 13.

JOHNSON, EDWARD, M.D., at his residence, 19, Cavendish-place, W., on October 15, aged 60.

MACKINTOSH, JANE, widow of the late John Mackintosh, M.D., of Edinburgh, at The Cottage, Woolwich-common, the residence of her daughter, Mrs. Charles Bingham, on October 16, aged 85.

MACPHERSON, GEORGE GORDON, late of the Bengal Medical Service, youngest son of the late Major Charles Macpherson, head of the Pitmean branch of the family, and Inspector-General of Barracks for North Britain, at his residence, 5, Craven-hill-gardens, on October 5, in his 77th year.

LORIMER, CHARLOTTE HENDERSON, wife of Alexander Lorimer, M.D., late Deputy Inspector-General of Hospitals, H.M.I.S., at Southsea, on October 17.

REID, MARIA AUGUSTA, widow of the late James Reid, M.D., of Brook-street, Grosvenor-square, at St. James's-road, Wandsworth-common, on October 15, in her 72nd year.

ROBINSON, JOHN EDWARD, L.R.C.P. Edin., M.R.C.S. Eng., second surviving son of Edward Robinson, Esq., of Westville, Rotherham, and Bron Eryri, Llanfairfechan, North Wales, on October 15, aged 27.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BOARD OF WORKS, SAINT GILES DISTRICT.—Medical Officer of Health. Candidates must be duly qualified. Applications, with testimonials (limited to three), to the Clerk to the Board, 199, High Holborn, not later than October 23.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Applications, with testimonials, to the Clerk of the Union, before November 6.

COVENTRY AND WARWICKSHIRE HOSPITAL, COVENTRY.—House-Surgeon. Candidates must be fully qualified. Applications, with testimonials, to the Secretary, on or before November 1.

HOSPITAL FOR SICK CHILDREN, PENDLEBURY, MANCHESTER.—Assistant-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Chairman of the Medical Staff, Children's Dispensary, Gartside-street, Manchester, on or before October 27.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.—Physician and Assistant-Physician. Candidates must be F. or M.R.C.P. London. Applications, with testimonials, to the Secretary, before October 28.

HUDDERSFIELD INFIRMARY.—Physician.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Hon. Sec., Mr. J. Calder, Liver Chambers, Tithebarn-street, Liverpool.

MIDDLESEX HOSPITAL.—Two Resident Physicians' Assistants, and a Resident Obstetric Assistant. Candidates must be legally qualified. Applications, with testimonials, to the Secretary, before October 30.

NORTH SHIELDS AND TYNEMOUTH DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretaries, Dispensary House, North Shields, on or before November 1.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

RICHMOND INFIRMARY.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, at the Infirmary, Richmond, Surrey, on or before October 25.

ROSS UNION.—Medical Officer and Public Vaccinator for the Third District. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, before October 25.

ROYAL FREE HOSPITAL, GRAY'S INN-ROAD, W.C.—Junior Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before October 27.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, Mount-street, Grosvenor-square, W.—Physician-Accoucheur. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, at the Dispensary, on or before November 3.

WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to Mr. A. P. Watkins, 53, Foregate-street, Worcester, on or before October 28.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATION.

Northallerton Union.—Mr. J. H. Buchanan has resigned the Borrowby District; area 8380; population 475; salary £10 per annum.

APPOINTMENTS.

Bodmin Union.—Charles Row, L.R.C.P. Edin., M.R.C.S. Eng., to the Lostwithiel District.

Haslingden Union.—Richard Clayton, L.R.C.P. Lond., M.R.C.S. Eng., to the Accrington District.

Keighley Union.—Arthur Roberts, M.R.C.S. Eng., L.S.A., to the North Keighley District.

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ROYAL COLLEGE OF SURGEONS.—At the last meeting of the Council, Mr. Joseph Blacker Bennett, L.S.A., etc., of Cleckheaton, Normanton, was elected a Fellow of the College, his diploma of membership bearing date May 18, 1840.

CARMICHAEL SCHOOL OF MEDICINE.—Dr. George F. Duffey has been appointed lecturer on Materia Medica in this School; Mr. Auchinleck is to lecture on Forensic Medicine; and Dr. Stewart Woodhouse, Diplomate in State Medicine of the University of Dublin, will deliver a summer course of lectures on Institutes of Medicine.

KING'S COLLEGE, LONDON.—The following scholarships and exhibitions have been adjudged at the opening of the academical year:—1. Science exhibition (open), given by the Clothworkers' Company, to J. F. W. Silk; special extra exhibition, W. P. Root. 2. Theological Department: Resident studentships to F. H. A. Hawkins, H. B. Hyde, and E. R. Hayne. 3. General Literature and Science Department: Freake exhibitions to C. H. K. Harper and T. F. Hobson. 4. Applied Science Department: Freak exhibition to H. Nettlefold; College Exhibitions to J. P. Kirkman, D. S. Marjoribanks, and J. L. Rigden. 5. Medical Department: Warneford Scholarship to Norman Dalton. 6. Whitworth Exhibitions: G. C. Marks, Denis McDonnell and F. H. Norvill (equal), W. J. Tilbrook, and Wm. Walker.

HOMŒOPATHY IN FRANCE.—"Talking of homœopathy, if I am well informed, the doctrine finds a great difficulty in recruiting its adepts. The old ones pass away, and the young do not present themselves to supply their places, so that it is easy to foresee that the present young medical generation will witness the end of the Hahnemann doctrine. Since the time of Tissier, who in the latter years of his life compromised a fine medical reputation by passing over to the homœopathic camp, I do not believe that a single physician has practised homœopathy in a French hospital. For several years past not a thesis has been produced in which homœopathic doctrines have been advocated; and the new law giving liberty of teaching does not appear to have given rise to the hatching of a homœopathic medical faculty. Lastly, if I can place faith in some revelatory signs, the homœopathic *clientèle* has sensibly diminished even in Paris itself—that soil so favourable to the propagation of every medical eccentricity."—*Union Méd.*, Sept. 16.

AMBROISE PARÉ CENSURED.—In one of the interesting papers on "Quelques Usages et Coutumes observés dans l'Ancienne Faculté de Médecine de Paris," now publishing in the *Union Médicale* by Dr. Chereau, he relates some valuable facts not hitherto known concerning Paré. From documents preserved in the École de Médecine Library, it seems that Paré was subjected to much obstruction to the publication of his works. On the announcement that he was about to publish his immortal "Œuvres" in French, the Faculty, which was possessed of the right of censure, was up in arms against him, and, vilifying him in most learned language, obtained a decree from the Parliament reaffirming the prohibition of any work on medicine or surgery that had not been approved by the Faculty. He had to submit his MS. to their tender mercies, and the printed work without doubt was very different from what had been written. One of the arguments against its being allowed to appear was that as there were to be numerous illustrations of anatomy and practical surgery, the nudities which would be necessary would violate all the proprieties and good manners! Some years later, another edition appeared, but this was in Latin, having been translated to conciliate the Faculty, who sent the title which they thought most suitable to the printer, with the menace that if it were altered the book should be torn up and *in viliorem usum asservatus*.

THE SURGERY OF THE SIAMESE TWINS.—A paper, by Professor Pancoast, is contained in the "Transactions of the College of Physicians of Philadelphia," just published, in which he treats of the question of an operation for the separation of these twins, as deduced from the autopsy made last year. His conclusions are:—1. That no operation of section of the band could have been performed in adult life, and the lives of the twins preserved. 2. That it would have been judicious surgery, upon the death of Chang, to have at once applied a strong ligature around the band, as far as possible from the body of Eng, and then to have cut through the band, between the ligature and the body of Chang. 3. That whether or not the operation would have been successful in the childhood of the twins is problematical; but that it would have been the part of wisdom and humanity to have made the effort. The volume also contains Dr. Harrison Allen's very interesting report, in full, of the autopsy of the same teratological curiosity, technically classed under the variety of abnormal conformation known as "omphalopagus xiphodidymus." From the fact of a certain amount of continuity existing between the portal systems, and that in the fœtal and early period of extra-uterine life the vessels must have been more capacious, and associated with a large tract of liver-tissue, he concludes that, all things being equal, an attempt at division of the band in early life would have been accompanied with more serious hæmorrhage than at any subsequent period.—*New York Med. Record*, Sept. 4.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. J. Henry, Charleston, New Zealand.—Letter, with enclosure, received.

Dr. Campbell.—The College of Surgeons possesses the following freehold property—viz., Nos. 37 to 43 inclusive of houses in Lincoln's-inn-fields.

London Medical Society.—Professor Erasmus Wilson, F.R.S., will deliver the next Oration. Mr. Francis Mason, F.R.C.S., delivered the address to which you allude.

J. Mogford, Secretary, the Chelsea Hospital for Women.—As numbers do not in the slightest degree interfere with principle, the Committee are by all means invited to reply. It may do them good.

Piracy.—If the young man lives long enough in his present situation, he will know what piracy really means—yea, even as a *modus vivendi*.

Dr. D. Campbell, Christchurch, New Zealand.—Letter, with enclosure, received.

DISINFECTING APPARATUS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I should be glad of information as to the best apparatus for disinfecting the clothing and bedding of patients. I am, &c.,

October 19. H. S.

THE MAUNSELL MEMORIAL FUND.

	£	s.	d.
Amount already acknowledged	249	16	0
The Right Hon. the Lord Chancellor of Ireland ..	3	0	0
R. W. Atkinson, Esq., 130, Sandford-road, per Dr. Purcell	1	1	0
Dr. Boyd, Strabane ...	1	1	0
Dr. Burges, Fethard ...	1	1	0
Dr. Blaquiere, Conna, co. Cork	1	1	0
Dr. Chaplin, Kildare ...	1	1	0
Dr. Denny, Birmingham...	1	0	0
Dr. Dorman, Kinsale ...	0	10	0
Thomas J. Gelston, M.D., Limerick	1	0	0
Dr. Given, Blessington ...	1	0	0
Sir A. Guinness, Bt., M.P.	5	0	0
Dr. Head	2	2	0
Dr. Hetherington, per G. St. G. Tyner, Esq., Downpatrick	0	10	6
Charles Kennedy, Esq. ...	2	0	0
Dr. Langstaff, Athlone ...	1	1	0
Dr. Le Clerc	1	1	0
Dr. Morgan...	2	2	0
Dr. Maconchy, per G. St. G. Tyner, Esq., Downpatrick	1	1	0
Dr. O'Brien	1	0	0
Dr. Sheridan, Wexford ...	0	10	0
Edward Smyth, Esq., Enniskillen	1	0	0
Dr. Thetford, Strangford, per G. St. G. Tyner, Esq.	1	1	0
Dr. Todd, Newtown-Stewart	1	0	0
Moses Taylor, Esq., per Dr. Chaplin	1	0	0
G. St. G. Tyner, Esq., Downpatrick	1	1	0
Dr. Usaher, Dundrum ...	1	1	0
Dr. West, Rathmullen ...	1	0	0
Dr. Wharton	2	0	0
Dr. E. P. Wright	1	1	0

N.B.—Subscriptions will be received by Dr. Joseph Rogers, 33, Dean-street, Soho, London.

C. will find an account of the mummy of Mrs. Van Butchell in the *Gentleman's Magazine* for January and February, 1793, if he thinks it worth while. Van Butchell was an advertising quack. In those days, when medicine was a learned profession, Sir G. Baker wrote a long, sarcastic Latin epitaph upon the mummified reliques, which was Englished in verse thus:—

"O, lucky husband! blest of heaven,
To thee the privilege is given
A much-loved wife at home to keep,
Caress, touch, talk to, even sleep
Close by her side whene'er you will,
As quiet as if living still;
And strange to tell that fairer she,
And sweeter than alive she'd be;
Firm, plump, and juicy as before,
And full as tractable, or more.
Thrice happy mortal! envied lot!
What a rare treasure thou hast got,
Who to a woman canst lay claim
Whose temper's every day the same."

This mummy is preserved at the Royal College of Surgeons, out of compliment to William Hunter, who embalmed it; and a hideous, dried-up thing it is.

R. T. D.—Dr. Charles Henry's death occurred at Pendlebury, near Manchester, August 30, 1836. He was found in the private chapel attached, to his house, quite dead, having shot himself with a pistol, the report of which had not been heard by any of the family. He had for some time previously been in a bad state of health, and had occasionally laboured under great nervous irritability.

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P. S.—"The Provincial Medical Society of the Border Counties of England and Scotland" was instituted June 27, 1838.

Dido.—In Germany and Austria the cremation movement has spread to Leipzig, Dresden, Breslau, Stuttgart, Vienna, and Berlin. The communal councils have in some cases passed resolutions to adopt the system.

Salix.—There is a letter in the archives of the Royal Society, from Greatrix to the Archbishop of Dublin, in which he describes the circumstances that led him to undertake curing by touch. At first Greatrix merely touched the parts affected, but afterwards he made "passes," or stroked the limbs of his patients, which led to his being called "Greatrix the stroker." The last person of note operated on in this way was Dr. Johnson. He was *touched* by Queen Anne in 1712.

A Metropolitan Teacher.—The total number of provincial students registered in 1865 was 249. The largest number was reached in 1873—viz., 455. Write to Mr. Stone.

COMMUNICATIONS have been received from—

The Registrar-General, Edinburgh; Our Liverpool Correspondent; Mr. T. M. Stone, London; Dr. J. W. Moore, London; H. S.; Dr. A. Speedy, Dublin; Mr. H. Morris, London; Mr. F. W. Lowndes, London; The Secretary of King's College, London; Medicus; Dr. A. Sheen, Cardiff; Professor Rolleston, M.D., Oxford; Dr. Carrière, Paris; Dr. W. G. V. Lush, Weymouth; Mr. A. Forbes, Glasgow; Mr. J. S. Johnson, Croydon; Messrs. Graham, Rowe, and Co., Liverpool; The Rev. P. M. Sankey, Wantage; Dr. S. Bixler, Carlisle, Pennsylvania; Mr. E. Elwin, Dover; Dr. J. Henry, Charleston, New Zealand; Mr. J. Bell, Oxford; The Secretary of the Naval Supplementary Fund; Professor Humphry, Cambridge; Dr. Roth, London; Dr. Gayland, Louisville, U.S.A.; The Dean of London Hospital; Dr. Whitmore, London; Dr. Paget, Cambridge; Dr. Wilkin, Beckenham; Dr. Sparks, London; Dr. J. Hughlings-Jackson, London; Mr. J. Chatto, London; Dr. Eustace Smith, London; Mr. Maunder, London; Dr. Edis, London; Mr. W. E. Poole, London; Dr. B. Bramwell, Newcastle-on-Tyne; Dr. A. M. Buchanan, Glasgow.

BOOKS AND PAMPHLETS RECEIVED—

Learned on Imperfect Digestion, sixth edition—Klein's Anatomy of the Lymphatic System; 2. The Lung—Lecture on O'Connell, by Dr. J. O'Flanagan—Gauld's Report of the Medical Missionary Hospital at Swatow—Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques, tome xxi.—Annali Universali di Medicina e Chirurgia, vol. ccxxxiii.—Transactions of the Clinical Society, vol. viii.—Lehren über Cholera und Typhus, von Franz X. von Gietl—Turnbull on Tinnitus Aurium, second edition—Studio Critico-Sperimentale intorna ad alcune particolarita dell' Azione Fisiologica dell' Alcool, dei Dottori Ignazio e Gaetano.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—The Royal London Ophthalmic Hospital Reports, vol. viii., part 2—Stamford and Rutland Guardian.

APPOINTMENTS FOR THE WEEK.

October 23. *Saturday* (*this day*).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

25. *Monday*.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. A Clinical Evening.

26. *Tuesday*.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Greenhalgh, "On the Use of the Actual Cautery in the Enucleation of Fibroid Tumours of the Uterus." Dr. Lawton Moss, "On Pathological Absorption Spectra." Mr. E. J. Spitta, "On a Movable Model of the Larynx."

27. *Wednesday*.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

28. *Thursday*.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

29. *Friday*.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 16.

BIRTHS.

Births of Boys, 1217; Girls, 1108; Total, 2325.
Average of 10 corresponding years 1865-74, 2150·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	791	651	1442
Average of the ten years 1865-74	657·3	651·7	1309·0
Average corrected to increased population	...	...	1401
Deaths of people aged 80 and upwards	...	...	36

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561859	...	5	22	3	5	1	4	...	19
North	751729	...	7	25	2	8	..	9	1	18
Central ...	334989	...	1	9	1	6	...	...	...	6
East	639111	1	4	23	1	8	1	4	3	13
South	967692	...	6	43	2	10	...	5	1	20
Total	3254360	1	23	122	9	37	2	22	5	76

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·286 in.
Mean temperature	45·6°
Highest point of thermometer	58·5°
Lowest point of thermometer	33·5°
Mean dew-point temperature	40·6°
General direction of wind	Variable
Whole amount of rain in the week	0·48 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 16, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Oct. 16.	Deaths Registered during the week ending Oct. 16.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2325	1442	58·5	33·5	45·8	7·67	0·48	1·22
Portsmouth ...	122632	27·3	89	40	...	...	...	...	...	...
Norwich	82842	11·1	49	40	54·8	33·5	45·1	7·28	0·84	2·13
Bristol	196186	44·1	137	104	55·5	32·4	43·9	6·61	1·58	4·01
Wolverhampton ...	71718	21·1	38	32	54·8	31·6	42·6	5·90	0·74	1·89
Birmingham ...	366325	43·6	295	153	54 2	29·7	43·4	6·33	1·80	4·57
Leicester	109830	34·3	87	49	55·5	30·8	44·7	7·06	0·79	2·01
Nottingham ...	92251	46·2	63	50	55·0	29·3	44·4	6·89	1·54	3·91
Liverpool	516063	99·1	379	269	53·5	35·9	44·9	7·17	1·24	3·15
Manchester ...	356626	83·1	245	175	55·0	30·8	42·4	5·78	1·06	2·69
Salford	135720	26·3	119	81	55·5	30·0	42·9	6·06	1·07	2·72
Oldham	87437	18·7	81	50	...	...	...	...	...	...
Bradford	168305	23·3	112	90	52·0	32·0	43·4	6·33	0·90	2·29
Leeds	285118	13·2	225	148	53·0	34·0	44·7	7·06	0·79	2·01
Sheffield	267881	13·6	184	114	57·0	30·0	44·8	7·12	0·66	1·68
Hull	133932	36·8	93	70	54·0	31·0	45·3	7·39	1·01	2·57
Sunderland ...	106342	32·2	74	52	69·0	31·0	48·4	9·11	0·79	2·01
Newcastle-on-Tyne	137665	25·6	86	64	...	...	...	...	...	...
Edinburgh	211626	50·5	121	85	...	...	...	...	...	...
Glasgow	534564	88·6	350	217	49·9	28·9	42·1	5·62	0·48	1·22
Dublin	314666	31·3	171	164	57·0	30 0	44·9	7·17	0·39	0·99
Total of 21 Towns in United Kingdm	7742889	37·0	5323	3489	69·0	28·9	44·3	6·84	0·95	2·41

†, At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·29 in. The highest was 29·78 in. on Sunday morning, the 10th inst., and the lowest 29·01 in. both on Wednesday and Thursday.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ON SOME

DIRECTIONS FOR SCIENTIFIC WORK

BY

MEDICAL OFFICERS OF HEALTH.(a)

By GEORGE BUCHANAN, M.D.,
President of the Association of Medical Officers of Health.

GENTLEMEN,—The good custom of our secretaries, in presenting to us at the end of each session a review of our Society's proceedings, takes from the President one of the more customary topics for an opening address; and, on the present occasion, when it is a newly-elected president who has the honour of meeting you, it is doubtless well that our thoughts should be given rather to the consideration of future work than to the retrospection of past work. For the subjects which are worthy to engage our attention are growing in number, and lines of work lie before the health officer of to-day that had not been marked out for the health officer of yesterday. Doubtless this is owing in the main to the past action of this and kindred societies, and to past studies which, in enlarging the bounds of knowledge, have supplied us with fresh view-points for looking into the dimly-illuminated vistas before and around us. And thus it is that I make no words of apology for dispensing to-night with words of compliment to sanitary workers and with words of satisfaction with past progress. The best compliment to past explorers will be to go, as they have gone, further and deeper into sanitary questions; the most satisfaction will be gained by advance from the point we have already reached. But it may be useful, and on this occasion becoming, that I should endeavour to define a few of the directions in which medical officers of health can, while pursuing their every-day functions, render help in advancing sanitary knowledge. We now comprise among our members gentlemen who are working under every variety of circumstances in London, in large provincial towns, over large areas of England, over small districts only; each sort of circumstance presenting its own special opportunity for adding to the general stock of information. In the smaller rural districts, where the medical officer of health comes into more exact relation with his people, and where the surroundings of these people can be more precisely learnt than is possible in town districts, special opportunity is given for investigating some of those mixed pathological and etiological questions that have been the puzzle of sanitary students working (as only they have heretofore had much chance of working) among large communities. Here the officer of health has special facilities for examining the antecedents of sickness, and can record for general use and for future comparison the precise circumstances surrounding particular occurrences of disease—circumstances that may in his district be definable even in their negative aspects,—and he can thus accumulate data that must help to the solution of vexed questions as to the origin and early relations of disease. The town officer of health, on the other hand, debarred by the thousandfold intricacies of town life from tracing the origin of disease in the particular instance, has the advantage of dealing with large numbers, and has his own facilities for applying statistical methods to the analysis and differentiation of the conditions that may be influencing health in his district. To all of us, whether our work lie in town or country, there come occasions when our common experience is at fault, and when we have not an answer ready to the vulgar fatalism of people round us; and these are beyond all others the occasions when exact and searching investigation may be expected to reward the officer of health, by putting him in possession of new knowledge. Already, beyond the broad classical facts of our science, a quantity of evidence on many of the obscurer points of public medicine is accumulated, and we may all add to the store.

Among the manifold directions in which health officers may be working towards a better understanding of social, occupational, climatic, and other conditions, as affecting the prevalence of those diseases with which their office is particularly concerned, there is one direction which I choose for consideration to-night—first, as it is distinctively medical, and, secondly, as it lies within the opportunities of all of us. I speak of questions to which no answer, or no complete answer, has yet been given, respecting the origin and means of diffusion of the so-called zymotic diseases. Over and over again, one or other of these diseases is witnessed, arising under conditions that are not at once explicable by current notions of their production and dissemination. For a first example, let us consider some of the difficulties that we are liable to encounter in interpreting the occurrence of a disease so comparatively well understood as enteric fever. In an out-of-the-way house, looking as if isolated from all chance of infection, where there has been no previous sickness for months or years, but where a number of common nasty conditions exist, a case of this fever occurs, and the impulse of the doctor who investigates it is to say that the disease has had a *de novo* origin from the ordinary excrement-filth of the place. Whether or not this has been so, is a question of the highest moment to science, but by no means to be settled out of hand by the apparent absence of specific cause in a few instances. Repeated observations and very complete record of all circumstances are wanted before any deduction can be properly drawn from such an occurrence as I am supposing. Often room has been left in the records of such cases for doubt as to the nature of the disease in question; or an oversight on a point so demonstrably important as the period of incubation has led observers to hasty and untenable conclusions; or the possibility of dangerous material passing a long distance through a soil or along a stream may not have been held in view; or some vehicle for the conveyance of specific contagion may have been overlooked. If we consider how, a dozen years ago, before Dr. Ballard's great piece of inductive work, which our Society is proud to have among its archives, those many wonderful outbreaks of enteric fever that we now trace to the agency of milk were unintelligible, and how all of them, instead of being merely regarded as unexplained, were liable to be regarded as demonstrating *de novo* origin of the disease—we shall the better apprehend the caution with which it is necessary still to proceed before we can affirm the adequacy of any common filth condition to originate enteric fever. Even since we have known of milk, it would not until lately have occurred to many of us to suspect the baker and other food-purveyors as possibly distributing fever-contagium along with their daily supplies of articles of diet. Obviously we have to be incessantly on the look-out, not only for these but for other and even obscurer vehicles for the specific poison; and there are most serious difficulties in arriving at a definite conclusion that no antecedent case has been concerned in the production of a given fever occurrence. But supposing, by exhaustive inquiry into a sufficient number of such cases, we satisfy ourselves that the fever must have had in a sense a *de novo* origin, we are only at the entrance of one of the most important problems concerning the disease. These particular houses, which have got enteric fever in them without any chance of the disease having been imported—wherein do they differ from the multitude of apparently similarly circumstanced houses that have in them no fever at all? and what are the circumstances of to-day that have produced the fever to-day and that did not produce it six months ago? Quite certainly there must be differences, or the effect would not be different. The nature of these differences is, however, in such a case as I am supposing, beyond our present knowledge; and it is by the study of differentiating circumstances, in cases where we can exclude antecedent occurrence of the disease, that we may best hope to discover the nature and affinities of the special material of the fever. This much is clear, that, whether our next step be to find out means of infection-conveyance, at present ill-understood or unsuspected, or whether it be to learn fresh lessons respecting the infection itself, the step may be expected to be gained by following directions of research that are peculiarly open to officers of health to follow.

Another disease that is frequently presenting the most hopeful difficulties to the sanitary student is scarlatina. In ninety-nine cases out of a hundred, doubtless its parentage and propagation are of the usual sort, by direct communication between infected persons or things and susceptible persons. Even these cases give the opportunity for observations, that are very much needed for practical purposes, as to the period of the disease when it assumes its contagious quality; as to the extent of the area of contagion; as to the circumstances influencing the retention of contagion in houses and articles of clothing, and so on;—points upon which all medical practitioners may be invited to record observations. But there are other phenomena of the disease that belong to a wider field of study. The

(a) The Inaugural Address delivered at the first meeting of the Society for the Session 1875-6, on October 16.

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circumstances that determine the special incidence of scarlatina in the late autumn months; the conditions that determine the cohesion, so to speak, of the disease to one locality, while it is easily got rid of in another; the reason why an epidemic in one place has a mortality of 4 per cent. of attacks, and in another of 40 per cent. Particularly those not very rare outbreaks that are preceded by a series of slight sore-throats, would promise to reward exact inquiry into conditions of origin. And those occurrences of scarlatina where no direct source of infection can be heard of, deserve particular study with reference to unknown means of spread and to possibilities of new production. Already we know of scarlatina distributed by the milkman after the same fashion that enteric fever may be spread. Already we know of dinner-parties from which half the guests have carried away scarlatina. Already we have been led to think whether beyond the human economy we may not find some method of conveyance, or some fresh origin of the disease. And on these points, and other such points involving practical issues of the highest importance in our contest with this disease, we are in want of further knowledge, and the officer of health again is the person who has most opportunity of acquiring such knowledge.

Or, let us consider those infectious diseases which more than others seem to be related to common non-specific inflammations: such diseases as diphtheria and erysipelas. Even in an immediate practical view, I may appeal to the interests of vaccination as liable to be compromised by our ignorance of the mode of generation and of the exact conditions of spread of erysipelas; and I may illustrate the use that we could make of a better knowledge of this disease by the greater power we should acquire for preventing the misfortunes of lying-in rooms and hospitals: while, as regards the more general aspects of such disease, any of us who have met with diphtheria or erysipelas in the course of our sanitary work must have become conscious of how sanitary action is hindered by the behaviour of those complaints being ill-understood. Here the officer of health of a small community has advantage over his colleague in a large town. He may make exhaustive inquiry into the circumstances of such disease as this, when he finds it occurring for the first time among people presumably not exposed to any previous infection. Perhaps he will at first learn nothing to help him in any administrative way, and may see little more reason for interesting his office in these diseases than in so many cases of brain or heart disease. But he may have good hope that, as records of such inquiries accumulate, they may lead to an advance in pathological knowledge; an advance which, in its turn, may give a new power of applying preventive measures.

And so of other diseases, the health officer may bring his distinctively medical knowledge to the elucidation of doubtful points or the discovery of new facts; and the more interest he takes in the scientific aspects of his office, the more will other medical practitioners come to take interest in the investigation of problems of causation and in means for the prevention of disease; and thus the health officer may gain the whole profession for his fellow-workers. Observe what medical science, and especially sanitary science, would gain, if all practitioners, instead of merely prescribing for their patients, were to concern themselves heartily with the natural history of disease. How much earlier inquiry can be made by the family doctor than by any health officer, and with what correspondingly greater chance of getting at facts of etiology. What much better opportunity he has of checking the exact truth of people's beliefs; and, again, of influencing them in ways beyond the sphere of official rules to proper courses of sanitary action. How long, with such assistance as he could give, would there remain any doubtful questions on such a matter, for example, as the duration of an incubation period? What light might he not throw on the nature of those diseases, such as lobar pneumonia, that in their definite course and tendency to crisis show obscure similarities to diseases of the "zymotic" class? All practitioners ready to make use of their every-day opportunities for the investigation of points like these should find in the medical officer of health of their district the most friendly and competent adviser; and in the organisation that shall see the health officer working, with the cordial assistance of his professional brethren, towards a scientific understanding of problems of pathology and etiology, will be found the best consolation that the medical officer of health can have for any inability to enlighten vestrymen and boards of guardians.

I propose, in continuation of this address, to illustrate the argument I have been advancing by dwelling on one particular topic that will probably have more interest than another for those present to-night, since it especially concerns health officers who have charge of great town communities. I refer to the prevalence of summer diarrhœa, and to our singular ignorance of its causes and of the action to be taken for its prevention. We have here a disease that in a few weeks of summer, in the great towns of England, regularly every year sweeps off many thousands of lives: about which, I will venture to say, no thoughtful person has information that satisfies himself, and which the health officer has certainly the best opportunities of studying. We have learned concerning it that a large part is related to conditions of excremental filth during hot weather; and this knowledge, obviously insufficient to account for all the phenomena of the disease, seems to have been taken by many people as a final conclusion, which, if it will not explain everything, at all events represents all that is necessary to be known for administrative purposes. Such other diarrhœa as is fatal in the summer, may, it is vaguely said, be set down to social and occupational conditions, over which but little direct control can be exercised. Except for general evidence on certain relations of the disease to heat and excrement, sanitary literature is curiously silent on the natural history of this most fatal complaint. Let us consider some of the points upon which more information is wanted.

First, is it or is it not true that summer diarrhœa is now a much more fatal complaint than formerly? We know that in old records there is no mention of the disease prevailing on any extensive scale; but this has been regarded as a mere omission of record, and the belief is generally entertained that if we could apply modern observation to the diseases of old times, and modern nosological terms to old bills of mortality, diarrhœa would be found to have been as fatal a disease in former times as now. But is this true? I have tried by some very imperfect tests to see what grounds there are for the opinion. I do not profess to have come to any kind of conclusion, and I merely submit to you such results as I have obtained as being suggestive of the directions that completer inquiry may well take for getting an answer to the question. On the one hand, we find in old bills of mortality a number of deaths from "convulsions," amounting year by year to double the actual number of deaths now ascribed to that cause in London with its enormously larger population, and constituting, with deaths from "teething," "vomiting," and "flux," about 30 per cent. of the total mortality. In the London of to-day only 10 per cent. of the total deaths are registered under the heads of these death-causes, diarrhœa included. So, as far as this consideration goes, it may well be that all the mortality we now find recorded as from diarrhœa existed in old times, though it was set down in bills of mortality under other names. But to this it may be objected that, until we have some evidence that the deaths formerly ascribed to "convulsions" and the like had an incidence upon age and season similar to the incidence now observed for diarrhœa, we are not justified in concluding off-hand that the old name convulsions and the new name diarrhœa are to any large extent convertible terms. I have therefore submitted some bills of mortality to another kind of test, with the result (so far as the imperfection of the test allows of any result) of making doubtful whether there was at the beginning of the present century any particular mortality of the sort we now witness among infants at diarrhœal times of year. We know that at present, even in the least diarrhœal seasons, the mortality from all causes in early August never fails to be raised above the mean mortality of the year, and the infantile mortality of the season to be raised greatly above the mean of the year, essentially from the prevalence of this one complaint. Now, if we have not facts about "diarrhœa" by name in old records, we have, at all events, facts, or what seem to be such, as to gross mortality and as to infantile mortality, week by week, to be found in bills of mortality. I have taken the London bills of the year 1808-9 (happening to possess a copy of them for that particular year), and have compared the then weekly mortality with that of 1874, the two years resembling each other in having a lower death-rate than that of neighbouring years, both among children and elder people. As we may be sure was the case, 1874 mortality, examined in small groups of weeks, shows a distinct rise at the beginning of August, bringing the deaths at all ages above the mean rate of the year. When we look at the infantile deaths this is more strikingly shown, by far the highest weekly mortality from all causes among children

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having occurred at the end of July and beginning of August; and this mortality, we know, was brought about by epidemic diarrhœa. But when we examine the deaths of 1809 week by week, the all-age mortality of early August, although it has a slight rise in it, does not come near to the mean mortality of other seasons of the year; and when we examine the infantile mortality separately, that again is nothing near so high as at most other seasons. Where, then, was the diarrhœa of July and August, 1809? It is obviously important to us to have a knowledge of the real prevalence of diarrhœa, not for one year only, but for several years at the beginning of the century and now. For we are probably cleaner than our ancestors, and London is probably freer from excremental abominations now than when George the Third was king. And so far as this is true, the reason for our increased suffering from summer diarrhœa will have to be sought elsewhere than in excremental filth, or else in such filth acting under conditions that are newly developed in the community.

Again, is it or is it not the fact that summer diarrhœa is fatal almost wholly among infants of a very few months of age, and that there is practically none of it in children over one year old. And first as regards the fatal disease. It is surprising that there should be any difficulty in getting exact data for answering this question; but as matter of fact there is almost no information to be had respecting it from published mortality returns. The registrars-general, in stating the incidence of various causes of death upon various ages, have made no division of the period under five years. Such information as is to be had comes therefore by induction from such secondary evidence as the death-registers do give; or it comes from local records that have been analysed for this purpose with greater nicety than the records of the entire kingdom. A specimen of the latter, relating, it is true, to one year only, and not separating ages at death more particularly than as they are within or beyond the first twelvemonth of life, has been given me by Dr. Whitmore; and from this it is seen that, both in epidemic and in non-epidemic months, the incidence of fatal diarrhœa is so vastly in excess upon infants under one, that the mortality of the disease at other ages may be almost disregarded. An example of ingenious deduction, applied in the detection of the same fact from the returns of our Registrar-General, is furnished by the writers of a recent paper in the *Scottish Meteorological Journal;* and the induction here is based upon the returns of ten years for the whole population of London. I have tested these writers' method by applying it to the facts of one year, and I consider that they show quite satisfactorily that the vast increase of the general death-rate by diarrhœa in July and August is almost wholly by diarrhœa among infants under one year of age. We, who have worked with the weekly sheets of the London registers, shall probably want little assurance of this fact. But observe, now, how we are left in uncertainty as to the facts for non-fatal diarrhœa, and how we are baulked by this uncertainty in approaching further lines of argument for the investigation of the cause of the disease. We want much, at this stage, to know how far death-registers are to be trusted, to show differences according to ages in the incidence of attacks, non-fatal and fatal together; whether the varying incidence according to age exhibited by the death-registers may not in truth signify great differences in the fatality of diarrhœa, but no great difference in the number of attacks, among infants on the one hand, and older children and adults on the other. We have here, then, respecting the age-distribution of diarrhœa, questions which those who are in a position to analyse death-registers and the records of non-fatal sickness may most usefully apply themselves to answer.

For, thirdly, to whatever extent summer diarrhœa attacks babyhood and spares later childhood, its causes must be sought in conditions which affect babyhood in a peculiar degree, and affect older children to a less degree. Now, though we are much in want of complete statistics, enough have been put on record to make us sure that diarrhœa generally has a special tendency to attack infants. And the writers of the paper to which I have adverted in the *Scottish Meteorological Journal* are evidently disposed to think that if we had the whole facts we should find that the incidence of fatal diarrhœa upon young infants was most special at the epidemic period of the year. It is enough for my present purpose that summer diarrhœa, like other diarrhœas, finds incomparably its largest number of victims in infants under one year old. But when we come to inquire what coincident conditions special to children under one year old, and of a nature to cause diarrhœa among them, exist specially in the two months of July and August, we find ourselves very far from having accurate knowledge. So far as heat and excremental conditions go, the means by which they bring about diarrhœa in young babies, and do not bring it about in their brothers and sisters born a year before them, are not at all easy to understand. We are continually reminded, by disbelievers in our work, of other conditions, peculiar to babyhood, over which health authorities have not direct control; so that we have practical reason for scientific curiosity as to the limits of those conditions, and for making sure that no unwarranted importance is attached to them. Detailed inquiry, then, is wanted, and is wanted on a large scale, in a variety of places, over a number of years, and in respect of non-fatal diarrhœa as well as of the fatal disease, into the surroundings of children attacked by summer diarrhœa. Among the very few inquiries of the sort yet on record, one by Dr. Crane, of Leicester, is a noteworthy instance of failure to bring the causes of this disease into harmony with ordinary views of its production. He inquired as to the circumstances of 283 children dying of diarrhœa in the summer of 1873; and found that of these 256 had been living in houses not in bad sanitary condition; 201 of them had been in charge of their own mothers by day and night; 107 of them had been wholly suckled, 98 others partially suckled, and only 78 had been fed on the bottle alone. Whether or not these proportions indicate that the children who died of diarrhœa were differently circumstanced from other children in Leicester who did not die of diarrhœa, Dr. Crane does not inform us; but obviously, so far as this particular inquiry went, there is no indication that neglect by mothers and bad feeding, which many people would offer as sufficient explanation of summer diarrhœa, played even a conspicuous part in the mortality from that disease in 1873 in Leicester.

Fourthly, a line of inquiry that suggests itself, with apparent promise of some knowledge of the means by which heat and filth may operate, and of the limits of the operation of such causes, is into the distribution, actual and comparative, of other diseases that are known to be intimately associated with excremental conditions. Particularly, the distribution of enteric fever is worth investigating in this regard. Of excrement in its relations to this disease we now know more than we did, and comparison of the behaviour of this fever with the behaviour of diarrhœa, under various circumstances of place and time, may possibly throw some light on the relations of excrement to diarrhœa, or suggest some directions for further investigation. It has long been known that the two diseases differ in their local distribution, and this fact was not intelligible while common non-specific filth conditions were regarded as sufficing for the production of fever. Now that we have reason to consider the maintenance and spread of enteric fever among communities as being due rather to some self-propagating element in excrement than to mere decomposing excrement as such, and that element to be peculiar to the specific fever, we can understand why a different disease should not, however it may be also related to excremental filth, exhibit any constant coincidence with the fever. Still, excrement is in question for both diseases, and experience has shown that the prevalence of enteric fever forms some kind of index to the prevalence of excremental nuisances as such; and a general similarity might be expected between the distribution of enteric fever and of such diarrhœa as is dependent for its production upon filth conditions. If the degree of difference between the distribution of fever on the one hand and diarrhœa on the other should prove to be great, we shall apparently have reason for considering either that a large part of diarrhœa is not of excremental origin, or that the element of excrement that is productive of diarrhœa is (like the material of enteric fever itself) something narrower in its distribution than the totality of decomposing excrement, something in fact specific to the diarrhœa, and operative under other conditions than those which are required for the operation of the fever-element. Let us, at least, see what are the facts of the case; and by way of illustration, let me adduce a few *primâ facie* results of inquiry. Arranging, first, the several divisions of England in the order in which "fever" (the great bulk of which was enteric fever) was fatal in them during ten years, and putting on the same sheet the mortality of each division from diarrhœa, no visible relation appears between the mortality of the several divisions by the one and the other disease. Again, taking out from statistical returns, districts with high or low fever-rates, and examining the same districts as to their diarrhœa-rates, little or no parallelism in the incidence of the two diseases can be found. Or,

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making a list of the twenty-five registration districts of England that in 1851-60 had most fever, and another list of the twenty-five that in the same period suffered most from diarrhœa, only one name appears on both lists. The fever districts are seen to be essentially rural or small town districts, the diarrhœa districts to be large towns, most of them manufacturing towns. It would seem, then, that there does in fact arise the consideration to which I have referred, and we want to know which alternative to accept—whether much epidemic diarrhœa is non-excremental in origin; or whether, being excremental, it depends on some specific element contained in excrement. Evidently nothing but very exact search into the conditions of diarrhœa production in each case—and into every obscure circumstance of diarrhœa occurrence—will help us towards an answer to this question. And this research can be made by no one so well as by a medical practitioner having the experience and opportunities of a health officer.

There do, in effect, appear to be a number of indications, severally not as yet very definite, that infantile diarrhœa, and particularly the form of disease epidemic in the summer, may be a specific disease in the broad sense of the word specific. All evidence that we can obtain about the behaviour of the disease will deserve to be examined from this point of view. We can as yet form no guess as to the nature of the specific element, though we may expect that the degree of its operation is determined by the intensity of some condition of organic foulness. But it may be that such an element, if it exist, would be single, although in one case associated with fæcal matters, and in another case not associated with what we commonly speak of as excrement.

In the last of these points which I intend to submit for your consideration, we shall find one of the indications I have mentioned. It is as follows:—Some health officers, in despair of more exactly understanding the disease we are considering, have tried to satisfy themselves by referring it altogether to the direct effects of "heat" upon infants. To speak of heat in this way is much as if one should speak of Providence as responsible for an effect. It is true that, when we observe the greater fatality of diarrhœa in hot summers than in cool, we can hardly doubt that in July and August heat is in some way a condition precedent of the result; but the very question that practically concerns the officer of health is as to the manner in which the heat operates. It must require some intermediate secondary condition or conditions in order to produce diarrhœa, or we should have diarrhœa equally spread wherever there was equal heat; and we know that this is not so. Now, examining as narrowly as we may this question of the direct influence of heat, we may observe some facts that are difficult to account for, and the further investigation of which may turn out to reward the student. Not only fatal diarrhœa, as shown by the Registrar-General, but also non-fatal diarrhœa, so far as the best sickness records with which I am acquainted (those published seven years ago by Dr. Ballard) give evidence on the point, is not epidemic before July, whatever may have been the heat of the weather. The months of May and June, it would seem, may have a week of average temperature as high as 60°, 64°, or even higher, and yet no particular consequent increase of diarrhœa be observable. And similarly, the prevalence of the disease would hardly seem to be affected by high temperatures occurring later than August. In September a rise of temperature up to a weekly mean of 60°, or even to 65°, is not accompanied by any corresponding rise in the amount of fatal diarrhœa. On this point the sickness records that I have consulted do not give uniform evidence, and their evidence is not uniformly to the same purpose as that of the death-registers, and further exact sickness records are obviously wanted. Still, the fact of there being a distinct difference between the operation of September heat and July-August heat in the production of diarrhœa, is a consideration which, even as it stands, deserves further study. Its significance would appear to be this: that in so far as summer diarrhœa should turn out to be a function, not of heat as such, but of heat acting essentially at a particular period of the year, countenance would be given to the notion that heat operates by developing some peculiar disease-material, whether in excrement or elsewhere, that has its time of multiplication essentially in July and August; that, in effect, the *materies* of epidemic diarrhœa may be something quite special to the disease, propagating itself at a particular time of year as certainly as plants flower or insects multiply at a particular season. I have no disposition to speculate on such a thing, nor on the nature of those conditions of foulness that would probably be wanted for the growth and multiplication of such a specific *materies*. What we shall all agree in demanding in regard of the present as of other points that I have submitted to you, is the collection of more information on the whole subject of "diarrhœa"; in confidence that every increment of knowledge will give us an increased ability to apply means of repression to this serious disease which cannot fail to be regarded by health officers of large towns as one of the opprobria of their districts.

I have now said enough in illustration of various lines of observation which may profitably be followed by medical practitioners seeking to promote sanitary knowledge, and notably by medical officers of health. In helping to answer the many intricate questions of which I have now indicated a few, we may expect to achieve a better comprehension of various points of pathology, as well as a better grasp of those principles that must guide us in our direct action for the prevention of disease.

ORIGINAL LECTURES.

COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond., F.R.C.P.,
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LECTURE X.—CHRONIC CATARRHAL PNEUMONIA AND UNABSORBED PNEUMONIC DEPOSITS—PNEUMONIC PHTHISIS.

(*Continued from page 466.*)

WHEN softening begins in a cheesy deposit, the change is indicated by the moister character of the crepitating or crackling sounds which accompany the respiration. Very soon the rhonchus assumes a metallic quality which is very noticeable, for pulmonary softening, when it has once begun in a child, usually proceeds with rapidity. The breath-sounds quickly become blowing and metallic, or even cavernous, while the resonance of the voice and cry is intensified and becomes bronchophonic. If the case have been from the first under observation, and the changes in the physical signs have been noted from day to day, the occurrence of signs such as the above, coming on gradually, and not succeeding to an acute inflammatory attack, indicates the progress of softening and ulcerative destruction of pulmonary tissue; but unless the successive steps of the process have been followed, as in the case supposed, the presence of dulness with cavernous breathing and gurgling rhonchus does not *necessarily* imply so serious a lesion of the lung. Acute and subacute catarrhal pneumonia frequently lead to considerable dilatation of bronchi; and a dilated bronchus, surrounded by solidified tissue, will give rise to exactly such physical signs as have been described. It is important in our diagnosis to distinguish clearly between these two conditions, for the ultimate issue of the case is likely to be very different, according as to whether actual breaking-down of the lung be or be not in progress. In children the bronchi dilate with very great ease; and as in such subjects fibroid induration is readily set up, the dilatation is often a permanent one. Cases of prolonged phthisis with cavernous signs, where the child falls away during the winter, but begins to improve again and gain flesh on the return of more genial weather, are usually cases of this description. Such children often live for many years, dying eventually of pneumonia or other acute pulmonary attack.

The seat of the physical signs is an important element in the diagnosis. Thus, when occurring in a case of chronic catarrhal pneumonia,(a) dilated bronchi are much more often found at the base of the lung than elsewhere, while ulcerating cavities are more frequently situated near the apex. Again, the general symptoms afford very valuable information. If the appetite is good and the child is gaining flesh and strength, while the temperature is normal or only slightly elevated, we have good grounds for inferring that the cavernous signs are not due to ulcerative destruction of the lung. Besides, the tendency of ulcerating cavities is to extend themselves, that of dilated bronchi to contract. If, therefore, we find, as the days pass, that the cavernous sounds become

(a) The statement in the text refers merely to cases of catarrhal pneumonia, and not to dilatations of the bronchi from other causes, such as fibroid induration of the lung.

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less and less intense, and less widely audible, we may conclude that it is with the less serious lesion that we have to deal. The most conclusive evidence, however, is furnished by a careful microscopic examination of the expectoration. If this be found to contain areolar fragments of elastic tissue, the existence of ulcerative excavation of the lung is at once established. Unfortunately, in children, who generally swallow all sputa, this evidence is not often within our reach.

Cavities are not always indicated by such positive physical signs as have been described above. If they are seated near the surface of the lung, they probably always give rise to cavernous respiration, metallic bubbling rhonchus, and bronchophony; but in cases where they are more deeply seated, and are separated from the surface by tissue not completely consolidated, the evidences of their presence become much less distinct. Indeed, it is questionable whether a small cavity, seated in the middle of the lung, and not communicating with a bronchus of some size, can be discovered by any means of physical investigation at our command. It is certainly the case that a cavity may be present without giving rise to other signs than slight dulness, faintly bronchial breathing, a small bubbling rhonchus, and increased intensity of vocal resonance, —signs which are distinctive of nothing more than mere consolidation of the lung.

Again, cavernous breathing of the most intense kind may be present, although there is no cavity. This phenomenon is sometimes to be found in cases of pleuritic effusion in the child. The diagnosis is made by noting the existence of the other signs of pleurisy. Where the lung is really the seat of excavation, effusion is rarely seen, for although pleurisy is common in such cases, it is almost always of the plastic variety, in which little or no fluid is poured out. Enlarged bronchial glands, by their conducting power, will give rise to loud blowing breathing at the apices of the lungs, and this may even acquire something of a cavernous quality. In such cases, however, the rhonchus, if present, is not metallic, and when the mouth is open the cavernous character of the respiration is much diminished. It must not be forgotten that enlarged bronchial glands may co-exist with cavities at the apices of the lungs.

The process of softening in a cheesy mass is not *necessarily* accompanied by any special severity in the general symptoms. The cough is often not much more frequent; the appetite may remain good; and even the weight of the body may be but little diminished. Usually, however, the process is accompanied by a very evident impairment of the general health. The beginning of softening is often indicated by high fever, flushings of the face, and morning perspirations, and in most cases the appetite fails, the temperature rises, the languor increases, the patient sweats profusely at night, and loses flesh unmistakably. Often at this time diarrhœa is set up, and the rapidity of the wasting is increased. Children seldom expectorate unless the cough causes vomiting; as a rule they swallow the sputum as it reaches the mouth. For the same reason hæmoptysis is rare(b) in the child, the blood being swallowed instead of expectorated. The digestion is deranged in most cases. There is usually considerable irritability of the stomach, and vomiting is easily excited.

The following case furnishes a good illustration of the symptoms and physical signs attending the breaking-down of a cheesy mass:—

William P., aged two years, was attacked by measles on New Year's Day. About a week after the disappearance of the rash, his cough was noticed to be very violent; this was especially the case at night, when he would become feverish and get flushed in the face. After coughing he sometimes retched, but did not vomit. His appetite remained fairly good, but he was noticed to be losing flesh. On February 14 the child was admitted into the East London Children's Hospital.

On admission, the right side was found to be completely dull in front from the third rib to the base, but the dulness was less marked outside the nipple-line than between that and the sternum. Above, the natural resonance was rather diminished as far as the apex. The respiration just below the clavicle was high-pitched and slightly bronchial, but over the area of dulness it became markedly bronchial and rather metallic in quality, although not actually blowing; no crepitation or rhonchus was heard during quiet breathing, but a double metallic click was caught at the end of a deep inspiration. Elsewhere on the right side there was little remarkable about the physical signs. At the back the percussion-note seemed generally high-pitched, but the respiration was natural and there was no rhonchus. The left side was healthy. The temperature after the first evening was always under 100°, usually only 99°; pulse 108 to 126; respirations 30 to 54.

The boy went out on February 21, with no alteration in his physical signs, but he was re-admitted on July 11 with severe diarrhœa. At this time an examination of the chest showed dulness at the right apex, both before and behind, with increased resistance. At the right back, from the spine of the scapula downwards, the note was rather tympanic; respiration at the upper part was bronchial, with moist, clicking rhonchi. Over the rest of the right side there was some clicking and wheezing rhonchus, both in front and at the side. At the left back the percussion-note was generally high-pitched, but the respiration was natural, and no rhonchus was noted except at the base, where occasional bubbles were heard. At the left front the physical signs were natural. The child was now thinner and paler, and looked much worse than before. His temperature was always over 100° at night, often rising as high as 102°, and on one occasion to 103·8°; respirations 42 to 60; pulse 102 to 138. The cough was not violent, and was loose. The diarrhœa soon ceased under the influence of lead and opium, and the omission of milk from the diet. The cough, however, continued, and the child daily lost in flesh and strength.

On July 29 the dulness at the right apex was increased, and the breathing had become blowing in quality, with a large, almost gurgling, rhonchus. This rhonchus was heard all over the right side, both before and behind. At the right supraspinous fossa the respiration was cavernous. All over the left side a coarse, crepitating rhonchus was heard, which disappeared to a considerable extent after a cough.

On the evening of July 29 the diarrhœa returned with some severity. Temperature, 7 p.m., 101·8°; pulse 138; respirations 48. On the following morning the temperature was 98°, and the child died in the course of the afternoon.

On examination of the body, the right lung was found to be much diseased. The upper lobe, adherent in places to the chest wall, was solid and of a dark purple colour. Its substance was dense, and could not be broken down by the finger. The denseness was due to a large excess of fibroid tissue, for the divisions between the lobules were seen as greyish bands, and the walls of the bronchioles were thickened, although their channels were not dilated. Small cheesy masses were scattered through the substance of the lobe, and at the upper part was a cavity, the size of a walnut, whose outer wall was formed merely by thickened and greyish-coloured pleura. At this point the lung had been adherent to the wall of the chest. The middle lobe was healthy. The lower lobe crepitated imperfectly, and was red in colour. At the anterior border of the base there was a patch of consolidation, with two small cavities containing softened cheesy matter. The left lung was the seat of recent catarrhal pneumonia; old patches of cheesy matter were dispersed through the substance; no grey granulations were anywhere seen. The bronchial and mesenteric glands were enlarged, and the intestines—both large and small—were studded with transverse ulcers.

In this case the child had an attack of catarrhal pneumonia secondary to measles. As so often happens under these circumstances, absorption was carried on very slowly, and on the admission of the child into the hospital, between four and five weeks after the beginning of the inflammatory attack, there was still considerable consolidation of the right lung. This consolidation was seated more at the base than elsewhere, but the incomplete resonance at the apex, together with the high-pitched and rather bronchial breathing heard below the clavicle, indicated that the upper part of the lung was not altogether untouched by the disease. The history of the case—for, as far as could be discovered, the child had been healthy before the attack of measles—showed clearly the nature of the illness. Catarrhal pneumonia is a frequent

(b) It is, however, far from uncommon for children to eject blood from the mouth, but this is seldom the result of hæmoptysis. Children are very subject to attacks of epistaxis, and, according to the seat of the hæmorrhage in the nasal cavity, the blood flows forward through the anterior nares, or backwards into the pharynx. If the latter, coughing is often produced, and large quantities of dark-coloured blood are ejected, to the great alarm of the parents. In such cases we generally find, on inquiry, that the nose has been bleeding, and blood may often be seen trickling down the back of the throat from the posterior nares. Sometimes the blood is swallowed, and is afterwards vomited.

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sequela of measles; and the presence of acute tuberculosis, the other common consequence of rubeola, was excluded by the strict limitation of the pulmonary physical signs to one side of the chest, for catarrhal pneumonia occurring secondarily to acute tuberculosis would certainly give rise to symptoms in both lungs. The temperature at this time was not high, being usually below 100° in the evening, and under favourable conditions the case might not improbably have done well. The child's friends, however, removed him from the hospital, and on his readmission, five months afterwards, the disease was found to have made great progress. Absorption of the deposit had taken place to a certain extent towards the base of the lung, but at the upper part chronic catarrhal changes had evidently been going on, so that there were distinct evidences of consolidation and softening at the right apex. The temperature was now high, and there was diarrhœa, which, by its depressing influence upon general nutrition, still further diminished any chances of recovery that might have remained. The case now went on rapidly from bad to worse. In a few days signs of excavation became apparent: the diarrhœa, which had been arrested, returned; and the child sank and died.

It would have been difficult in this case to exclude secondary tuberculosis at the time of the child's readmission to the hospital in July. The character of the physical signs made it evident that the opposite lung had become affected, and there was nothing in the case at this period incompatible with the presence of the grey granulation. Still, the formation of secondary deposits in different parts of the body, and of ulcerations in the bowels, may occur in such cases quite independently of tuberculosis, and there was therefore no need to resort to this explanation of the general symptoms. It is a point worthy of notice in passing, that a diarrhœa resulting from so serious a lesion of the bowels could be arrested for a time by treatment, although there was no reason to suppose that any attempt at repair had taken place in the intestinal ulcers.

In the following case the disease was the direct result of an acute attack of catarrhal pneumonia, the deposit failing to be completely absorbed. The cavernous signs were not, however, produced, as in the preceding instance, by ulcerative destruction of lung, but were the consequence of a much less serious lesion. The case furnishes a good illustration of a condition which is far from being uncommon, and is one in which accuracy of diagnosis is of the utmost importance in estimating the probabilities of a favourable termination to the illness.

William C., a thin, pale boy, aged fourteen years, but looking very much younger, was admitted into the East London Children's Hospital on November 20.

On stripping the boy for examination, the sternum was seen to be prominent, especially at the lower part, and the chest was contracted laterally at the base, showing the existence of a certain amount of permanent collapse of the bases of the lungs from successive catarrhs. The respiration was rather laborious, but the two sides of the chest moved equally, and the intercostal spaces of each side sank in. The percussion-note was high-pitched at the right supra-spinous fossa, but the breath-sounds there and all over both sides were quite concealed by a profuse crepitating rhonchus, which on the right side was hard, metallic, and ringing; and this quality became more marked as the stethoscope was moved towards the base. The resonance of the voice was natural. In front there was no dulness on either side, except a slight want of resonance above the right clavicle; but a bubbling rhonchus was heard more or less copiously on both sides. The vocal resonance was everywhere strong; temperature 104·8°. On the following morning—temperature 101·8°; pulse 120; respirations 46.

On November 24, in addition to the want of resonance at the right supra-spinous fossa, there was slight dulness at the right posterior base, and here the respiration was tubular. The same crepitating rhonchus was heard all over both sides posteriorly, changing at the right base to loud metallic gurgling. Over the upper part of the right back the respiration was bronchial. Temperature (8 a.m.) 103·6°; pulse 120; respirations 48; temperature (9 p.m.) 102·6°.

After this report the dulness at the left posterior base still further increased. On December 1 the want of resonance extended upwards as high as the spine of the scapula. Over the dull area the respiration was cavernous, with fine metallic bubbling rhonchus and bronchophonic resonance of the voice. The signs of general bronchitis persisted, for there was still much fine subcrepitant rhonchus at the left back. The signs of consolidation of the right apex remained unaltered. By this date the fever had become much reduced, and the temperature was only 99·6° both morning and evening; pulse 120; respirations 36.

The temperature remained between 99° and 100° until the evening of December 9, when it rose suddenly to 104·2°, and on the following evening was 105·2°. After this date, however, it again sank, but very gradually, and on the evening of December 21 was 98·8°. The elevation of temperature, which was no doubt due to a return of the catarrhal inflammation, was accompanied by an increase in the amount of subcrepitant rhonchus, but with no extension of the dulness or other alteration in the physical signs. There was still the same evidence of slight consolidation at the right apex, and at the base the dulness still reached as high as the angle of the scapula. The respiration was here cavernous as before, with metallic bubbling and intensely bronchophonic resonance of the voice. The dulness did not extend into the infra-axillary region. All over the right front a crepitating rhonchus could be heard.

The boy's general health began now greatly to improve. His appetite became very good, and he grew rapidly fatter. The temperature remained little higher than normal, rising sometimes to 100°, but, as a rule, maintaining a regular level of a little over 99°. His cough was loose, and not distressing. Towards the end of December he began to perspire profusely at night, but the sweats were controlled by a draught containing tincture of belladonna given at bedtime.

Little alteration was noticed from day to day in the physical signs. The rhonchus varied somewhat in quantity, and the respiration at the right base behind was sometimes more markedly cavernous than at others, owing, no doubt, to the varying quantities of secretion in the lung at that spot. Alterations in the vocal fremitus and in the resonance of the voice seemed to be dependent upon the same conditions. Towards the end of January the dulness at the right back began to diminish in extent. Instead of reaching upwards to the angle of the scapula, it became limited to the extreme base. Thus, on February 12 the physical sign were the following:—Percussion-note still high-pitched at right supra-spinous fossa, and dull at extreme base; but the dulness is, as before, limited to the back. All over the right back a loud crepitating rhonchus is heard, which at the base becomes larger, harder, more ringing, and more superficial. Respiration at the base is cavernous, but not very loud, and at the supra-spinous fossa is bronchial. Ordinary bronchitic râles are heard at the left back and in front on the right side. Vocal fremitus to-day rather diminished at right posterior base. 8 a.m.: Temperature 98·2°. 6 p.m.: Temperature 99·2°; pulse 96; respirations 22.

The boy left the hospital on March 8, looking fat and well. The high-pitched percussion-note still persisted at the right supra-spinous fossa, and there was still dulness at the right base behind. The auscultatory signs were exactly the same as at the last report. Temperature (7 p.m., March 7), 99·6°.

On April 30 the boy came to the hospital for examination. The physical signs were now very much the same as before. Both sides expanded fairly well and equally. There was still evidence of consolidation at the right apex, and at the base the dulness persisted, and the respiration was cavernous, with a sharp crepitating rhonchus not removed by coughing. Vocal resonance at base bronchophonic. The crepitation was heard more faintly in the infra-axillary region, but the respiration there was excessively weak. Very little rhonchus was heard elsewhere, and the left side appeared to be quite healthy. The boy looked very well, and was fat. He coughed occasionally, but expectorated nothing. The finger-ends were not clubbed.

This patient on his admission was evidently suffering from a chronic consolidation at the apex of the right lung, with secondary acute catarrhal pneumonia. There was slight dulness at the right supra-spinous fossa; but the breath-sound was not tubular, as it would have been in a boy of his age if the consolidation had been recent. The high temperature showed that the crepitating rhonchi heard about the back were not due merely to bronchitis, and although there was no loss of resonance over the back generally, yet the metallic quality of the râles on the right side—a quality which became still more marked towards the base—indicated the presence of deposits in the lung. The pneumonic process continued, and a few days afterwards evident dulness could be detected at the right posterior base, with all the signs of pneumonic consoli-

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dation. Cavernous signs soon began to manifest themselves, and in a short time it became evident, from the loud cavernous respiration, the metallic gurgling, and the bronchophony, that the base of the right lung was the seat of a cavity of some size. It was necessary to determine the nature of this cavity, for the prognosis depended greatly upon an accurate estimate of the pathological condition of the lung. The temperature and general symptoms here furnished important information. At the very time when the cavernous signs became fully developed the temperature fell considerably, and at the same time the respirations, which had been 48 in the minute, sank to 36. A change so favourable was sufficient to exclude softening and breaking down of a recent deposit, for such rapid destruction of lung-tissue, instead of an amelioration, would have caused a serious increase in the severity of the general symptoms. Besides, the cavernous signs were seated at the base of the lung—a comparatively unusual situation for a cavity, although common for a dilated bronchus; and the signs had supervened upon an attack of catarrhal pneumonia where the development of a bronchiectasis is so often met with. These reasons were sufficient for concluding that the signs were due to a cavity formed by the dilatation of a bronchus. The after-progress of the case confirmed the conclusion arrived at: the condition of the boy improved greatly, the appetite returned, he gained flesh fast, and rapidly resumed the appearance of health, although the physical signs suffered little alteration, and some considerable consolidation, with all the signs of a cavity, remained as a persistent condition.

It is remarkable in this case how little change was induced in the chronic consolidation of the right apex by this attack of catarrhal pneumonia. A certain amount of bronchitic rhonchus was heard there as in other parts of the chest, but no extension of the consolidation took place at this spot, and no active change in it was induced by the presence of the catarrhal condition. Such a consolidation forms a good illustration of the inactive cheesy deposit which is detectable by physical signs, but does not affect the general condition of the patient, and gives rise to no constitutional symptoms.

(To be continued.)

ORIGINAL COMMUNICATIONS.

NOTES ON THE CLIMATE OF NERVI.

By Dr. SCHETELIG.

The little town of Nervi, on the Rivièra di Levante, six miles east of Genoa, hitherto scarcely known, deserves to be better appreciated as a place for winter quarters. It is with this object that I have prepared the attached meteorological tables(a) showing the daily range of thermometer, psychrometer, and barometer during the last six winter months. Before enlarging upon this matter, a few remarks on the geographical aspect of the place may prove acceptable.

Whilst at Genoa the first and second range of protecting hills rather recede from the Mediterranean so as to leave a wide gap, in which the settlers of all centuries built this important city and its fast-growing suburbs, on going eastward the Apennines approach nearer to the Mediterranean, until at Quinto, between the lowest range and the shore, no space is left but for a few rows of houses, the road, and the rail. At the next station, Nervi, the high, level, rocky soil expands in a beautiful curve to the sea, thus affording ample ground for those famous gardens and suburban villas which Genoese pride has raised on this spot. Here the hills rise to a much greater height, and with their steep sides so effectually hem in the underlying town as to produce a most admirable barrier to the north. This undercliff position, indeed, has made Nervi what it is, and what, in the opinion of the Italians,(b) it has been for the last 400 years—a sheltered spot with all the beauty that a southern vegetation can give a landscape.

To show that in nowise this tract of land is inferior to its western rival, the Rivièra di Ponente, I need but call the attention of the reader to the configuration and height of the protecting hills. The nearest range, just behind Nervi, rises to 1300 feet, but no valley intervenes, and from there we ascend on a lesser gradient to about 2500 feet, when, over glens and slight depressions, we look straight upon the snow-clad tops of the western Apennines. This physical advantage Nervi has in common with all the Eastern Rivièra, as far as the remarkable promontory of Portofino (sixteen to eighteen miles from Genoa); still, none of the other places, as Sori and Pieve di Sori, can boast of any available land for building like Nervi. In order fully to understand its character one should go to Camogli, the last railway-station this side of the promontory, and from there look down the coast to the west. Then this rocky shore, with its bold outline and its innumerable indentations, stretches far away to Genoa, to lose itself in the blue curve of the Western Rivièra beyond. Above, the mountains follow the coast-line, verdure-clad and dotted over with villas, churches, orchards, and olive-groves; for nowhere on this coast, as far as the eye reaches, are the rocks bare. Two spots in this picture form centres of attraction—in the far distance, San Francesco d'Albaro, the prominent suburb of Genoa; and nearer the green sward of Nervi that stretches out into the sea on a level of about eighty to one hundred feet.

Nervi has no sandy beach, but is built on rocks. A wild path, rather picturesque, follows its boundary-line along the sea-coast, and affords many nooks and corners where invalids bask in the sun. This walk, though much dilapidated and highly to be recommended to the public spirit of the town councillors, helps to give a prominent feature to life at Nervi. Lying from fifteen to thirty feet above the water, and under the high garden-walls, it becomes a true magazine for the sun's rays, without presenting the drawback of those local winds which, in most of the other Mediterranean places, make the seashore inapproachable at noonday to all but the strong. Often, when the day was on the wane and the gardens had become cooler, we found a walk along the sea pleasant, and distinctly traced its more genial temperature to the radiation from the rocks and walls.

Unlike most places on the other side, Nervi has its gardens and hotels between the road and the water. A few villas, indeed, lie to the north, between the road and the hill—and they certainly have their charms; but from the hotels the eye sweeps over the parks to the sea, and no dusty road prevents one enjoying the southern vegetation to its full extent.

As a faithful chronicler, having shown the bright side, I must not omit the objectionable points. Nervi is not, and will never grow to be, an important place for winter resort. In spite of its old-established fame; in spite of the many acres of park-like gardens, some of which are liberally thrown open to the foreign public; in spite of the new road in construction to the railway-station, and the other one in contemplation to the little church of St. Illario on the hill—hitherto the cherished object of walks for the healthy only—the main portion of its territory is for ever locked to further enterprise and improvements. This is partly due to the available ground being in the hands of rich Genoese landowners of the oldest title; partly to the brisk trade of maccaroni and vermicelli manufacture carried on at Nervi—a branch of industry, it would appear, equally obnoxious in creating dust of flour and curcuma, and successful in limiting the sphere of vision to its votaries. For there is no doubt that the general body of "Nervini" are utterly averse to paving the way for foreign influx by anything like improving roads and canalisation, and against them the few men of public spirit find it hard to hold their own.

Ground being dear, accommodation is scarce. Nervi boasts of two hotels, of which the old-established "Pensione Inglese" must be acknowledged to be a first-class hotel, inferior to none between Nice and Pisa. A new wing was added last year. Besides, there are private habitations in the shape of villas, most of them in their own grounds—the Villa Gnecco, Villa Campostano, Casa Blanc, four Villas Pongone, the Villa Ghilino, and others at Capolungo—to be let in part or in full. Whoever wants good rooms at the hotel should come early in November.

Meteorological tables covering no more ground than that of one season may perhaps not be deemed ripe for publication. Still, I give my observations for what they are worth, and do not attach to them the importance due to a series extending over many years. But in publishing the registers of a winter almost unequalled in severity I hope to enable the professional reader to estimate on a broad scale, by comparing it with others, the value of the climate of the Eastern Rivièra.

Those to whom this subject is not new are aware that a

(a) These tables are unfortunately obliged to be suppressed, owing to want of space.—Ed.

(b) "Annali della Republica di Genova," third edition (Genova, 1854), vol. i., page 85: Monsignore Agostino Giustiniano, 1470-1536, recommended Nervi for its milder climate and its earlier harvest.

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milder temperature, a comparatively cloudless sky, and a certain dryness, are the most generally recognised characteristics of the best-situated places on the Italian and French Mediterranean coast. Nervi, being subject to the same physical conditions, may be expected to share in their results. So much ought to be told to all those who, from a month's, or even a week's observation, wish to establish a difference in favour of or against the climate of a certain locality. The unpublished tables of the late General Brocchi give the mean winter temperature for fifteen years (1849-64) at Nervi as 50·7° Fahr. My own readings, recording the *true* maximum and minimum of each twenty-four hours, make the mean temperature of Nervi for the winter season 1874-75, after correction (as below), to be 50·6°—viz., November 52·9°, December 47·7°, January 56°, February 43·4°, March 49·8°, April 54·5°. Between the minimum to the left of each column, *i.e.*, the lowest register for the previous night, and the maximum point in the centre, I have endeavoured to show the *daily* range as it is marked by an observation at 8.30 a.m. and another at 5.30 p.m. This way of arranging my figures will enable the reader to take in at a glance the daily oscillation of temperature as far as the invalid may be concerned to learn it.

Mean Relative Humidity.—Regarding the third class of readings—that of the psychrometer (wet and dry bulb thermometer), reduced from Guyot's tables to a percentage of the full saturation of the air—I much regret that the position of my little observatory in the garden did not allow of my making a night observation. Also, the number of observations has been irregular, as not every day the register could be taken at all the hours (8.30 a.m., 12 noon, 2 p.m., and 5.30 p.m.). I have, therefore, refrained from constructing a curve indicating the *mean* relative humidity for each day, and simply give the observations themselves.

Barometer.—From the lowest line will be seen the daily amount of atmospheric pressure.

Winds and State of Sky.—Above the figures for humidity I have placed a row of numbers from 1 to 6, to illustrate the state of the sky—1 is fine and clear; 2, single clouds, but with southerly winds, and therefore mild; 3, overcast; 4, clouded and dark; 5, rain; 6, snow. The wind-chart being a source of trouble to many people in the South, I do not hesitate to give up half of the names of the winds as they are frequently quoted, and only retain the distinction between the northerly and southerly currents, letting the many local winds (mostly brought about by rarefaction) take care of themselves. The former often make themselves felt at Genoa in the shape of a tramontana, but reach Nervi only in a roundabout way—as N.W., or sometimes as N.E. currents, chiefly at night. Much of the fall of the relative humidity is directly traceable to their influence, and it has not been an unfrequent occurrence for me to state from the psychrometer the prevalence of a northerly current when no real wind was yet to be felt. Instances of great evaporation, consequent upon tramontana currents, are to be found on November 13, 15, 25, and 26, January 31, February 5, 23, and 28, March 15 and 16 (calm days), and March 31. S.E. winds also set in occasionally: at times we must look upon them as modified northerly (*i.e.*, land) winds; at other times they are sea breezes, and with their appearance the atmosphere becomes cloudy or hazy, the barometer falls, and the humidity rises. The mistral, a land wind of the worst description in force and dryness, though frequently of a S.W. direction, is a rare visitor at Nervi. Last winter we experienced it on November 20 to 22, January 22, and April 14, while on December 20 to 23 I only presumed, from circumstantial evidence, that it had been prevalent somewhere on the eastern coast.

To the number of rainy days (twenty-six) may perhaps be added eight (six in December and two in February) on which rain only fell in a shower at morning or at night. This grand total of rainy days, together with the great frequency of mild sea-breezes (two), has, I believe, been previously dealt with by others, and has perhaps much contributed towards making a reputation for Nervi as presenting a mild and equable climate. While admitting that possibly it rains more often there than at most of the places on the Ponente, this fact alone cannot explain the comparative freedom from dust, but it must be especially pointed out that Nervi boasts of a good supply of water from its aqueducts, its rivulets and mountain watercourses. No doubt the close proximity of a well-wooded hill-side works to redress the balance. This influence of vegetation on the soil may be inferred from the fact that on the hill-side sufficient water is found to feed half a dozen trees of the *Eucalyptus* kind.

On two days snow fell at Nervi. As a like event has not been on record for many years, we must consider it an exceptional occurrence. Some writers on southern climates have endeavoured to explain its appearance by cold southern currents, and even by the influence of the climate of Corsica. My own observations do not tend to support this theory. It seems to me very clear that many of the cold northern winds, coming into contact with the warmer air of the Mediterranean, must experience a condensation of their watery vapour. If the difference of temperature be small, or the force of the land current very great, we remain [illegible] away of a chilling tramontana; if the northern current [illegible] cold, and one or both of them nearly saturated with [illegible] vapour, it will depend on their direction and velocity, and consequently on the lesser or greater suddenness of clashing, whether and where we are to have rain or snow. In this way, for instance, when gradually the northern current gains the upper hand, snow often follows rain, whereupon the atmosphere becomes clear, but cold. Again, as we repeatedly observe, snow is only deposited on the higher hills, where the warmer ascending air experiences the amount of cooling down required for condensation of vapour.

For those desirous of having it, I add the correction for the maximum temperature as found by many comparisons of my own instruments (giving the temperature of the garden air under wooden shades) with one in the cold shade of the house. To be deducted—

In November	2·3°	from 64·4°	and upwards
	1·6°	„ 57° to 64·4°	
December	No correction.		
January	1·26°	from 58°	and upwards
February	1·44°	„ 52°	„
March	1·26°	„ 58°	„
April	1·8°	„ 61°	„

Instruments: Maximum and minimum thermometers by Adie, London; minimum ditto by Baudin, Paris; wet and dry bulb thermometers by Callaghan; barometer by Negretti and Zambra.

Nervi, near Genoa.

A CASE OF RUPTURE OF THE BLADDER, WITH A LARGE COLLECTION OF URINE IN THE PERITONEUM.

By W. WILLIAMS, M.D., M.R.C.S.,
Senior House-Surgeon, Royal Southern Hospital, Liverpool.

JOHN D., aged fifty, was admitted on July 28 last, suffering much acute pain in the abdomen. He had been kicked four days previously over the region of the distended bladder, and had since suffered greatly, and been unable to pass water; the catheter, which had been daily used without relief, affording passage to but a small quantity.

On investigation, considerable collapse was observed; cold, livid extremities; small, weak pulse; furred tongue, and much restlessness. No vomiting had taken place; the bowels were reported as regular. The abdomen, besides being uniformly distended, was also very tender to the touch, and dull on percussion at all points.

A medium-sized catheter was introduced without difficulty, but the flow of urine which at first took place became soon suddenly stopped, evidently from some obstruction at the eyes of the instrument, and owing, as was seen on its withdrawal, to plugging of them with colourless, semi-solid matter, resembling the exudation found in peritonitis. By means of a larger instrument, 200 ounces of clear urine and numerous similar clots to the above were voided, with considerable diminution in the size of the abdomen, but with no diminution of tenderness or improvement in the constitutional symptoms; and death took place on the following morning, July 29.

The post-mortem examination revealed diffuse peritonitis, with matting together of the intestines, and extravasation of urine from a ruptured bladder, which was found small and contracted at the lower part of the pelvis, having at its summit a ragged oval opening, with firm, thickened edges, covered by deposit an inch and a half in diameter. The organ had not

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capacity for more than three ounces of urine. The large quantity which I drew on the patient's admission had occupied the peritoneal cavity, and had probably continued to distend that membrane in increasing quantity since the receipt of the injury. The chief means of diagnosis—apart from the history—from a distended bladder were provided by the general nature of the abdominal swelling and dulness; the severity of the constitutional signs, and their continuance, together with pain and tenderness after the evacuation; and, lastly, by the nature of the deposits.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

TREATMENT OF DISEASED JOINTS.

The treatment of diseased joints by sulphuric acid is likely to be fully tried at this Hospital, as are most other remedies or suggestions of any value. Mr. Cooper Forster has resorted to it in one or two cases, and some weeks ago we had the opportunity of seeing the method applied by Mr. Durham.

Three patients were thus treated on this occasion, all of whom were suffering from advanced pulpy degeneration of the synovial membrane of a joint, and in one case a condyle of the femur was also necrosed, and a small piece of bone was removed from the joint with forceps. Four joints in the three patients were operated upon: in one patient the ankle-joint, in one the knee, and in one the knee and the wrist-joints were the seats of disease. The mode of operating was simply to make one or more incisions into the joint, let out any flaky or puriform fluid which might be present, and then to stuff strips of lint, soaked in a mixture of one part of the sulphuric acid of the shops with two of water, into it. The parts were then covered with carded oakum and a bandage, and the limb was fixed on a splint. No great amount of pain can be produced by the application, for one of the patients seemed quite comfortable and without any sign whatever of suffering, when we saw her again about half an hour after recovering consciousness from chloroform.

Through the courtesy of Mr. Howse we saw, at the same visit, several cases of excision of the knee-joint which had been operated upon by him. Mr. Howse operates in the usual way, but his method of immediate after-treatment is somewhat different in some of its details to that which is generally followed elsewhere. After the operation is finished, and before the patient leaves the operating-table, the limb is set in a modified McIntyre splint, such as has been before described in these columns as in use at other institutions; then the spaces between the sides of the splint and the limb are filled with cotton-wool soaked in melted wax; next a roller soaked in the same material is applied around the limb and splint above and below the wounded parts. The wound itself is treated strictly on Lister's plan, except that sixteen thicknesses of gauze instead of eight are used, but no oil-silk or macintosh. Another point is that one-third of the mattress is removed from the footboard end of the bed, and the cradle for swinging rests immediately upon the corded webbing of the bedstead. This much facilitates the dressing of the wound, and does away with the inconvenience of draw-sheets, while the other limb rests quietly upon a pillow raised to the same level as the mattress itself.

By adhering to this method, Mr. Howse has had excellent results with respect to limb as well as to life. The mortality indeed has been very small, for out of twenty-seven cases he has lost but two—one patient died of pyæmia, whilst ulceration and sloughing were going on about the leg not operated upon, and after firm union had taken place between the bones at the seat of the excised joint; whilst the other died of tubercular meningitis, and had tubercle deposited in several of the abdominal viscera. Four cases we saw at this visit in Mr. Howse's wards in different stages of convalescence: two were able to sit up; one, a little hero of five or six years old, had recovered from amputation at the right hip-joint, and was doing infinite credit to surgeon, dressers, sister, and nurses, by getting a firmly anchylosed left knee-joint. In this case Mr. Howse's mind was not made anxious lest he should cut away any portions of the bones beyond the line of the epiphyses, for as the right lower limb had been entirely removed, it was of course impossible that any inconvenience could follow from discrepancy in the length of the legs.

Another patient, a young woman, on the tenth day after the operation, was lying quite happily, and comfortably at crotchet work, without the slightest evidence of febrile or any other general or local disturbance.

Three of the cases we saw had been submitted to excision for synovial disease of the knee-joint, which had advanced to a suppurative stage. The fourth, a female adult, had for years suffered from chronic rheumatic arthritis of knee and several other joints. In the right knee-joint the tibia was displaced backwards and outwards, but the disease of the left knee-joint (the one excised) was so aggravated that the woman had long been quite unable to stand upon it.

At the same visit, Mr. Lucas brought to our notice two very interesting cases under his own care. A little boy had one of his testicles in the perineum. The other patient was a child about four years old, with a congenital melicerous cyst in the neck communicating with the surface by a narrow sinus, through which was oozing a little transparent viscid fluid. A probe could be passed in some considerable distance. It was situated on the right side, between two and three inches below the base of the lower jaw, and in front of the border of the sterno-mastoid muscle. Mr. Lucas intended to dilate the sinus by means of a tent, and then to apply iodine or some such irritating substance to the inner wall of the cyst.

KING'S COLLEGE HOSPITAL.

CASE OF THROMBOSIS OF ARTERIES OF THE LEG—GANGRENE—AMPUTATION—DEATH.

(Under the care of Dr. BEALE and Mr. WOOD.)

[For the notes of the following case we are indebted to Mr. G. Batterbury, Medical Registrar.]

G. R., aged forty-two, a coach-painter, was admitted as an in-patient, under the care of Dr. Beale, on April 3, 1875. Patient states that on March 30 he was seized suddenly, whilst walking, with shooting pains in the right ankle. He walked for about thirty yards after first feeling the pain, when, in consequence of its severity, he could walk no further. He was conveyed to his home in the Old Kent-road. In the evening numbness of the leg came on; the pain became worse, and extended up the leg to the groin.

Previous History.—Has been subject to attacks of bronchitis. Twenty years ago had a chancre, followed by a rash. Five or six years ago had ulcers on the legs. Also had inflammation of the eyes, and about a year ago was operated on for gummatous tumour in the eye. Three years ago he had swelling of both feet. This has occurred at intervals since. No history of scarlet fever, rheumatic fever, or of gout. Never had colic or wrist-drop. Says he has been temperate. Is married; wife has had two miscarriages and four children born alive, all of whom have been healthy. Father died in a convulsive attack (probably renal), otherwise family history is good.

State on Admission.—Patient is a thin man with florid complexion. Complains of pain, numbness, and coldness of the right leg. The leg is very blue, and feels cold to the touch up to two inches above the knee-joint. There is loss of sensation up to the knee-joint; above this point sensation remains normal. No pulsation can be felt in the arteries of the leg except in the femoral artery just below Poupart's ligament. There is tenderness along the course of the superficial femoral artery and in the popliteal space. There is slight general œdema, and marked œdema of both legs and feet and of the right hand. The arteries of the left leg—posterior tibial and dorsalis pedis—can be felt pulsating. The conjunctiva of the right eye is injected; the pupil contracts and dilates normally. There is a distinct blue line on the gums. The chest is very prominent in front; it expands well. Heart- and breath-sounds normal. Liver dulness normal. Tongue moist and furred. Pulse 72, normal in tension; temperature 100°. Urine contains one-third albumen; specific gravity 1025; on microscopical examination there are small granular and hyaline casts.

April 6.—Bullæ have appeared on the front of the right tibia, and there is a line of demarcation about two inches above the knee on the anterior aspect. No line on the posterior

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aspect of the thigh. To take a draught containing two grains of quinine every two hours.

7th.—Slept well after taking thirty grains of bromide of potassium and fifteen grains of chloral hydrate.

9th.—Line of demarcation well marked all round the thigh. Pulse 100; temperature has kept stationary at about 101° the last three days. Patient is now very desponding.

13th.—Pulsation can still be felt in the femoral artery, but not in the other arteries of the right leg. Toes becoming mummified. Large blebs in front of leg. Urine still contains one-third albumen. At 3 p.m. amputation between the middle and lower thirds of the thigh was performed by Mr. Wood. On examination of the leg after amputation the superficial femoral and popliteal arteries were found plugged with a dark-coloured adherent clot.

After the operation patient was removed to the surgical wards. Gangrene gradually spread up the thigh, and he died on the 18th.

A post-mortem examination was made, and an adherent clot was found in the femoral artery, extending up to the external iliac. The viscera were healthy, with the exception of the kidneys, which were large and white. The right testicle was atrophied, and adherent to the tunica vaginalis.

The following remarks were made by Dr. Beale upon this very interesting case:—"I think we must attribute the formation of the clot in G. R. to previous change in the blood. Nothing was found in connexion with the arterial tunics that would satisfactorily account for the fact. On the other hand, the man was, and had been for some time, thin and out of health. There is reason to think that for years past the blood of this patient would very readily coagulate. The swelling of the feet may have been due to coagula forming in some of the small veins of the leg—a pathological change much more common than is generally supposed. Where a deep vein is plugged there may indeed be no symptoms, save slight local pain, lasting perhaps for weeks, and œdema over a very limited extent of surface. The condition of blood which contributes to the development of coagula in the veins, after existing for a long time, may be succeeded by a state in which a very slight local disturbance may occasion that much more serious catastrophe, the formation of a coagulum in an artery; or, in such a case, a slight roughening, or even a mere inequality upon the edge of a valve of the heart, might determine the deposition of coagulum, and almost sudden death."

UNIVERSITY OF EDINBURGH.—At the preliminary examination for the degree of Doctor of Medicine of the above University, on Wednesday, the 13th inst., the following questions were given in the Alternative Paper for Moral Philosophy:—1. State briefly what is meant by that element of civilisation termed *refinement;* how it is manifested, mentally and corporeally; and what are its causes. 2. Illustrate the operation of solar light and heat on man in the development of ethnic characteristics of the intellect and the moral sentiments. 3. What cerebral conditions are due to poverty, and what to luxury, so that moral and intellectual degeneration results? 4. Define moral insanity and moral imbecility respectively, and state the difference as to the causes of each. 5. Under what conditions of health do loathing of life and the desire to die, known as suicidal melancholia, occur?

QUEEN'S COLLEGE, BIRMINGHAM.—Mr. William Sands-Cox has addressed a letter to the Governors of Queen's College, Birmingham, in which he complains that the "Sands-Cox Medal" for the years 1874-75 has not been awarded as enacted by Act of Parliament; also that other prizes and scholarships appear not to have been awarded. He also states that he learns with pain "that the resident department, on the recommendation of the medical professors, has been abolished—a change in direct violation of trusts secured by rent-charges and mortgages by deeds enrolled in the Court of Chancery on the site and buildings of the College; a change utterly subversive of the principles on which the College was founded; at variance with the Act of Parliament, and simply 'that a larger sum may be made available for division among the medical professors.'" He also expresses a hope that the governors will recommend the press to be admitted to all quarterly boards of the Council, by which the injurious and prejudicial effects which always arise from "hole and corner" meetings will be prevented. The letter has been referred to the Council for their consideration and reply.

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Medical Times and Gazette.

SATURDAY, OCTOBER 30, 1875.

HIDDEN SOURCES OF POLLUTION.

IT is well known, as Dr. Buchanan said in a late address to the Association of Officers of Health, that different opinions prevail as to the origin of typhoid. All agree that filth of the most offensive description is its ordinary source or vehicle. But whilst some aver that filth itself generates typhoid poison by some complicated process of fermentation, others believe that it is only the vehicle of some specific animal poison which must proceed from the person of a typhoid patient, and that it is as specific a zymotic disease as small-pox or hydrophobia.

Dr. Buchanan did well to urge the necessity of exploring every possible means by which typhoid infection can be spread, because, till these are exhausted, the doctrine of spontaneous origin rests upon thin air, and one of the strongest motives for precaution is absent. At present we would just allude, in passing, to the fact that some cases of typhoid are so mild, or so ill-developed, that they are not recognised. The patient is ill and weak and relaxed, but his malady is not diagnosed. Hence the inquiry for sources of infection is baffled.

But what we would particularly call attention to is one mode of contamination which may take effect at a long range, which has been often pointed out, but which has not, we believe, received the condemnation at the hand of the Legislature which it well deserves. This is the formation of *soak-holes, swallow-holes, dead-wells,* dry wells, or *puits d'absorption.* They are illustrations of the futile attempt to get rid of sewage without submitting it to the action of growing plants. Once on a time, solid and liquid sewage were received into cesspits, where the contents leaked away slowly, having little water with them, and were emptied from time to time. A suburban builder thought there was ample provision for getting rid of sewage and for water-supply if every house had a small yard, with just room in it for a pump and a privy. Then

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came the water-closet, with its indoor means of contamination from the absorption of gases by the cisterns, which, till lately, were used both for drinking and closet purposes; and the admission of refluent sewer-gas into the very centre of houses, through every sink and pipe by which water or slops might pass away,—this gas being nominally kept out by *traps*. The water-closet system generates an enormous bulk of polluted water, defying many of the attempts to deal with it, and spreading foulness wherever it goes. We believe that the only way of dealing with it is to apply it, with or without preliminary deodorisation, to the irrigation of large quantities of land—so large that the land need not be saturated or water-logged; but even then, in rainy weather, there is great fear that it may escape. But given a country house, with no irrigation arrangement, one of two courses is pursued: either it is turned into the nearest ditch, to infest the air, and evaporate at leisure; or, if the soil be porous, it is turned into a dead-well, to soak away in the earth. Here, of course, it penetrates into any neighbouring well, and may travel long distances.

Hence, in case of the "spontaneous" origin of typhoid in some smiling rural village or detached country house, it will be expedient to explore not only the sewage arrangements of the infected place, but to cast an eye on the isolated farm-houses and country seats in the neighbourhood, more especially if the soil be chalk or sand. It will be expedient, too, that the insidious nuisance constituted by this substitute for drainage should be denounced and rendered illegal. But, as things are, it prevails to a serious extent, and is practised by persons who would shrink at any more palpable breach of the Sixth Commandment. We may recall the fact recorded some time ago, of the drainage of a cemetery into the chalk strata near London by this system.

Dr. Buchanan will have done great service if he induces the sanitary authorities to revolt at the "vulgar fatalism" implied in the notion that diseases come of themselves, and to initiate the acute and searching investigations by which the propagation of typhoid in many obscure instances has been unravelled.

SOME STEPS TOWARDS AN IDEAL HOUSE.

It is very clear that we cannot at Dr. Richardson's bidding pull down our houses and erect new streets with subways, nor yet emigrate into the new Hygeiopolis if it should be built. But it is one advantage of his brilliant ideal picture of a model city, that it enables us to make a catalogue of existing defects, and to amend bit by bit such as are within our powers.

For instance, we may ask—What kind of water-cisterns is our house supplied with? is that which is used for drinking and cooking connected with that which supplies water-closets? Where do the overflow-pipes emerge? Is there any possibility that sewer-air can come up through the overflow-pipe or waste-pipe of any cistern? These questions are all the more pertinent because there are hundreds of houses, supplied with water under the influence of medical officers of health, in which the privy is supplied from the same cistern as the kitchen, and the overflow-pipe goes into the closet. It would be as well to ask, further, when were these cisterns emptied and cleaned out? and, in the prospect of the coming winter, where is the tap by which water may be turned off and stopped from coming in? and is there a tap for emptying the pipes, so that no water can lodge and freeze in them?

It will be expedient, also, to look over the boilers attached to the kitchen and other fireplaces. When were they cleaned out? If the earthy salts precipitated on boiling hard-water are not removed often enough, the boilers will crack; and it is just as well to see that they contain nothing but water. A friend who took a house lately, that had been inhabited by a most respectable family, thought fit to have the boiler in the nursery cleaned out, and in it was found a pair of well-boiled old boots!

Then, with regard to the exit of water. Are the drains of impervious pipes, properly trapped before entering the street-sewer? and what means are there for the escape of any gases that may be generated in the house-drains, or find their way into them from the sewer?

Are the walls and ceilings of the living apartments non-absorbent? If not, are they clean? Are the bedrooms carpeted all over, with carpets nailed down? If so, what pains are taken to hinder them from being receptacles of hair-combings, scurf, nail-pairings, grease-droppings, crumbs, bed-flue, and all kinds of dust? Why not have the bedroom floors painted for two feet all round the room, so that the carpet, which should be in separate slips or portions, may be taken up and shaken or exposed to the air out of doors; whilst the floor can be washed, or cleansed with benzoline, or some other disinfectant and solvent of dirt?

We may next ask whether the means of warming are sufficient? Is the house, like many in the suburbs, provided with enormous windows of thin glass, with no wooden shutters inside—thus cooling the air of the rooms to a most injurious degree in the daytime, whilst thick curtains are necessary for the evenings? What is the temperature of the bed-rooms if there is no fire in them? Is there any provision for warming the air of the passages and staircases, or any means for saving some of the immense volume of air that is warmed by contact with the fireplace and grate, but which now, as things are, is too often carried wholly up the chimney? The number of deaths from lung disease—whenever the temperature becomes low—of persons of all ages and conditions, from the infant in arms to the bedridden inmate of a workhouse, shows that our means of internal warmth are miserably deficient, though our consumption of coal be as extravagant as it is wasteful. It will be well to ask as to the disposal of refuse and offal—potato-peelings, pea-shells, bones, feathers, straw, and the like. Some say, burn them; but they are most abundant just when fires are smallest; and in the summer many sensible people do all their cooking with a gas stove. It will be well to ask if the receptacle for such things is well situated and closed in, for the parish authorities are often extremely remiss in the arrangements for the removal of dust and refuse from private house. All the better for the flies.

These are a few jottings on matters within our power. No Haussmann is needed to secure tightly-fitting windows—double windows if need be—and stoves that will work well and cheaply; and till these things be done it is in vain to sigh after improvements that can only be effected by the rebuilding of a city.

ANTISEPTICS BEFORE THE CLINICAL SOCIETY.

It cannot be said that the discussion on antiseptics at the Clinical Society has up to this time displayed any great breadth or profundity of knowledge. Even those who spoke in their favour seemed, in the majority of instances, to give them only a half-hearted support, and in the greater number of instances Lister's method was spoken of in such a way as would have made the excellent Professor stand aghast. A little enlightenment is, on the whole, advisable before men talk on a subject, and such brief facts as the following may be useful to men who intend to speak on antiseptic surgery. In the first place, then, the use of antiseptics and Lister's method of treating wounds have of necessity nothing in common. Neither the use of antiseptics, nor even the use of carbolic acid, was introduced by Professor Lister, but he introduced the method which he employs with such admirable success and which is known by his name. The first to use carbolic acid as a dressing to wounds was, we believe, Mr. De Morgan, but he has since used many other antiseptics

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as dressings, and our impression is that he, at the present moment, uses chloride of zinc more extensively than anything else. But the mere use of carbolic acid is not Lister's method, nor do we suppose that for a single moment Mr. De Morgan would think that he had anticipated this method. In truth the matter is this: Mr. Lister's whole system is founded on a profound belief in the germ theory, insomuch that, we believe, he has said that no one save a confirmed believer in this theory could carry out his method effectually. In performing an operation it is his desire to exclude all germs from the wound; where this is not possible, to kill any which may be there present. To this end no care is too great, no precaution is too minute; in attention to what some men would call minutiæ lies the great force and value of his system. What good, then, can come of comparing things not comparable—as the use of antiseptics ordinarily seen in London with that seen in Edinburgh in the hands of Professor Lister? Of the speakers at the Clinical Society, only two—Mr. Heath and Mr. T. Smith—had recently seen Mr. Lister's cases. Some, apparently, had never seen them, and hardly seemed to know what Mr. Lister had written and spoken on the subject. But surely in indulging in any kind of controversial speaking or writing it is a good plan to find out exactly what your opponent says or does not say; and we should strongly advise any gentleman who desires further to ventilate his views, to find out exactly what Lister has said or has not said, and, above all, to know what his method really is.

THE WEEK.

TOPICS OF THE DAY.

In order that the alterations in the law made by the Public Health Act of 1875 may be clearly understood, the Local Government Board has issued a circular to urban and rural sanitary authorities which concisely points out such changes as have been made. Although the main object of the Act was consolidation, advantage was taken when the Bill was prepared of the opportunity to introduce certain amendments, the chief of which were explained to the House of Commons by the President of the Board, Mr. Sclater-Booth, the others being suggested afterwards. Some of the alterations are intended to clear up doubtful points of construction, whilst others make substantial changes in the law, by giving to rural authorities some of the powers hitherto conferred only upon urban authorities, also by extending the powers and obligations of both with respect to sewerage, water-supply, gas, the abatement of nuisances, and other matters connected with sanitary administration or town government. But the Act does not alter the present constitution of any existing urban or rural authority, nor the tenure of office of any of their officers. Amongst the items which fall more directly within our province to notice, we may mention that the circular, in treating of "infectious diseases and hospitals," explains that under the Sanitary Act of 1866 and the Sanitary Law Amendment Act of 1874, persons suffering from infectious disorders could, in certain cases, be compulsorily removed to any hospital provided by the local authority within the district, and for this purpose any hospital was to be deemed to be within the district if it was declared by the Local Government Board to be within a convenient distance of the district. By section 124 of the present Act, every hospital to which persons may be compulsorily removed under the above provisions is required to be a suitable one, and within a convenient distance of the district, and it will be for the justices now to determine whether or not the hospital fulfils these conditions, the Board having no longer any power to make orders for the purpose referred to. In connexion with hospitals a new and important provision will be found in section 132, which enables a local authority to recover expenses incurred by them in maintaining in a hospital patients who are not paupers. Next as regards "mortuaries." Under the Sanitary Acts the local authority were empowered to provide a mortuary, and section 141 of the present Act imposes on local authorities the obligation of making such provision if required by the Local Government Board to do so. The following section, No. 142, under which a justice may order the removal to a mortuary of the body of a person who has died of any infectious disease, renders any person obstructing the execution of such order liable to a penalty not exceeding five pounds.

The Board of Management of the London Fever Hospital have lately adopted the plan of opening it, free of charge, to all artisans or working-people (not being paupers), or to any members of their families, who may be attacked with any form of infectious fever, reserving certain wards for the use of persons who are able to pay for the accommodation they require. To enable them to carry out this plan, certain structural improvements in the building, which were much required, have now been carried out. The removal of some old side wards, which were once used for isolation purposes, has allowed more windows to be made in the wards which are retained, and has signally improved them; while new sinks, ward sculleries, etc., have been added to them on the most approved plan. The part of the Hospital set apart for the reception of scarlet fever cases has received a large number of patients during the course of the present epidemic, and is still well filled, but the typhoid fever wards are almost empty. The Board of Management wish it to be known that their private wards are always open for the reception of paying patients, who may be visited at any time by their customary medical attendants; also that domestic servants, or persons employed in shops, who are sent away by their employers, for their own safety or convenience, are received on payment of two guineas for the entire illness. Working people, brought from their own homes, are admitted free, and will be fetched by the Hospital ambulance on payment of the sum actually charged to the Hospital for the hire of the horse which draws it. The great facilities thus offered for the removal of cases of infectious disease from private dwellings cannot be too highly commended; and they only require to be made known far and wide, so that the public may have no excuse for refusing to avail themselves of such an excellent institution.

By the latest information which has reached this country, it appears that the cholera epidemic in Syria has greatly abated, but has been succeeded in several places by typhus and low fever. The people are reported to be in great distress, and it has been determined to urge the claims of the sufferers upon the liberality of the public in this country.

Only last week we adverted to the persistence with which bad meat was sent up to London for exposure in the public markets, and we are now delighted to find that the Guildhall magistrates are determined in future not to inflict fines, which are immediately paid, but to punish by imprisonment those brought before them for this offence. Only last week a butcher, William Kynaston, living near Evercreech, Somerset, was summoned for sending four quarters of beef unfit for food to the London market. In pursuance of the determination above expressed, this man was sentenced to one month's imprisonment. The necessity for active inspectors to supervise our food supplies is further evidenced by the fact that the officers of the Fishmongers' Company seized at and near Billingsgate Market, during the past month, thirty-five tons eighteen cwts. of fish unfit for human food, and this, for the time of year, is considered a very large quantity.

A correspondent writing to the *Times* on the subject of English watering-places, and their liability to spread infection from the number of convalescents who resort to them, as

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was mentioned at the late meeting of the Social Science Congress, suggests, very sensibly, that sanatoria for the upper classes should be established at various seaside places, to which persons recovering from infectious diseases might resort. It is suggested that they should be separate or isolated buildings, with grounds sufficiently spacious for air and exercise, in which persons might remain till all fear of infection was removed, the building being placed under the surveillance of some local medical man. At places where these sanatoria were known to exist, much anxiety and fear would be spared to heads of families in choosing apartments; and as regards the sanatoria themselves, they ought to become paying speculations when their utility and capabilities were thoroughly understood.

The Royal Commission to inquire into the practice of subjecting live animals to experiments for scientific purposes met at Delahay-street on the 20th and 22nd inst. There were present Viscount Cardwell, Lord Winmarleigh, Mr. W. E. Forster, Sir John B. Karslake, Mr. T. H. Huxley, Mr. J. E. Erichsen, Mr. R. H. Hutton, and the secretary, Mr. N. Baker.

A meeting of the members of the Improved Industrial Dwellings Company was held at the Mansion-house last week, to consider the report of the directors sanctioning the creation of additional capital to the amount of £250,000 by the issue of 25,000 shares of £10 each. The chairman, Sir Sidney Waterlow, M.P., after explaining the financial success of the undertaking, proceeded to convince the meeting that the philanthropic objects for which the Company had been formed had been as successfully carried out as the commercial portion. Thus they had at present 1596 tenements in the occupation of 6750 people; 603 tenements were in course of erection to accommodate 5000 other persons; and about 600 tenements had still to be contracted for, to give room for 2500 others. The rate of mortality in the Company's dwellings, during the nine years of the Company's existence, had been 16·2 per 1000, as against an average of 23·6 per 1000 in the metropolis. In the metropolis the density of population was 42 per acre, although in St. George's-in-the-East it was 197, and in the Company's dwellings about 750 per acre; yet the death-rate per 1000 of persons over one year of age was 17 in the metropolis, and only 10·35 in the Company's dwellings. Although the birth-rate was five in the 1000 more in the Company's dwellings than in the metropolis generally, the death-rate of infants was only 1·7 higher in its dwellings than in the metropolis. We have quoted the above particulars from the report in question, to show how much good may be anticipated from the working of the Artisans' and Labourers' Dwellings Improvement Act, if properly carried out by the authorities.

A special report was read on Saturday last, at the meeting of the Asylums Board, on the subject of the increase of scarlet fever in the metropolis. Fifty-four new cases were stated to have been admitted into the Hospital at Homerton during the fortnight, and on Saturday there were 220 patients in the Hospital, being twenty more than could be properly accommodated. The statistics of previous epidemics led to the belief that the present outbreak of scarlet fever would go on increasing until the close of the year; and under the circumstances it was felt desirable to open the Small-pox Hospital for the treatment of patients suffering from this disease. Complaint was made, at the same meeting, by several unions on the north of the river, of the great distance which patients had to be sent to the Stockwell Hospital: in this building, on Saturday, there were 104 patients suffering from fever.

Another instance of munificent donations to hospitals has lately been recorded, in the case of the will of Mr. Richard M. Mount, formerly a solicitor, of Canterbury. Amongst other legacies, this gentleman leaves £100 each to the Kent and Canterbury Hospital, and the Canterbury Dispensary; and at the death of his wife he bequeaths £10,000 to the Kent County Ophthalmic Hospital, and the residue of his property to the South London Ophthalmic Hospital, St. George's-circus, Southwark.

At a meeting of the Middlesex Magistrates held last week the following coroners' accounts were passed for payment—viz., Mr. Humphreys, 262 inquests, £415 8s.; Dr. Hardwicke, 185 inquests, £379 1s. 10d.; Dr. Diplock, 95 inquests, £176 7s.; Mr. Payne, 11 inquests, £18 8s.; Mr. Bedford, 55 inquests, £99 15s. 6d. Captain Morley, who, it may be remembered, on a recent occasion objected to the excessive expenditure incurred over coroners' inquiries, moved that the present accounts be paid, and remarked that it was most gratifying to him to find that, as compared with the corresponding six weeks of last year, although there had been forty-two more inquests held, the cost had been £103 less, being a saving of nearly £1000 per annum.

A singular outrage upon a surgeon is reported in the York papers. A medical gentleman of Thirsk was summoned by a messenger whom he did recognise, at one o'clock in the morning, to proceed immediately to a patient under his care, residing about two miles off. He obeyed the summons, but when he arrived at his patient's house he was surprised to find no application for his attendance had been sent. On his return a dark lantern was suddenly flashed in his horse's face; the animal shied, and the medical gentleman instantly jumped out of the gig. A blow was aimed at him, which narrowly missed his face, and a second on the chest struck him to the ground, when his assailant made off. On recovering himself he found he had been stabbed in the chest, but the wound fortunately had barely penetrated the skin. The police were immediately communicated with, but no trace of the perpetrator of this dastardly outrage has up to the present been discovered.

HOW ANALYSTS DIFFER.

THAT doctors differ is proverbial, but we are threatened with a kind of difference of opinion which may rudely touch the pocket. A case wherein Professor Redwood and Mr. Wanklyn differed, *toto cœlo*, as to the quantity of alum found in bread may be still in the minds of our readers, and we have now the conclusion of the case before us. At the Middlesex Appeal Sessions, on October 26, there came on for hearing an appeal against a conviction dated July 3, 1875, by F. H. W. Glossop and J. R. Hogarth, Esqs., two of the Justices of the Brentford Division, for selling adulterated bread. Mr. Moon is a baker and confectioner, carrying on his business at Oxford House, Ealing, where he has resided for the last twenty-five years. On May 26, last, Mr. Gregg, Inspector of Weights and Measures for the district, caused a loaf to be purchased at Mr. Moon's shop, and on the following day took it to Dr. Redwood, at the Pharmaceutical Institute, Bloomsbury-square, the public analyst for the district. At the time the loaf was purchased, Mr. Moon took another loaf from the same batch and requested Mr. Gregg to seal it up or mark it for identification, so that it might also be analysed on his behalf. Mr. Gregg declined to do this, and Mr. Moon subsequently applied to Dr. Redwood for leave to be present at the analysis. This request could not be complied with, the regulations requiring that the public analysts should be kept in ignorance of the ownership of the articles sent to them for analysis. The loaf which Mr. Gregg had refused to mark was kept by Mr. Moon in case any proceedings should be taken. Having completed his analysis, Dr. Redwood gave a certificate that the loaf was adulterated with alum, but not to an extent injurious to the health of the consumers, the proportion of alum being twenty grains to the 4-lb. loaf (this worked out arithmetically would be in the proportion of 1 to 1400). On this certificate Mr. Moon was summoned before the Brentford Bench of

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Magistrates. The evidence for the prosecution was that of Mr. Gregg, the person who bought the loaf, and Dr. Redwood's certificate. Mr. Moon called all the persons in his employ to prove that no alum was ever used in his establishment, the firm of millers with whom he dealt to prove the genuineness and purity of the flour supplied to him, and Dr. Wanklyn, the public analyst for Berkshire, and Mr. Nesbitt, his assistant, who had analysed the loaf from the same batch as that given by Mr. Gregg to Dr. Redwood, and which Mr. Gregg had refused to mark, and who said that that loaf was unadulterated. Mr. Moon also applied that the remaining portion of the loaf analysed by Dr. Redwood might be analysed by some independent scientific gentleman to be named by the Bench. The magistrates did not, however, think fit to accede to this application, but convicted Mr. Moon, and fined him forty shillings and two guineas costs. From this conviction Mr. Moon appealed, and the case was heard on the last appeal day, the same evidence being given on both sides as before the magistrates at Brentford. After the evidence of Professor Wanklyn and his assistant (Mr. Nesbitt), the Court resolved that there should be a further analysis, and adjourned the decision of the case for this analysis to be made. Dr. Stevenson, Lecturer on Chemistry at Guy's Hospital, was the gentleman selected by the Bench to conduct this analysis, and Professor Wanklyn and Dr. Redwood had permission to attend at the analysis. Professor Stevenson's certificate was next read by Mr. Beal, the Deputy Clerk of the Peace. Its effect was that the bread was not adulterated, and that it contained no greater trace of alumina or mineral matter than is always and necessarily present in genuine wheaten flour. On this certificate being read, Mr. Besley, for the respondent justices, at once admitted that it was impossible any longer to uphold the conviction, and that it must be quashed, and addressed the Court on the subject of costs, contending that they were never given against justices who had simply discharged a public duty to the best of their ability, and that as they were the only parties formally before the Court, there was no power to give costs against Mr. Gregg. Mr. Edlin observed that this would be most unjust to the applicant, who at great expense had completely vindicated his character as a respectable tradesman. A technical argument as to the law on the subject ensued between the counsel, at the conclusion of which Mr. Edlin said that he should put the same construction on the words "party appealing" and "parties appealed against," in the last clause of the sixth section of the Adulteration Act, with regard to liability for costs, as the Court of Queen's Bench had adopted in the case of the Queen against Smith (29, *Law Journal*, Magistrates' Cases, 216), in respect of similar words in 12 and 13 Vic., cap. 45, sec. 5, empowering justices to give costs on appeals, and hold, therefore, that the words "party appealed against" meant the informant, although the justices of the bench below were the formal parties to the appeal, and although the informant might not have personally appeared in support of the conviction, which, as a matter of fact, he had done in this case and been examined as a witness. In conclusion, he said it was only simple justice to observe that Mr. Moon had completely vindicated his character as a respectable tradesman and as a baker of pure unadulterated bread. The conviction must be quashed and the appellant must have his costs of the appeal, and no order would be made as to the costs of the proceedings below. This order will include the costs of Professor Stevenson's analysis. Upon the application of Mr. Besley, the costs of the respondent justices were ordered to be paid out of the county rates.

All's well that ends well; but it is not satisfactory that in such cases the mere certificate of an analyst should be enough to inflict such injury on an inoffensive man. Alum is not easily estimated, but still analysts should be able to do so approximately. We do not wish to hurt Dr. Redwood's feelings,—we know him to be a most estimable man,—but a case like this, and the somewhat notorious case of Feltoe's "Spécialité Sherry," ought to teach him great caution in giving certificates or testimonials.

THE WATER-SUPPLY OF THE METROPOLIS FOR SEPTEMBER.

The report on the water supplied by the metropolitan water companies for the month of September last, shows that throughout that period the state of the water in the River Thames at Hampton, Molesey, and Sunbury, where the intakes of the West Middlesex, Grand Junction, Southwark and Vauxhall, Lambeth, and East London Companies are situated, was good. The highest flood state of the river at Hampton during the month was five inches above the (six feet) summer level, and the lowest was one inch below summer level. At Seething Wells, Kingston, the state of the water in the river was good during the month in question. The Kent Company have extended the constant supply in their district, principally in Deptford, Plumstead, and Charlton; a covered reservoir has also been recently constructed at New Cross, to provide for constant supply to Peckham. The New River Company have in a number of cases afforded constant supply, by means of stand-pipes to a large number of the houses of the poor situated in courts within the City bounds; negotiations are also pending with the City authorities relative to the erection of fire hydrants, and for a further constant supply of water, by means of stand-pipes or other apparatus placed outside dwelling-houses situate in courts and alleys within the City; and the Company are about to extend their area of filtration. The East London Company have completed the extension of the constant system of supply in a large part of their district. The Southwark and Vauxhall Company have completed the covered service reservoirs at Nunhead, to contain 18,000,000 gallons. The West Middlesex Company are giving constant supply to a number of houses on the application of the owners, and are fully prepared to extend the system when called upon; they are also constructing at Barnes a new filter-bed of two acres area, which is intended to provide for exceptional and extraordinary circumstances. This Company, having large reservoir capacity for subsidence, avoid taking in water when floods prevail, thus enabling them to filter their water very efficiently. The Grand Junction Company have formed a high-service reservoir near Kilburn, to contain 6,000,000 gallons for constant supply. The Lambeth Company have completed the extensions and improvements in their works at Molesey; when full, the new reservoirs will contain about ten days' supply. All the companies effectually filtered the water supplied by them to the metropolis during the month of September, and it was delivered into their mains clear and bright. Many of the causes of complaint as to the quality of the water delivered for domestic purposes were found on inquiry to be attributable to the dirty state of the cisterns on the premises of the complainants. All cisterns should be frequently cleaned out, and every care should be taken by the consumers to prevent the contamination of the domestic water-supply.

MEATH HOSPITAL AND COUNTY OF DUBLIN INFIRMARY.

On the morning of Wednesday, October 27, Mr. Robert Perssé White, one of the surgeons of this institution, successfully ligatured the left common iliac artery for the cure of a large traumatic aneurism of the corresponding femoral vessel. The tying of the artery was effected by means of an improved and ingenious clamp lately designed by Mr. Porter, Surgeon to the Queen, and Senior Surgeon to the Hospital. The patient, a man some forty-five years of age, was kept under ether by Mr. P. Crampton Smyly throughout the somewhat tedious operation. Nothing could have been more satisfactory than the action of the anæsthetic in this case.

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ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE winter session was formally opened on Monday, October 25. The President of the College, Mr. Edward Hamilton, occupied the chair; and a very large number of the Council and Fellows, with members of the profession and students, assembled in the lecture theatre. Dr. James Little, Professor of Practice of Medicine, delivered the inaugural address. He devoted himself chiefly to the task of advising the students as to their future career. He impressed on them the necessity of diligent study if they wished to succeed in their profession, and pointed out to them the best means of profiting by their studies. They had undertaken a most responsible work, and if they would fit themselves for it they must enter seriously on their training, and devote their entire energies to it. To those who had completed their studies he would say—"Hesitate before you enter the army." Dr. Little then referred in detail to the grievances under which the Army Medical Staff laboured, and said he believed that of late years medical talent of a high order was thrown away in the army. He concluded by again impressing the students with the responsibility and seriousness of the work they had undertaken. He was frequently applauded in the course of his address. The session was then formally declared opened.

THE CITY PUMPS.

THE condition of the City pumps, and the expediency of shutting them up for ever, occupied the attention of the City Commissioners of Sewers at their last meeting. The report of Dr. Sedgwick Saunders was read, in which he stated his conviction that the continued drinking of those waters, or even their employment for domestic purposes, was fraught with serious danger to the public health; and in order to demonstrate the grounds on which he based his opinion, he laid before them the results of some analyses made by himself and others in his laboratory at various periods and in different weathers during the present year. At the present time there were only four pure-water pumps in use in the City—namely, those in Bartholomew-lane, Aldgate; at the junction of Fenchurch- and Leadenhall-streets; Crutched-friars; and Fann-street. The whole of the waters in the rest of the City pumps were so loaded with organic matters as to be entirely unfit for domestic consumption, and the imperative demands of public health required that immediate measures should be taken for their being closed. The waters were polluted by sewage in large quantities, and nothing but peremptory action would avert the serious consequences which might at any moment arise from a continuance of their use. It was more important that that should be done, since those pumps were popular with many persons, who were deceived as to the deadly nature of the waters from the fact that they were bright, cool, and sparkling when first drawn from the well, and in spite of such persons having been informed by competent authorities that those very qualities were produced by the presence of the products of decomposed nitrogenous matter of the most revolting kind, coming as they did directly from the graveyards and sewers in their immediate neighbourhood. A discussion followed the reading of the report, in the course of which several members expressed the opinion that the water of the pumps was not so bad as had been represented. With respect to Aldgate pump, one of the members said that the people of Aldgate prided themselves upon its water, and he himself drank it with unmixed pleasure. Perhaps the gentleman took it after boiling, and with something in it.

THE SCIENTIFIC GRANTS OF THE BRITISH MEDICAL ASSOCIATION.

THE Scientific Grants Committee of the British Medical Association have this year received £300 for allotment amongst those who desire assistance in original researches in medical and the allied sciences. The following grants have already been made, and the Committee are prepared to allot the balance of £170. Applications, which must be made not later than December 29 next, should be sent in at as early a date as possible to the General Secretary of the Association, 36, Great Queen-street, W.C.:—Drs. Braidswood and Vacher, on the Life-History of Contagion, £25; Professor Rutherford, researches on Biliary Secretion, £20; Dr. Crichton Browne, on the Antagonism of Medicines, £10; Dr. M'Kendrick and Professor Dewar, on the Physiological Action of Chinoline and Pyridine Compounds, £25; Dr. Mahomed, the Pathology of Albuminuria, £15; Dr. Munro (Cupar-Fife), an Antidote for Chloroform, £3; Dr. Caton, on the Electric Currents of the Brain, £15; Dr. Fothergill, the Effect of Certain Agents on the Circulation; Dr. Spencer Clifton, the Action of Uranium Salts in Diabetes. In addition to the scientific grants, Mr. Samuel Wood, of Shrewsbury, has generously presented £25 to be given for the best essay on Pyæmia; and there is also the Hastings Prize Medal of twenty guineas offered for the best paper on Diphtheria: its Pathology, Diagnosis, and Treatment.

MEDICAL PSYCHOLOGY AND THE EDINBURGH UNIVERSITY CURRICULUM.

THE University of Edinburgh has recently made an important change in its curriculum for the degree of M.D. Previously to last year, candidates for that degree must have passed an examination in Arts on certain subjects, of which moral philosophy was one; but in the course of last winter session it was decided to allow bachelors of medicine going up for the higher degree to profess medical psychology as an alternative subject for moral philosophy. This change came into operation on the 13th inst. We print the questions for candidates elsewhere. We understand that provision will also be made for encouraging the practical study of mental diseases by candidates for the degrees of bachelor of medicine and master of surgery, by allowing three months' clinical clerkship at a public hospital or asylum for the insane to be taken alternatively for the same period of out-door hospital or dispensary practice.

THE HARVEIAN SOCIETY.

THE first meeting of the forty-fifth session of the Harveian Society took place on Thursday, October 21, and was attended by a very full muster of members and visitors. After some instructive remarks by Dr. Wiltshire on "Pruritus Vulvæ," Mr. Carr Jackson read the paper of the evening, "On the Early Recognition and Treatment of Lateral Curvature of the Spine." In the course of his very practical observations, Mr. Jackson described minutely the symptoms attending the first, or truly curable, stage of the disease; and in laying down general principles of treatment, he took occasion to enter a vigorous protest against the too often unnecessary use of cumbrous apparatus. Numerous applications for membership were read, and it is evident that this useful Society will derive fresh impulse from the establishment of the Harveian Lectures, and the happy selection of Dr. Sibson as the first lecturer.

THE LOCAL GOVERNMENT BOARD AND SURGEONS.

SOME weeks ago the President of the Royal College of Surgeons drew the attention of the Council to an extraordinary order issued by the Local Government Board, whereby a Fellow or Member of the College, unless he possessed a registerable *medical* qualification, would be disqualified from advising whether or not a medical officer under the Board was or was not justified in performing an amputation. It was at once seen that such an absurd order would exclude even Sir James Paget, the worthy President himself, from offering an opinion. The attention of the President of the Local Government Board was at once drawn to the subject, and at the last meeting of

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the Council of the College a letter was read from Mr. Fletcher, the Assistant-Secretary to the Board, stating that an "early opportunity would be taken to amend Article II. of the General Order of the Board, relating to the qualifications of those entitled to give certificates authorising poor-law medical officers to perform amputations."

JOHN HUNTER.

It is, perhaps, pretty well known that our great physiologist had a suburban retreat at Brompton called "Earl's Court House," where many of his most valuable experiments were made. What was then a country house, surrounded by fair fields and meadows, is now encroached on by bricks and mortar, and in a few years, when the lease expires, this interesting building will in all probability disappear. In order that a record of Hunter's residence and its surroundings may be preserved, Mr. John Carder, of Earl's Court-road, has succeeded in taking a series of admirable photographs representing the famous residence as seen from the road. No. 2 is a prospective view of the house, showing the town which has grown up around it; Nos. 3 and 4 are two charming views from the lawn in the rear of Earl's Court House; and No. 5 and last is the well-known lion's den in the grounds, in which Hunter kept some wild animals, from one of which he was near losing his life. We strongly recommend these interesting *souvenirs* to the many admirers of John Hunter.

THE MEDICAL EDUCATION OF WOMEN.

At the annual meeting of the governors of the Queen's Hospital, Birmingham, last week, the Mayor attempted to get his fellow-governors to adopt a form of petition to the Council of Queen's College, urging that body to reconsider their recent decision not to admit women to the medical classes; but the general opinion of the governors was that the admission of women to its classes would be fatal to the success of the College, and the Mayor ultimately withdrew his resolution, —evidently much against his will, and not until after he had charged the profession with illiberality and trades-unionism of the very worst type. Notwithstanding the Mayor's dictum, we believe that the Council have acted very wisely in refusing to endanger the success of their institution by admitting women to its educational privileges.

DEATH OF PROFESSOR LORAIN.

The Faculty of Medicine of Paris, and, indeed, the profession at large, has sustained a great loss in the death of Dr. Lorain, which occurred suddenly, on Sunday last, the 24th inst., in the forty-eighth year of his age. Dr. Lorain was Physician to La Pitié Hospital, and about three years ago was appointed to the Professorship of the Faculty of Medicine of Paris, in succession to the lamented Daremberg. Dr. Lorain was a great favourite both in and out of the profession, and his funeral has just taken place in the midst of the regrets and sorrow of all who knew him.

OUTBREAK OF SCARLATINA NEAR GLASGOW.

The villages of Busby and Cathcart, in the vicinity of Glasgow, are at present visited with scarlatina of a very bad type. The epidemic, which first broke out a few weeks ago, has of late been largely on the increase. In some houses almost every member has been attacked in succession; and so fatal has the outbreak proved, that the mortality is reported to be about 20 per cent. of the cases. No steps appear to have been taken as yet by the sanitary inspectors in the matter.

CARDIFF MEDICAL SOCIETY.

The following gives us a glimpse of medical life in Wales; it not altogether seductive. Ordinary meeting, October 6, 1875; James Millward, Esq., President, in the chair. Resolved— 1. That in the opinion of this Society it is desirable that the hours of attendance in the surgery be curtailed, and that patients should not be attended to after 8 p.m., except in emergencies. 2. That a copy of this resolution be sent to each member of the Society.—Alf. Sheen, M.D., Hon. Sec.

FROM ABROAD.

The Night Medical Service in Paris.

In imitation of what has been done in St. Petersburg, Berlin, and some other places, the Préfet de Police has just addressed to the Paris Municipal Council a scheme for supplying medical attendance in emergencies occurring during the night. The matter has often been discussed in the Société des Médecins des Bureaux de Bienfaisance, and the present movement of the Préfet in the matter is chiefly due to the representations made by M. Passant, one of the most active members of that Society. The following is the *mémoire* addressed to the municipal authorities:—

"I believe, gentlemen, that I am responding to a very decided and long-standing desire of public opinion in asking you to vote a sum of 10,000 fr. for the purpose of securing medical succour to persons who during the night become the subjects of sudden accidents. The cases in which the absence of such aid has been disastrous to patients happily are rare; but still painful occurrences have happened from time to time, the recital of which by the press, in a more or less exact form, has struck the imagination, and served as a text for the most passionate recrimination against the medical profession. We should not allow ourselves to be too much influenced by these divagations of thoughtlessness and fear, for in Paris the medical profession, taken as a whole, thinks little enough of its repose, its health, and still less of its interests. But its habits of devotion must not allow us, as concerns it, to overlook the most simple ideas of equity. The powers of medical men are only human powers, which have their limit. Their profession, which is practised amidst a thousand causes of emotion and personal danger, and in violation of the laws of hygiene, renders rest for them at certain hours an imperious necessity. On the other hand, certain it is that the exaggerated apprehensions of the families of the sick, or their own groundless uneasiness, often expose them to disturbance during the night without any serious reason. Lastly, they cannot be refused the right of governing their procedures by certain rules of prudence, for it has happened to more than one of their number, who had been appealed to in favour of a pretended patient, to be led into a snare. I need only mention, also, the ingratitude of clients, who, having received the required services, refuse the most legitimate remuneration.

"These considerations will explain the utility of administrative interference in this matter, for such intervention will secure this triple result—1. That the person in need of immediate aid will be certain to know where to find it, without being exposed to the loss of precious time while making repeated inquiries in vain. 2. The practitioner will be in such a condition, as regards health and liberty, as to allow him to respond to the appeal made to him. 3. His personal safety will not be endangered while performing this duty, and he will not be deprived of a just remuneration for having been disturbed. Dr. Passant, who is regarded by the Préfet as one of his most devoted auxiliaries in his office of First Physician of the Dispensary of Salubrity, has been investigating this special question for several years, and has laid down some propositions of so simple and practical a character that they leave nothing to desire.—(1.) In each *quartier* the practitioners are to be invited to declare whether they are desirous of attending the requisitions that may be made to them during the night. (2.) The names and addresses of those who reply affirmatively will be placarded at the police-station of the *quartier*. (3.) The person in quest of a doctor will at once repair to the station, and will choose from the placarded list the practitioner whose aid he wishes for. (4.) An officer of police will be detached to accompany the person seeking for aid to the residence of the practitioner. He will follow the latter to the house of the patient, waiting there, and accompanying the doctor home. On taking his leave, he presents the latter with an order for 10 francs, payable on presentation. (5.) According to the condition of life of the patient, which is inquired into at the proper time, the administration will either

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compel the repayment of the doctor's fee, or itself bear the expense."

There seems to be no doubt that the municipality will agree to the scheme, especially as it is stated that it will save some 50,000 francs now expended. How so much is to be done in a town of nearly two million inhabitants with so small a sum as 10,000 francs it is not easy to see.

Arsenic-Eaters.

At the recent meeting of the German *savants* at Graz, Dr. Knapp brought forward (*Wien. Med. Zeitung*, September 28) the subject of arsenic-eating. He observes that it has often been discussed in Germany and England, but may admit of further illustration by those having cognisance of living arsenic-eaters. He relates that in 1860 he came into contact with one Johann Wölfler, thirty years of age, small in stature, but strongly built, who declared that he had eaten arsenic during twelve years. On February 22 he took in Dr. Knapp's presence four grains and a half, and on the 23rd five grains and a half, eating well and drinking freely; and when he went away on the 24th he was quite well. The urine on being tested exhibited arsenic. This man is still living in Styria, strong and healthy, and still addicted to the use of arsenic. This case is quoted in Hasselt-Henkel's *Giftlehre* (1862), as well as several others, among which is that of the manager of the arsenic factory at Salzburg, who in his seventeenth year began with three grains, and increased the quantity to twenty-three grains—though in what space of time is not stated. Drs. Maclagan and Rutter, travelling in Styria in 1864, were shown two cases by Dr. Knapp, in one of which five grains, and in the other six grains, were eaten in their presence, they having every means of guarding against fraud (one of these persons was exhibited at the present meeting). The urine was sent to Edinburgh, and arsenic found in it.

It is difficult to say how far this habit of arsenic-eating is spread, but Dr. Knapp has convinced himself that in Upper and Middle Styria it is very prevalent; and many horsekeepers, woodcutters, and huntsmen are known to him personally as arsenic-eaters, females also participating in the habit. Many commence eating it as early as seventeen, and continue doing so until extreme old age. Most of them doing this secretly, it is impossible to give figures on the subject. The principal reason assigned for taking the arsenic is that it is a preventive of disease; and among other reasons assigned is the desire of maintaining a blooming appearance, the relief of difficult breathing, and aiding the stomach with matters of difficult digestion. It is also employed as a means of procuring abortion, sometimes, however, causing the mother's death by poisoning. The arsenic-eaters known to Dr. Knapp are strong, healthy persons, having the sexual passions highly developed. Probably only strong persons can accustom themselves to the use of this substance. However, they sometimes reach a good old age; and Dr. Knapp has seen a charcoal-burner more than seventy years of age, who is still a very robust man, and who asserts that he has eaten arsenic for more than forty years. Nothing like arsenical cachexia seems ever to be produced; but acute poisoning is sometimes induced by the incautious use of large doses. The quantity commenced with is very small, and it is only gradually increased. The largest quantity Dr. Knapp ever saw taken was fourteen grains. The intervals at which it is taken vary much—viz., from every fortnight or week to two or three times a week.

Dr. Knapp concluded his paper by relating a case. J. F., aged fifty-five, a tailor, has taken the golden sulphuret of arsenic (white arsenic being, however, that employed in most cases) since the year 1849, commencing with about one grain for three days, and at the present time he takes six grains weekly, increasing the quantity if he has to make great exertion, or if he has to take food of difficult digestion. He states that his father also took considerable doses, and in his neighbourhood there are many people who take it, some in larger quantities than he does, all of them enjoying very good health. Another man, P. H., aged twenty-five, a servant, had, in imitation of other cowherds, taken arsenic with excellent results, always feeling uncomfortable when he omitted it.

After the paper was finished, J. F. took seven and a half grains of the sulphuret, and P. H. ten grains of white arsenic, in the presence of the assembled *savants*. Next day the two men were again introduced in perfect health, Prof. Hoffmann also demonstrating the abundant presence of arsenic in the urine.

Before proofs like these, Dr. Knapp observes, all doubts that have been entertained as to the reality of the existence of the Styrian arsenic eaters must surely vanish.

REVIEWS.

Thermo-Dynamical Phenomena; or, the Origin and Physical Doctrine of "Life," and a New Theory of "Fermentation." By H. A. Huntley, Analytical Chemist to Messrs. Barrie and Co., Madras. Madras: Printed by C. Foster and Co. London: Longmans. Pp. 50.

From an analytical chemist we might have hoped for something of logical precision in investigation and in argument concerning these burning questions. The preface to the pamphlet runs thus:—"This concentrated work comprises a paper submitted to the Royal Society of London by the author." Submitted(?): was it ever read? Alas! we find it to consist of a jumble of magniloquent scientism, the terms often ill-spelt, the diction distressing, and the argument, for the most part, absurd.

The author convinces himself that he has discovered the cause of "spontaneous generation." That cause, which feebler minds have failed to grasp, is *Heat*. The conclusion has been arrived at by "experiments conducted, as will be noticed, with the most careful observation." And here is a specimen of the record of such scientific precision:—"I subjected a vegetable solution in cold water (without boiling) in a vessel to a legitimate temperature of heat. After the lapse of some hours, microscopic investigation evinced signs of active vivacity; in other words, infusorial animalculæ were skating about numerously in active vivacity." Further experiments showed that subjection of organic solutions "to a *frozen atmosphere*, surrounded perpetually with ice, of course suffering at an entire immunity from the remotest influence of *heat*," caused the development of no infusorial animalculæ whatever, even though some of such experiments lasted more than a *twelvemonth*. Of course the conclusion was irresistible. Here we have vitality with heat and want of vitality without it—*ergo*, heat is the cause of vitality! As it is the cause of life, so it is the producer of those thermo-chemical decompositions of animal and vegetable substances vulgarly called fermentations. Having exhausted the subject of fermentation (in eleven pages), we come back to "life" again, and are clearly shown "the primeval origin of bioplasm in Cosmos by ultra-experiential observation": we need scarcely say that such "experiential observation" is very "ultra" indeed. The work ends with a profound iconoclasm; the last chapter is intended to "establish the untenability of the intuitional hypothesis of theism and religious faith, and to show that the argument of a 'first cause,' or an insulated 'creator,' or an all-powerful intellectual being, as advocated by *theism*, implies an intellectual contradiction; and therefore does not present the remotest (*sic*) barrier (as many imagine) for modern science to overcome."

"I wish," says the author, "to impress upon the mind of my readers the fact, that it is a very singular circumstance to observe the *latency* of the power of ideal expansion—or ultra-experiential observation—in some of our mediocre investigators of science of to-day, when transpiring and convincing events require an observer to be fully saturated and pervaded with a current of this power." If this means, being translated, that one who writes upon a scientific question should be well versed in his subject, and should possess a logical mind, we cannot conceive of anyone in the wide world to whom the lesson would be more valuable than the author himself.

The Surgeon's Pocket-book: being an Essay on the Best Treatment of Wounded in War. By Surgeon-Major J. H. Porter, late 97th Regiment, Assistant Professor of Military Surgery, Army Medical School, Netley. London: Charles Griffin and Co. 1875.

This excellent little manual will be hailed as a real boon by many a surgeon, both in the army and navy, who desires an epitome of surgical practice embracing almost all his requirements when on active service, and yet small enough to be stowed away in little more space than would be filled by a dozen cartridges. Small as it is, however, there is much valuable information condensed between its tough leather covers, nor is there any stint of well-executed woodcuts to clear up any obscurity which might arise from the necessarily terse style.

A work written like this, for a prize offered by the Queen of Prussia and Empress of Germany, and honoured as it was by

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its selection as the prize essay by judges of no less renown than Billroth of Vienna, Langenbeck of Vienna, and Socin of Basle, should need little praise at our hands. The writer has had experience of the subjects on which he speaks during the Crimean campaign, the Indian Mutiny, and the Franco-German War of 1870-71, and when all the altered conditions of modern warfare are considered, the value of this extensive and recent personal experience will be duly appreciated. Like a true surgeon, the author has omitted from his manual nothing of importance for the prevention of sickness besides the treatment of injuries, and, accordingly, space is spared for the description of the construction of cooking-places, latrines, extemporised filters, and the like. As an example of the thorough way in which every subject is treated, we may say that no less than nine carefully finished woodcuts illustrate the various ways in which objects ready to a soldier's hand may be converted into stretchers for the conveyance of the wounded from the field. Other kindred matters, as the means which may be employed to serve the purpose of splints when these are not forthcoming, are illustrated with similar care, and in the more important sections—amputation and the like—although sufficiently clear rules are laid down for the guidance of those needing them, space is afforded for reciting the opinions of really a wonderful array of authorities, considering the size of the volume.

Altogether we must heartily congratulate the author upon the successful achievement of a not very easy task, and our brethren of the public medical services upon so valuable an addition to their special literature.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, OCTOBER 16.

Dr. BUCHANAN, President, in the Chair.

THE minutes of the previous meeting having been read and confirmed,

Dr. TRIPE moved that "during the discussion of a paper no one shall speak more than ten minutes, except with the express permission of the chairman, and that similarly without the chairman's permission no one shall speak more than once."

This resolution, seconded by Dr. ILIFF, was carried.

Mr. LIDDLE proposed that a letter of condolence should be addressed to the family of the late Dr. Ross, expressing sympathy with them in their late bereavement, and lamenting the loss which the Association has sustained by the decease of so distinguished a member.

Dr. TRIPE then moved that every member be requested to present a copy of his annual report to the Society.

This being the first meeting of the Association for the Session 1875-6,

Dr. BUCHANAN, the newly-elected President, proceeded to read the inaugural address, a report of which will be found in another column.

During the discussion which ensued,

Dr. TRIPE remarked that about the year 1832, when the cholera first made its appearance in an epidemic form in this country, diarrhœa began to be prevalent also in an epidemic form, of which there had been an enormous increase during each subsequent decennial period. He had observed a close relationship to exist between the variations in temperature and the prevalence or fatality of diarrhœa. The traces of each on a chart would be found to run nearly parallel. The cause of such prevalence in infants was probably from some irregularity on the part of the mother—the secretion being altered. Dr. Tripe had noticed that during such fatal periods the milk turned sour very quickly. Under such circumstances he had substituted for ordinary cows' milk the condensed Swiss milk, with marked benefit.

Dr. MORGAN alluded to certain epidemics of enteric fever in which he had to his own satisfaction proved that in at least eighty cases the poison had been carried upwards of two miles by the stream from which the inhabitants derived their water-supply. He thought he would be able to prove, in a paper which he promised to read before the Society, that enteric fever may originate *de novo*.

Dr. LIDDLE was of opinion that infantile diarrhœa and other teething disorders were frequently traceable to a strumous origin.

Dr. FOX, avowing himself to be, on the etiology of enteric fever, an opponent of Dr. Budd's theory of propagation, said he had always examined most carefully for a specific origin in all cases supervised by himself, although he believed in the Murchison theory of a *de novo* propagation. He thought it very desirable that schools should be authoritatively closed during the prevalence of scarlet fever.

PATHOLOGICAL SOCIETY.

TUESDAY, OCTOBER 19.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

NEW VOLUME OF "TRANSACTIONS."

THE PRESIDENT laid on the table the new volume (No. xxvi.) of the *Transactions* of the Society.

HYDATID CYST OF THE LIVER.

Dr. CAYLEY exhibited a specimen of hydatid cyst of the liver, which had burst into the lung. A man of thirty-two was admitted into the London Fever Hospital with pyrexia and diarrhœa. He had been ailing seven weeks, and in bed seven days. He was believed to have typhoid fever. On admission he was suffering from right lateral pain, dyspnœa, and cough; and there was dulness at the right posterior pulmonary base, with other signs of pleuritic effusion, which was accordingly diagnosed. When thoracocentesis was just on the point of being performed, the patient coughed up a hydatid vesicle and yellow fluid. The trocar was immediately inserted, and two pints of hydatids and yellow fluid evacuated. Next day the operation was repeated; still the same products were spat up. The wound was washed out, but the discharge continued. Another opening was made in the chest, and drainage established, but the patient expectorated as before, and one day suddenly died, suffocated by hydatids, which came up in torrents. Post-mortem, a large hydatid cyst was found springing from the upper surface of the liver, and growing into the lung; the bronchial tubes were choked with hydatids. A pint of the mixed products remained in the liver. The intestines were normal. The patient had stated that at about the age of seventeen he had been for many months under treatment for enlarged liver, but had felt no effects up to his present illness.

Mr. MAUNDER asked Dr. Cayley whether there was decomposition of the fluid in the cyst as a consequence of the tapping, and whether (if so) the patient had been affected thereby.

Dr. CAYLEY replied that the fluid had no smell at any time. The man died choked by hydatids in the air-passages.

Dr. LEARED referred to the treatment of such cases by tapping and iodine injections.

Dr. PEACOCK also spoke upon the subject.

SUPRA-RENAL CAPSULAR DISEASE.

Dr. PEACOCK brought forward a case of supra-renal capsular disease, with very characteristic symptoms during life. A married woman, aged thirty-four, first came under Dr. Peacock's notice last spring, complaining of dyspeptic symptoms, with cough and expectoration. She was losing flesh and strength, but no marked signs of disease in the chest were detectable. The skin was of a very dark colour, and especially so in places, but she was naturally of very dark complexion, and had had general eczema two years before, since which time she had become much darker. Her appearance, however, at once suggested the idea that she was labouring under Addison's disease. Under tonic treatment she improved somewhat, and was lost sight of; but during the summer she was admitted into St. Thomas's Hospital. She then stated that for some time she had been subject to syncopal attacks, and for the last three weeks had been confined to bed, suffering from almost constant sickness and vomiting. She was much prostrated, but was perhaps rather less dark than when she had been seen before. She died quite suddenly a few days after her admission into the hospital. After death, with the exception of one or two small consolidated nodules and some cretaceous masses at the apices of the lungs, those organs were found to be quite healthy, and the only serious disease found in the body was the peculiar degeneration of the supra-renal bodies which characterises Addison's disease. There were old adhesions between the liver and spleen, and the

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diaphragm and adjacent parts, and the capsule of the liver was opaque and thick.

Dr. GREENFIELD, who had made the post-mortem examination in this case, said that the capsules were precisely in the condition familiar to pathologists; the microscopical investigation was not yet completed. He would direct attention to the very extensive and very tough adhesions, in this and other cases of Addison's disease, in the upper part of the peritoneal cavity—on the upper and lower surfaces of the liver, and about the stomach and spleen. In these adhesions, and in those of another case, Dr. Greenfield had observed peculiar, clear, glistening nodules. The spleen was very large and tough. The pigment in this case had avoided the papillæ of the tongue, instead of selecting them, as is frequently seen.

Ulceration of the Stomach.

Dr. PEACOCK also showed a specimen of ulceration of the stomach. A man, aged forty-two, of very intemperate habits, swallowed about a tablespoonful of sulphuric acid by mistake about five weeks before his admission into the hospital. Vomiting was promoted at the time, but no antidote was used, and he had suffered severely ever since. Two weeks after the occurrence he vomited a large quantity of blood; and while in the hospital he had incessant vomiting. There was a circumscribed tumour in the epigastrium, which was sometimes large, tense, and dull on percussion; at others smaller, softer, and resonant. He survived for about three weeks after his admission. The mucous membrane of the lower part of the œsophagus, and in various places in the greater curvature of the stomach, was deeply and extensively ulcerated, and there was some contraction of the pyloric orifice.

Valvular Disease of the Heart (partly Congenital).

Dr. PEACOCK exhibited a third specimen—one of combined aortic and mitral valvular disease; the aortic doubtless due to congenital defect in the valves. There were only two semilunar segments at the aortic orifice, and these were nearly of equal size. One of them was, however, obviously the representative of two others, which had either never been properly divided, or had become again united after division. There was the raphe, which usually exists in such cases, on the aortic side, and the edge of the united curtain hung down so as to allow of regurgitation into the ventricle, while the thickened valve must have caused obstruction. The mitral valve was also somewhat thickened, and the orifice slightly contracted. The heart weighed 19½ oz. The subject of the disease was a child twelve years old, who had been liable to cardiac symptoms all her life, and had never had rheumatic fever. The attack which proved fatal came on very insidiously, and without any signs of acute disease. She had characteristic evidence of obstructive and regurgitant disease of the aortic valves, but the existence of mitral obstruction was less clearly indicated. She was in the hospital for several months, and from the first was in a very torpid condition; had a low temperature, not materially exceeding 95° or 96°, and was subject to violent attacks of vomiting without obvious cause. Latterly the urine became albuminous and the liver engorged, and she had general dropsy and ascites. The abdominal organs, and especially the liver and kidneys, were very much congested.

The PRESIDENT inquired whether there was any history of a sudden interference with the circulation.

Dr. PEACOCK replied in the negative.

Dr. GREENFIELD said that he knew the case well. There was no history whatever of acute disease, but for several years the patient had been subject to attacks similar to the fatal one.

Dr. PEACOCK added that he once considered such cases as examples of intra-uterine endocarditis, but he now believed they were due to arrest of development.

Hemorrhage into Pons Varolii and Fourth Ventricle.

Dr. DOWSE showed the brain of a woman aged sixty-six, where hæmorrhage had taken place into the pons Varolii and fourth ventricle. Two years ago the patient had an attack of apoplexy resulting in left hemiplegia. Her mind had been affected ever since, and she had occasional epileptic seizures, with convulsions of the right half of the body. The temperature of the left side was usually two degrees higher than that of the right. On October 12 last she had what the nurse thought to be "one of her fits." The right side was convulsed, and at first there was marked right facial palsy; the head and eyes were drawn to the left, and the pupils were minutely contracted. Profound coma soon set in, and she died in twelve hours. Post-mortem, the vessels of the pia mater were engorged, and there was subarachnoid hæmorrhage over both lateral lobes of the cerebellum, and more markedly over the right temporo-sphenoidal convolutions. The substance of the left hemisphere was fairly healthy, but abundant old disease was found in the right. At the base, from the chiasma anteriorly to the medulla was a mass of recently extravasated blood, the result of the giving way of the left half of the pons Varolii, into which the hæmorrhage had taken place, totally destroying the left half and invading the right. The fourth ventricle was full of blood. The arteries were atheromatous.

Subarachnoid Hæmorrhage of the Cord.

Dr. DOWSE also exhibited a specimen of this nature. A man of fifty, while working in the sun, ten days before his death, was suddenly seized with great headache, giddiness, vomiting, shaking, and sub-consciousness. Five days later, whilst apparently recovering, he was seized with general convulsions, most marked on the right side, and became partially comatose. In this state he was admitted. There was, however, general hyperæsthesia. Respirations 30; pulse 120; temperature on both sides 103·3°. Marked rigidity of both upper and lower limbs—the former being flexed, the latter extended; reflex irritability increased. Urine was retained, free from albumen. On the day of his death the temperature rose to 106°. Post-mortem, subarachnoid hæmorrhage was found over the hemispheres and cerebellum, the anterior lobes being the only parts free; and the same at the base of the brain from the anterior perforated space to the medulla. The vessels were not atheromatous. When the cord was removed, it presented the same condition of subarachnoid hæmorrhage.

Thrombosis of the Internal Carotid.

Dr. DOWSE exhibited a third specimen, illustrative of this condition. A woman of sixty-six, in hospital for debility, was attacked with right hemiplegia (and aphasia), and ten days afterwards with left hemiplegia; she died thirty-six hours later. After death, the anterior half of the right cerebral hemisphere was found to be intensely hyperæmic without softening; a mass of extravasation occupied the corresponding corpus striatum. The left hemisphere contained no extravasation; it was remarkably pale, and partly softened. The basal vessels were atheromatous. The internal carotid arteries were found to be completely occluded, the petro-cavernous portion of each containing a thrombus adherent to the wall. Dr. Dowse said that the interest of the case lay in the relation of the vascularity of the hemispheres to the plugging of the carotids.

Colloid Carcinoma of the Breast.

Mr. BUTLIN exhibited a tumour in which cells of the epithelioid type, partly colloid, were arranged in spaces bounded by trabeculæ, and containing also colloid material. It was removed by operation from the breast of a woman of forty-three; it had been growing for twelve months, was as large as a small egg, and closely resembled clinically an ordinary hard cancer.

Aneurism of the Anterior Communicating Artery.

Dr. GREENFIELD exhibited such a specimen. A bricklayer, of forty-five, fell thirteen feet from a scaffold, and was picked up insensible; taken to the hospital, he was diagnosed to be suffering from concussion of the brain and fracture of the pelvis. He improved, but on the ninth day suddenly died in a fit. Post-mortem, there was found a small scalp wound, no fracture of the skull, and very extensive subarachnoid hæmorrhage. The brain was not contused. There was a firm clot in the fourth ventricle, extending forwards, and subarachnoid hæmorrhage of the cord. Obviously the bleeding had occurred on two occasions, the clot posteriorly being the more recent. On careful examination an aneurism was discovered on the anterior communicating artery, as large as a sweet-pea, which had ruptured at its posterior and upper part, thus permitting hæmorrhage backwards into the circle of Willis. The man had fallen apparently in a fit at the time of the first rupture; a second hæmorrhage had been the immediate cause of death. Dr. Greenfield said that there was but one case on record of a similar aneurism.

Dr. SEMPLE said that he had lately described a somewhat similar aneurism of the basilar artery.

Tumour of the Anterior Cerebral Artery.

Dr. GREENFIELD also exhibited a specimen of this nature, which had led to thrombosis and softening. A sailor, aged thirty-seven, was admitted with left hemiplegia and right paresis which had come on seven days before with an apoplectic attack.

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After several convulsive attacks and symptoms of paralysis of the third left nerve, he became comatose, and died on the fourteenth day with pneumonia. Post-mortem a tumour as large as a pea was found on the left anterior cerebral artery near the optic chiasma; a thrombus within the vessel had extended into an abnormal branch of the artery which supplied the anterior part of the corpus striatum. This portion of the brain was softened. The tumour was probably syphilitic, as there was a history of the disease.

Typhoid Ulceration of the Larynx.

Dr. Hilton Fagge exhibited a fresh specimen. A man of twenty-three was treated in Guy's Hospital for typhoid fever with somewhat anomalous symptoms; throughout he had sore throat and hoarseness. He died of exhaustion on the twenty-fourth day. The ileum presented, twelve inches from the valve, a spot resembling a healed ulcer, and, six inches higher, a second; but no further trace of disease. The mesenteric glands were, however, much swollen and dark red. The spleen was neither large nor soft. The lungs were not hyperæmic, nor was there bronchitis. The larynx presented extensive ulceration:—over the right arytenoid cartilage was an ulcer leading into a purulent cavity half an inch within the ary-epiglottidean fold; on either cord and on either margin of the epiglottis there were also ulcers. The gall-bladder contained mucus only. Dr. Fagge said he had never seen such extensive ulceration of the larynx in typhoid fever. The small amount of disease in the intestines was remarkable. The absence of bile from the gall-bladder he had observed before—perhaps it was due to frequent feeding, which would render the gall-bladder obsolete for the time (the hepatic ducts were stained yellow).

Infantile Syphilis.

Dr. Coupland showed the viscera of an infant of three months which had died on admission into the Middlesex Hospital, after suffering, according to the mother's account, from shortness of breath for three hours only. Post-mortem, the liver was found enlarged, and nearly the whole of the left lobe was of a yellow colour; two smaller masses of the same appearance were distinct from the other: these parts proved, on microscopical examination, to be wholly composed of round and spindle cells, and young fibrous tissue. The heart was square-shaped; the left ventricle was greatly bulged, and the walls very pale: this was due to a diffuse infiltration of small round cells to an enormous extent. A nodule of a gummatous appearance in the lower lobe of the right lung presented nuclear infiltration between the alveoli. Dr. Coupland said the case was apparently one of extreme rarity and interest both clinically and pathologically. He promised to furnish a more complete account of the microscopical appearances at a future meeting.

CLINICAL SOCIETY.

Friday, October 22.

George W. Callender, F.R.C.S., F.R.S., Vice-President, in the Chair.

Tumour of the Skull of Doubtful Nature.

Mr. Jonathan Hutchinson exhibited a child with a congenital tumour of the head, probably due to arrested development of the bones of the skull. The child was brought to Mr. Hutchinson at the Moorfields Ophthalmic Hospital in October, 1871, being then six months old. She was the younger of two children, the elder being reported healthy. When she came under observation, there was found to be a large hemispherical tumour in the middle line of the top of the skull and frontal region. The tumour was smooth and hard; its base measured four inches by five inches, and in the middle line it reached just to the root of the nose. On each side, the base of the tumour reached nearly as far outwards as the outer angle of the corresponding orbit. The fontanelles were not quite closed. A hard ridge occupied the situation of the sagittal suture in its anterior half. Behind the tumour, and almost continuous with its base, were one or two nodules. The eyeballs were very prominent, and the lower parts of the sclerotic much exposed. The child was lost sight of until April, 1875, when she was again examined. She was then four years old, but would not be taken for more than two. She had but just learnt to walk. She was cheerful, good-tempered, and could talk well. The right hand was always colder than the other, and the whole upper extremity was believed to be weaker than the left. Just above the outer angle of the eyebrows, the skull narrowed, having on each side prominent ridges which marked the junction between the squamous and parietal bones. Thus it would appear that the whole frontal bone was too small. The eyeballs were very prominent, almost the whole cornea being exposed, and much of the sclerotic below it. In the middle of the top of the skull, beginning a little behind the coronal suture, and passing backwards along the whole length of the sagittal, was a soft swelling an inch and a half high and probably two inches across. A sort of ill-marked depression crossed the tumour about its middle, and near to this depression two plates of bone could be felt in its walls. At its margins, lips of bone passed upwards into its walls, where they gradually thinned off and were lost, a condition which suggested that the tumour had pushed its way from within outwards. The tumour was soft, and received impulse from the circulation and from the respiratory movements. Mr. Hutchinson stated that he believed that, owing to the want of development of the frontal and anterior parts of the parietal bones, the brain, in its growth, had caused absorption of bone and bulging in the position of the sagittal suture.

The Chairman was inclined to agree with Mr. Hutchinson's view of the case. He had seen one something similar under the care of Mr. Stanley. The child lived to the age of twelve, and after death it was found that the growth was a soft cancer, which had destroyed the upper part of both hemispheres.

Mr. Morris thought the explanation rather improbable, especially considering the condition of the eyes. In a case he had recently seen the patient was a woman aged forty-five, who received a blow on the head. This was followed by a rapidly-growing tumour of considerable size, involving the parietal and temporal bones. It pulsated in every direction, and had a hard, bone-like ridge surrounding it. A puncture was made, but only blood-stained fluid escaped. A gentleman who had seen the case in Brighton thought, from a case he had already seen, that the tumour was malignant. Two such cases were narrated by Markoe.

Mr. Holmes thought the malignancy was not proved in Mr. Morris's case. Mr. Cæsar Hawkins had a somewhat similar case under observation for years. The patient was an elderly man, and there were no symptoms from the tumour, save slight epileptiform attacks and what sometimes appeared to be a kind of foolishness. The growth pulsated. Ultimately the patient died of pneumonia, and the growth was found to be fibrous.

Ulcer of the Tongue of a Doubtful Cancerous Nature.

Mr. Hutchinson exhibited a patient with an ulcer of the tongue of doubtful nature. He was first seen in April, 1874, when he had noticed the ulcer for two months. He was then fifty-nine years of age. There was no history of syphilis, and the biniodide of mercury and other specifics had been given without any benefit. When first seen the ulcer was quite clean, and had a hard border; it was about the size of a sixpence, and situated exactly in the middle of the dorsum of the tongue. The ulcer was freely cauterised with acid nitrate of mercury. When the patient was presented to the Society, eighteen months afterwards, there was an oval patch in the middle of his tongue about as large as the stone of a damson plum, a little raised in the middle, and with ill-defined borders. There was no ulceration; but at its posterior part was a little hollow overhung by smooth papillary growths. It appeared that, soon after the application of the caustic, the sore had healed, and that it had since caused him not the slightest inconvenience or pain until June of the present year, when another sore, similar to the first, formed behind it; and at the same time a gland under the lower jaw enlarged. The gland softened, broke down, and discharged a thin sero-pus; and in September another gland followed the same course. There was no history of cancer in the family.

Mr. Henry Lee thought the behaviour of the glands indicative of the disease in this case.

Mr. Maunder said that often when giving iodide of potassium in large doses an ulcer would for a little while seem to improve, but only by-and-by to show more definitely the malignant nature of the disease.

The Chairman thought the disease malignant.

Antiseptics.

Mr. Pick briefly recapitulated what had been said on a previous evening in short papers by Mr. Callender and himself.

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He insisted that carbolic acid did not prevent suppuration, but only the putrefaction of the pus. He considered it to be most useful in excisions. Thus, in the Children's Hospital with which he was connected, he used to see a good deal of secondary fever after excisions; but, with carbolic acid, that was almost absent. It had struck him, in removing the dressings from wounds where it had been used, that, though the external layers might be fetid, the deeper parts, which were fully carbolised, were not so, but perfectly sweet. In all cases where he had used the carbolic acid the patients had done well; in one where no carbolic acid had been used, pyæmia followed.

Mr. MAUNDER said that from his experience the history of cases treated by carbolic acid was much the same as that of cases treated in other ways. He had three cases of suppurating knee-joint at the same time in the hospital, and these did well with incisions and drainage-tubes. He had brought a case illustrative of another method of treating such conditions, viz., by tying the femoral. This had been done by Mr. Little, and the patient had made an admirable recovery. He considered it quite equal to the antiseptic method. He thought Mr. Pick's patient owed as much to the care of the surgeon and to the general principles of surgery as to carbolic acid.

Dr. MOXON asked if there were any observations as to the existence of bacteria in Mr. Pick's case.

Mr. HOLMES was of opinion that such a question could not be settled by single cases. In reference to such a case as Mr. Pick's, Mr. Lister expected much, but could hardly expect to conduct such a case without suppuration. It was quite impossible to compare dissimilar cases. What resemblance was there between Mr. Pick's and a contused wound in Mr. Maunder's cases? Some cases would do well from the beginning; some would do badly. What was wanted were the general impressions of men not prejudiced either way, and who had carried out the system thoroughly. He had used carbolic acid in most instances, and the more extensive the wound, he had found it the more valuable, especially in opening large abscesses; here it was of the highest value in preventing traumatic fever. But if a wound was to be treated on Lister's method with complete success, it must be treated from the beginning. Wounds which had been exposed for some time were, according to Lister's views, no longer in a favourable condition for such success. He did not believe in Lister's views, but his general principles he thought excellent. They implied the idea of abstaining from meddling with all wounds; there was no improper exposure, and the surgeon had to attend to the dressing himself. Yet he had seen pyæmia in such cases. Nevertheless, he considered that the number of cases of pyæmia after operation in our London hospitals was greatly exaggerated, and he gave some telling statistics on this point. It would require a long period to give any accurate ideas of the influence of antiseptics on disease and mortality in hospitals.

Mr. DE MORGAN agreed with much that had been said, especially as to the value of extreme care. Nevertheless, antiseptics were of great use; not, however, to purify air, as had been supposed, for of that a good example was afforded by an open empyema. Thus with a single small opening the air and pus speedily became fetid; but if another, a larger and a counter-opening were made, this was soon remedied without any disinfectant. Professor Humphry's cases, where there was free exposure and no covering, did extremely well. Still, the use of disinfectants was good in many cases, as when he had cleared out a joint and sponged it with chloride of zinc with the best results. Extreme cleanliness was the great thing. This disinfectant was useful, but boracic acid or sulphurous acid did as well as others.

Mr. BARWELL said that Lister's method and the antiseptic system were not quite the same. In Mr. Pick's case, antiseptics were used quite properly, but after long exposure of the wound. In operation-wounds which are under control, Lister's method was of great value, for with it we could operate where previously we could hardly have dared. He thought, however, the method was spoiled by the introduction of many unimportant details, and he thought it might be made much simpler.

Mr. HEATH said he had seen Lister's cases, and they were really astonishing, not in amputations only, but in other operations, if possible, more severe. Mr. Lister himself insisted forcibly on the minutiæ as all-important, but if there was any failure there was always some loophole for escape. Having to operate under a spray was very repellant. He had seen as good cases of fracture here in London without antiseptics as with them, and he had seen elevation of temperature with antiseptics. He asked Mr. Callender if the results continued as good in St. Bartholomew's as heretofore. His reports showed how important an element care was in such cases. He would ask Mr. Maunder why he did not tie the femoral in the cases before them.

Mr. T. SMITH said if they were to try Lister's method they must try it in its entirety. Mr. Lister naturally complained of men courting failure by not carrying out the method properly; for instance, using imperfectly disinfected forceps. In point of fact there was no evidence before the Society to enable them to give an authoritative opinion as to the value of Lister's method.

Mr. MAUNDER, in reply to Mr. Heath, said he did not tie the femoral in the case in question because the plan had done badly in another case, and he was unwilling to depreciate it.

Mr. CROFT had seen Lister carry out his plan in Glasgow, had been greatly struck with it, and had used it himself. It was our duty to consider other patients in the ward, and the risk of infection, as well as the one patient operated on.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

THURSDAY, OCTOBER 14, 1875.

S. W. BROADBENT, M.R.C.S., President, in the Chair.

PREVALENT DISEASES OF THE DISTRICT.

Mr. H. E. ARMSTRONG, Medical Officer of Health for Newcastle-upon-Tyne, presented a return of the admissions to, and deaths at, the Newcastle Fever Hospital, from March to September, 1875, inclusive. The total number of cases admitted was seventy-three. There were forty-nine cases of typhus, and eleven of enteric fever. Of the typhus cases, twenty-one were admitted in March, five in April, eleven in May, five in June, four in July, one in August, and two in September. Ten of the typhus cases proved fatal. Mr. Armstrong, after making some remarks on individual cases, stated that the sanitary condition of the town was at present good.

SACCULATED ABDOMINAL ANEURISM.

Dr. PAGE showed a specimen. The aneurism was about the size of an orange. It sprang from the commencement of the vessel involving the cœliac axis and both renal arteries. The patient was a clerk, thirty-two years of age. He denied having had syphilis, but had led a dissipated life. The origin of the disease was referred to a strain. The sac ruptured behind the peritoneum. Death was preceded by convulsions.

AMYLOID DEGENERATION OF KIDNEYS AND SPLEEN ASSOCIATED WITH MITRAL DISEASE.

Dr. PHILIPSON showed specimens. The combined weight of the kidneys was one pound eight ounces and a half. The mitral valve and a large portion of the interior of the left auricle were coated with dense vegetations.

CALCAREOUS DEPOSIT IN MITRAL VALVE.

Dr. PHILIPSON showed a specimen.

ANEURISM OF THORACIC AORTA.

Dr. PHILIPSON showed a specimen. The aneurism was the size of a small melon. It sprang from the ascending portion of the arch. The superior vena cava was adherent to, and compressed by, the outer wall of the sac. During life there was œdema of the face, neck, upper extremities, and upper part of the chest.

MALIGNANT ULCER OF THE HAND.

Dr. BEATSON showed a specimen. The hand had been amputated under antiseptic precautions. The wound healed in ten days, without a drop of pus, and without the slightest constitutional disturbance. The patient was seventy-five years of age.

SCIRRHUS OF THE BREAST.

Dr. MURPHY showed a specimen. The tumour was a very large one. The breast was removed under the antiseptic method. The wound healed without a trace of pus. The operation was not followed by any constitutional disturbance.

DISEASED VERTEBRÆ.

Dr. BYROM BRAMWELL showed a specimen. The disease

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was very extensive. The spinal canal was opened into; the membranes partly destroyed. The spinal cord ran through the middle of a stinking abscess. There was no paralysis.

Tumour of the Heart.

Dr. Byrom Bramwell showed a specimen. The tumour was the size of a hen's egg. It was situated on the exterior of the left heart at the junction of the auricle with the ventricle. On microscopical examination, it was found to consist of small cells, irregular in shape, containing many nuclei and nucleoli. The patient died very suddenly. Death was apparently due to cardiac syncope.

Hydatid Cyst of Liver.

Dr. Byrom Bramwell showed a specimen, also several drawings and a series of beautiful microscopical preparations illustrating its minute structure. In some of the scolices the so-called calcareous particles were deeply stained by Beale's solution of carmine.

"Hydatigenous Mole."

Mr. Gowans showed a specimen. The mass was expelled at the tenth week of utero-gestation. It was noticed that the uterine tumour was larger than normal, extending to a point two inches above the umbilicus.

Progressive Muscular Atrophy.

Dr. Byrom Bramwell showed two cases. The first was a pitman, aged twenty-two. Eighteen months ago he first noticed a weakness in his left hand. A pail of water which he was in the habit of carrying slipped every now and again out of his hand. "Cold made the fingers curl up." The right hand became affected a year ago. The patient's general health was very good. The muscles of the body generally were well developed; the biceps remarkably so. The muscles of the left thumb and hand were completely atrophied. The muscles of the right hand were affected, though to a less degree. The muscles of the left forearm were beginning to be atrophied. The second patient was also a pitman. He was twenty-eight years of age. He was admitted to the Newcastle Infirmary some weeks ago under Dr. Embleton, by whose kind permission Dr. Bramwell was enabled to exhibit the patient. In this case the disease was in a very advanced stage. The man was unable to rise from his seat. He could not raise his hand to his head. The muscles of the arms and thighs were most affected. The disease had commenced only seven months ago in the ball of the left thumb. It had rapidly spread to other muscles. The atrophied muscles still responded to galvanism. This patient stated that when sitting he felt perfectly well. Vision was somewhat dim. On ophthalmoscopic examination, commencing grey atrophy was seen to be present. This fact favoured the nervous origin of the disease.

Empyema treated by a Free Opening and Drainage-Tube under Antiseptic Precautions.

Dr. Byrom Bramwell showed a case of the above. The right chest had been twice tapped, and ninety-eight ounces of pus withdrawn by means of Weiss's aspirator. The cavity having again filled, a free opening was made and a drainage-tube inserted under the spray, etc. The operation was performed by Dr. Mickle, Junior House-Surgeon to the Newcastle-on-Tyne Infirmary, on August 30. The dressing was changed daily. The operation had been followed by marked relief. The pulse and temperature had since been normal. Cough and expectoration had diminished. The patient had gained eight pounds and three-quarters in weight. There was still a daily discharge of about half an ounce. The dressing was removed for the inspection of members.

Staphyloraphy.

Dr. Arnison exhibited a boy on whom he had operated on October 5. The patient was only five years of age. The cleft was not complete, and did not include the alveolar process. The operation was designed to close only the posterior part of the cleft, and had been perfectly successful, union having taken place to the very tip of the uvula. Dr. Arnison stated that he had had better success by this method of procedure than by closing the whole cleft at a single sitting. He attributed the good result to the nervous and vascular supply of the parts being less interfered with.

Strapping the Chest in Abscess after Pleurisy.

Mr. T. F. Hopgood gave the history of a case in which marked benefit from this mode of treatment had resulted.

Treatment of Hydatids of the Liver.

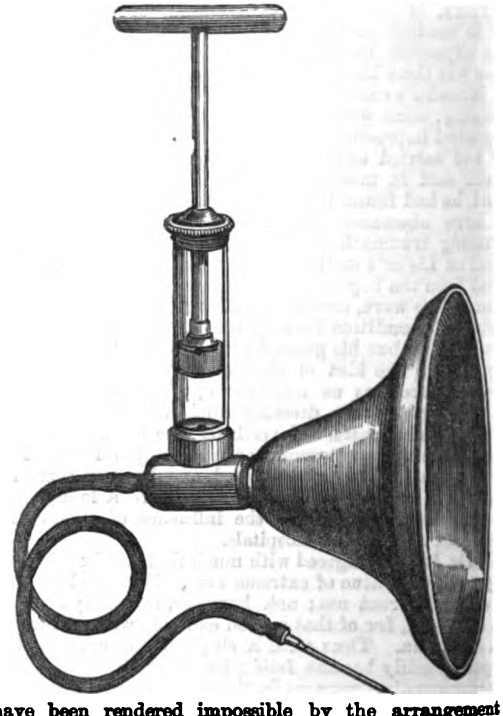
Dr. Byrom Bramwell read a report of a case of hydatids of the liver treated by a free opening under antiseptic precautions. The patient was exhibited, and a large portion of cyst-wall discharged through the drainage-tube was shown.

NEW AND RECENT INTRODUCTIONS AND IMPROVEMENTS.

IMPROVEMENTS IN TRANSFUSION APPARATUS.

The transfusion apparatus of which an engraving is given (manufactured by Messrs. Salt and Son, of Birmingham, anatomical mechanicians to H.R.H. the Prince of Wales) is an improvement upon every other in use, and the readers of the *Medical Times and Gazette* may be interested in the following description translated from a report which appeared recently in the *Gazette des Hôpitaux* (Paris). This transfusion apparatus (Collin's model) was exhibited at the Academy of Medicine by Professor Béhier with the following note, which we extract from the published report:—

"The operation of the transfusion of blood presents two grave dangers which hitherto have impeded the efforts of physicians in this direction—first, the formation and projection of clots; secondly, the introduction of air into the cavity of the veins. The first of these dangers seems



to have been rendered impossible by the arrangement of this transfusor. Experience has shown that the absence of valves and stopcocks renders the operation easy of execution, whilst the danger of introducing air into the circulation was avoidable with sufficient care on the part of the operator. Messrs. Collin have rendered these accidents independent of an imperfect operative procedure, and the instrument which he presents prevents mechanically the introduction of air into the veins. The blood from the healthy subject is received into a chamber or reservoir, of which the contents are incessantly renewed; a float, made of an unalterable material, sinks as soon as the liquid is exhausted. This float, which is lighter than the blood and heavier than the air, remains above the tube of transfusion, and prevents the passage of air, which, under all circumstances, escapes by the upper orifice. The *modus operandi* consists in withdrawing and pushing forward the piston. The glass cylinder contains nearly one-third of an ounce (avoirdupois) of blood.

"The apparatus consists of a basin, a pump, a distribution-chamber, a tube, and a trocar. The capacity of the basin is about ten ounces, made in the form of a bell-mouthed funnel,

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four and one-eighth inches deep, six inches in its largest diameter, and is made of thin metal nickel plated. The left hand of the operator seizes it in such manner as to avoid those oscillations which might cause the coagulation of the blood contained in the vessel. The syringe (which is made of glass) is three and one-third inches long, mounted with metal, which, whilst it increases the strength, is never in contact with the blood. The capacity of the cylinder is four cubic inches. The blood is drawn from the distribution-chamber into the pump, and is forced from the pump into the tube without the intermedium of a valve.

"Experience has demonstrated that any valve, by multiplying the surface and edges presented to the blood, has a tendency to cause coagulation, and the object of the chamber of distribution is to render this cause of coagulation impossible. It is fixed upon a cylindrical space in the continuation of the axis of the basin, and communicates by three orifices of equal size with the basin, the pump, and the transfusion-tube. It contains a smooth spherical ball of hard caoutchouc of a determined density, inferior to the density of the blood (1055); this ball floats upon the blood in the chamber. When the piston is withdrawn, the blood descending into the pump displaces the ball, but it immediately resumes its former position: when the piston is pushed forward, the ball prevents the entrance of the blood into the basin, and forces it to follow the direction of the transfusion-tube. This mechanism, in addition to its simplicity, offers the very important advantage of rendering the propulsion of air into the vein impossible. It is not difficult to understand that as the ball acts as a valve only upon the condition of its floating, as soon as the basin, and consequently the chamber of distribution (which in reality forms the bottom of the basin), is empty, the ball falls of itself into the lower part, and applies itself automatically to the orifice of the transfusion-tube. The pump can suck in the air, but can force it out only by the orifice of the basin, which alone is open. The ball, which, while the apparatus is charged with blood, prevents the reflux of the blood into the basin, as soon as the apparatus is empty, prevents the entrance of air into the veins. This result is obtained by employing a force more constant than a valve—that is, the force of gravity."

OBITUARY.

ROBERT DICKSON, M.D., F.L.S., ETC.

We are exceedingly sorry at having to record the loss of this estimable physician, who died at his residence, Cambridge Lodge, Harmondsworth, near Slough, on October 13, in his seventy-first year. His was one instance amongst many of the increased liability to fatal accidents which besets persons whose life and strength are already yielding to age and infirmity. On the evening of the 9th he was taking a warm bath, when by some incautious movement he turned on the hot-water tap. He was able neither to turn it off again, nor to get out of the bath quickly enough to avoid being severely scalded on the right hand and both legs. Then the usual sequences occurred. He seemed to recover from the immediate effects of the shock and collapse, and the injury, though extensive, seemed to be superficial; but after a day or two of tolerable ease he became unconscious, and quietly expired.

Dr. Dickson was born at Dumfries in the year 1804, and educated first at the High School of Edinburgh, and then at the University. One of his chief instructors was Professor Pillans, whose friendship he retained until the professor's death. He next studied medicine at Edinburgh, became M.D. in 1826 at the age of twenty-one, supplemented his medical acquirements by voluntary study in Germany and at Paris, and finally settled in London. Here we find him becoming a Licentiate of the London Royal College of Physicians in 1831, and lecturing on Botany at the Webb-street School of Medicine in the Borough. In 1834 he married Mary Ann Coope, daughter of a member of the celebrated firm of Ind, Coope, and Co., and lived for a time in Finsbury-square. But soon afterwards he migrated westward, lectured on Botany at St. George's Hospital, and lived in Mayfair till 1868, when he retired from the active practice of his profession, and betook himself to the calm pursuits of horticulture in the bosom of his family, in which he found amusement most congenial to his tastes.

As a practitioner, Dr. Dickson's circle of patients was select and attached, but not numerous. His professional career was grievously blighted about 1845 by the failure of his attempt to be elected Physician to St. George's Hospital. He justly thought that his services as Lecturer on Botany during many years gave him a claim to the support of the medical officers and the governors of the Hospital. But the opposition was far too strong. His antagonist was Dr. Bence Jones, who was not only backed by a large amount of family and aristocratic influence, but who had all the prestige arising from his having been a pupil of Liebig, and being in England at that time a leading representative of the chemical school of pathology and treatment. Dr. Dickson belonged as clearly to the antagonistic sect of what used to be called the Galenists. From the love of botany which he had imbibed at his northern *Alma Mater*, he had a greater knowledge than any physician in London of the vegetable materia medica, and greater faith in it. His familiarity with the use of vegetable remedies was immense, and his habit was to prescribe them most profusely; and there is no doubt that they often did great service in his hands. He was a warm admirer of that peculiarly pure and refined class of vegetable preparations (of which Battley's liquor opii is a specimen) for which the house of Battley was famous. Amongst mineral remedies, he advocated the use of the oxide of zinc in the profuse perspiration of phthisis, and believed, on theoretical grounds, in the efficacy of corrosive sublimate in the early stages of Bright's disease. But, as we have said, it was amongst vegetable remedies that his knowledge was extensive, and furnished him with resources little known to his medical brethren: as an example we may quote the combination of Barbadoes aloes and sulphuric acid, of immense power in obstinate constipation.

Great was his grief at being occasionally supposed, by strangers, to be the notorious Samuel Dickson, author of "Fallacies of the Faculty," who, to Robert Dickson's great annoyance, lived in the next street.

During the early part of his life his pen was always busy. He wrote numberless articles on popular science in the *Church of England Magazine*, and all the articles on materia medica in what was once called the "Penny Cyclopædia," but now the "English Cyclopædia." Amongst these his article on "Wine" well deserves to be distinguished. Long before such knowledge had become popular, Dr. Dickson denounced the practice of adding alcohol to wine, and advocated the pure juice of the grape. He prescribed Manzanilla as the nearest approach to an unbrandied sherry, and claret and hock long before the Gladstonian era enabled us all to put his precepts into practice. His knowledge of wine was extensive and his cellar well stored, and in the days of his prime to be admitted to his table was to get an ineffaceable lesson on Madeira and the finest vintages of France and Germany. His coadjutors in the "Cyclopædia" were men of no mean stamp. Charles Knight, in his "Passages of a Working Life" (vol. ii., p. 230), mentions amongst the contributors Dr. Baly, whose useful life was cut short by a railway accident; Mr. John Simon, who has done so much for sanitary reform; James Paget, the eminent surgeon; and Dr. Southwood Smith; and says of Robert Dickson that "his benevolence is as conspicuous as his knowledge." His knowledge of English literature was unusually deep, and lay amongst authors quite out of the common line of reading. He had an enthusiastic love of the ballad and popular music and poetry of different nations, and was a most warm patron of art. He was one of the earliest founders of the Art Union, and was indefatigable in circulating the useful little almanac published by that body. Amongst the little-known individuals who set going the sanitary, artistic, and benevolent impulses of society, he was altogether one of the earliest and most enthusiastic. When the cholera invaded London in 1831 he offered his house as a cholera hospital, to show his contempt for the fear of contagion. He was one of the original promoters and guarantors of the baths and washhouses in Goulston-street, Whitechapel, and, with his fellow-guarantors, incurred liabilities that were only cleared off a few months ago. He was one of the original committee of the Brompton Hospital for Consumption. His professional appointments (except that he was Physician to the London branch of the Edinburgh Life Office) were all of the sort that brought labour with no pay and little popular applause. He was Physician to the Scottish Hospital, to the London Orphan Asylum, and to the Soldiers' Daughters' Home at Hampstead, which he assisted his friend Colonel Powys Keck to found, and

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where he used to pass long hours in furnishing the garden with the choicest shrubs and flowers, and looking after the comfort of the inmates.

No one was better known at the Friday evening meetings of the Royal Institution, and at the other best-frequented literary and scientific gatherings in London, than Dr. Dickson, with his short, nervous cough, and most unmistakable North British accent. These haunts know him no more; but he survives in the memory of his friends, and in the good institutions which he helped to found and govern. He was an honest, free-speaking man, a hater of cliques and jobs, and a friend to any deserving person.

He was F.R.C.P. in 1855. His wife died three months ago. He leaves six surviving children—Frederick John, in the Ceylon Civil Service; Robert Bruce, in holy orders; Charlotte, wife of C. Major, Esq.; and three daughters not yet married.

GEORGE HARVEY BETTS, M.D., M.R.C.S.

We regret to announce the death of Dr. George Harvey Betts, who passed away at his residence, The Villa, Bonchurch, Isle of Wight. The deceased gentleman some years since resigned a considerable practice in London in consequence of failing health, and going to the Island, took up his residence at Ventnor. After making considerable strides towards renewed health he left for Cheltenham, where he practised a short while, but again broke down—this failure being a good deal accelerated by the grief he suffered through the unlooked for death of his son. Dr. Betts afterwards returned to the Island —this time settling at Shanklin. Here he lost his daughter, and soon after quitted Shanklin for Bonchurch, where he was supposed to be improving very satisfactorily until a few weeks ago, when his old symptoms returned, to which he succumbed as we have stated.

MEDICAL NEWS.

Apothecaries' Hall. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 21:—

Blake, George Farncombe, Old-square, Birmingham.
Parker, Alfred Charles, Worthington, Leicestershire.
Thayer, Linus Orten, 71, Mildmay-park, N.
Tyrrell, Frederick, Harlington, Middlesex.

The following gentlemen also on the same day passed their primary professional examination:—

Bradford, Cordley, Queen's College, Birmingham.
Davis, Arthur Randall, Middlesex Hospital.
Mason, John Wallis Baron, Middlesex Hospital.
Warner, James, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Clayton, Richard, L.R.C.P. Lond., M.R.C.S. Eng.—Medical Officer for the Accrington District of Haslingden Union.

Foster, Balthazar, M.D., F.R.C.P.—Honorary Consulting-Physician to the Birmingham Ear and Throat Infirmary, *vice* Alexander Fleming, M.D., F.R.C.P., deceased.

Fussell, E. F., M.B.—Physician to the Sussex County Hospital, Brighton, *vice* Dr. Henry Moon, resigned.

Hollis, W. A., M.D.—Assistant-Physician to the Sussex County Hospital, Brighton, *vice* E. F. Fussell, M.B., resigned.

Russell, Vernon William, L.K.Q.C.P.I., L.R.C.S.I., L.M.—Surgeon to the Tipperary County Infirmary.

Strugnell, F. W., M.R.C.S. Eng.—House-Surgeon to Queen Charlotte's Lying-in Hospital.

Sykes, William, L.R.C.P. Edin., M.R.C.S. Eng.—House-Surgeon to the Doncaster General Infirmary and Dispensary, *vice* Mr. F. Wallis, resigned.

MILITARY APPOINTMENTS.

War Office—Medical Department.—Deputy Surgeon-General James Macmillan Scott Fogo retires upon temporary half-pay; Surgeon-Major Sydney Alder retires upon half-pay; Surgeon Wilmot Horton Trevor Power resigns his commission.

Brevet.—Surgeon-Major Cosmo Gordon Logie, M.D., to have the honorary rank of Deputy Surgeon-General upon retiring on half-pay. Deputy Surgeon-General Charles Barclay, Madras Army, to have the honorary rank of Surgeon-General upon his retirement.

BIRTHS.

Cribb.—On October 21, at Bishop's Stortford, the wife of Henry Cribb, L.R.C.S. Lond., of a daughter.

Argles.—On October 24, at Hermon Lodge, Wanstead, the wife of F. Argles, M.R.C.P., M.R.C.S. Eng., of a daughter.

Edwards.—On September 17, at Port Elizabeth, Cape of Good Hope, the wife of William Henry Edwards, M.D., of a son.

Hayward.—On October 22, at Hillside, Ealing, Middlesex, the wife of Howard Hayward, M.R.C.S., of a daughter.

Walker.—On October 22, at The Shrubbery, Carisbrooke, Isle of Wight, the wife of George E. Walker, L.R.C.P., of a son.

Walker.—On October 23, at 10, Ovington-gardens, the wife of Arthur de Noé Walker, M.D., of a daughter.

Rickards.—On October 21, at 8, Cavendish-place, the wife of Walter Rickards, M.D., of a son.

MARRIAGES.

Barns—Whitehead.—On October 21, at Holy Trinity Church, Islington, N., Francis George Barns, 31, London-wall, to Elizabeth Ann, second daughter of the late Dr. Whitehead, of Finsbury-park, N.

Denne—May.—On October 19, at St. Mary's, Hanwell, Alfred D. Denne, Royal Navy, eldest son of William Denne, F.R.C.S., of Eastbourne, to Mary, second daughter of the Rev. John May, M.A., of Hanwell.

Hardwicke—Evans.—On October 21, at Christ Church, West Bromwich, Ernest Henry, fourth son of Junius Hardwicke, M.D., of Chilton Lodge, Rotherham, to Elizabeth, youngest daughter of the late Rev. Thomas Evans, rector of Longdon-on-Terne, Salop.

King—Wickham.—On October 19, at St. Mark's Episcopal Church, Portobello, Thomas Radford King, M.D., to Agnes Jane, only daughter of the late Benjamin Wickham, Esq., Royal Navy.

Maddox—Sharp.—On October 25, at the parish church, Arreton, Isle of Wight, Richard L. Maddox, M.D., to Agnes, fourth daughter of George Sharp, Esq., of Blackwater House, near Newport, Isle of Wight.

Morris—Webster.—On October 19, at St. Mary's Hayes, Kent, Huson, eldest son of Thomas Morris, M.D., to Elizabeth (Bessie), third daughter of John Hearne Webster, of Yarra House, Reading, Berks.

Paramore—Hick.—On October 4, at All Saints, Scarborough, Richard Paramore, M.R.C.S., Eng., L.S.A., of Hunter-street, Brunswick-square, London, W.C., to Louisa Elizabeth, third daughter of Wm. Hick, Esq., of Scarborough.

Smythe—Burt.—On October 21, at Holy Trinity, Tunbridge Wells, Algernon S. Smythe, of Maidstone, to Rose A. Burt, only daughter of the late R. Burt, M.R.C.S.

Webb—Bayley.—On October 21, at the parish church, Basingstoke, Hants, Charles Frere Webb, M.R.C.P. Edin., M.R.C.S. Eng., of Basingstoke, to Mary Ellen, fourth daughter of the late Joseph Bayley, Esq., surgeon, of Odiham, Hants.

Webb—Fox.—On October 20, at St. Mark's, South Norwood, G. Parker Webb to Elizabeth, daughter of the late Thomas Fox, M.D., Deputy Inspector-General of Hospitals.

DEATHS.

Badger, Wildsmith, L.S.A., for many years resident in the City of London, at Sydenham, on October 23.

Baxter, W. R., M.D., LL.D., suddenly, at his residence, Emsworth, Hants, on October 16.

Callanan, Sabina, only daughter of the late John Callanan, M.D., Cork, at Newtown, Ballyglunin, co. Galway, on October 16, in her 30th year.

Crisp, Henry, M.B. Lond., M.R.C.S. Eng., Staff Surgeon-Major, of St. Martin's Chambers, Charing-cross, on October 3, in his 51st year.

Cross, William, F.R.C.S. Eng., L.S.A., at his residence, 7, Caledonia-place, Clifton, Bristol, on October 26.

Lush, Ann, wife of William George Vawdrey Lush, M.D., for six years Sister Mary and for twelve Sister Elizabeth of St. Bartholomew's Hospital, at Weymouth, on October 18.

Maclean, Donal Grant, second son of Andrew Maclean, M.D., Deputy Inspector-General, Royal Military College, Sandhurst, at Sandgate, Brisbane, Queensland, on August 1, aged 22.

McNab, Harriet, widow of the late William McNab, surgeon, of Ware, at Glebe House, Amwell, Herts, on October 18.

Miller, Benjamin, M.R.C.S. Eng., L.S.A., at 89, Denmark-hill, on October 19, aged 51.

Smart, Celia Elizabeth, wife of B. C. Smart, M.D., M.R.C.S. Eng., of Manchester, at the residence of her father, D. Gurteen, Esq., of Haverhill, Suffolk.

Wrangham, J. D., M.D., M.R.C.S. Eng., at Wragby, Lincolnshire, on October 21, aged 59.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Addenbrooke's Hospital, Cambridge.—House-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 2.

Christchurch Union.—Medical Officer for the Eastern District. Applications, with testimonials, to the Clerk of the Union, before November 6.

Colchester Union.—District Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Guardians, on or before November 1.

Coventry and Warwickshire Hospital, Coventry.—House-Surgeon. Candidates must be fully qualified. Applications, with testimonials, to the Secretary, on or before November 1.

Huddersfield Infirmary.—Physician.

Liverpool Infirmary for Children.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Hon. Sec., Mr. J. Calder, Liver Chambers, Tithebarn-street, Liverpool.

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METROPOLITAN FREE HOSPITAL, DEVONSHIRE-SQUARE, CITY, E.—Honorary Assistant-Physician. Candidates must be M.R.C.P. Lond., or pledge to become so within twelve months. Applications, with testimonials, to the Committee, on or before November 6.

MIDDLESEX HOSPITAL.—TWO Resident Physicians' Assistants, and a Resident Obstetric Assistant. Candidates must be legally qualified. Applications, with testimonials, to the Secretary, before October 30.

NORTH SHIELDS AND TYNEMOUTH DISPENSARY.—House-Surgeon and Dispenser. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretaries, Dispensary House, North Shields, on or before November 1.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-ON-TRENT. — House-Physician. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before Nov. 16.

NORTH WALES COUNTIES LUNATIC ASYLUM.—Assistant Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Mr. J. Robinson, Clerk to the Visitors, on or before November 3.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

ROCHDALE INFIRMARY.—House-Surgeon. Candidates must possess both medical and surgical qualifications, and be registered. Applications, with testimonials, to Mr. E. M. Royds, Leehurst, Rochdale, before November 6.

WEST RIDING PRISON, WAKEFIELD.—Resident Surgeon. Candidates must be duly qualified, and registered. Applications, with testimonials, to J. Hamerton, Esq., Clerk of the Peace, Wakefield, on or before November 15.

ST. GEORGE'S (HANOVER-SQUARE) PROVIDENT DISPENSARY, 59, MOUNT-STREET, GROSVENOR-SQUARE, W.—Physician-Accoucheur. Candidates must be duly qualified. Applications, with testimonials, to the Honorary Secretary, at the Dispensary, on or before November 3.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bury Union.—Mr. Wm. Sellers has resigned the Radcliffe District; area 7682; population 26,598; salary £60 per annum.

Crickhowell Union.—Mr. Parry has resigned the Crickhowell District; area 33,798; population 5049; salary £35 per annum.

Gloucester Union.—Mr. A. D. Cookson has resigned the Workhouse; salary £65 per annum.

Hastings Union.—Mr. F. Cumming has resigned the Third District; area 10,293; population 4281; salary £90.

Wirral Union.—Dr. Way has resigned the Upton District; area 12,310; population 4731; salary £30 per annum.

APPOINTMENTS.

Gateshead Union.—Philip Brown, M.D. Aber., L.S.A., to the Winlaton District.

Guiltcross Union.—George E. Archer, M.R.C.S. Eng., L.S.A., to the Fifth District.

South Shields Union.—Mr. John Pattinson as Analyst.

Tiverton Union.—Thos. F. Clarke, M.D. St. And., M.R.C.S. Eng., L.S.A., to the Bradwinch District.

THE MORTUARY QUESTION.—At last week's meeting of the Metropolitan Board of Works, it was decided that it is not expedient to comply with the prayer of the memorial of the Strand District Board, praying the Board to seek Parliamentary authority to construct mortuary buildings in the metropolis, on sites acquired, if necessary, by means of compulsory powers.

THE Visiting Justices of the West Riding of Yorkshire Prison at Wakefield have recommended the grant of a superannuation allowance of £200 a year to Dr. William Wood on his resignation of the office of Surgeon, in consequence of injury received in the performance of his duty; and that a grant of £100 be made to Mr. William Dyson Wood, the Assistant-Surgeon, in respect of his services during the late epidemic of typhoid fever in the prison.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Hy. Baynes.—Mackey's, Bouverie-street, Fleet-street.

Seeking for Sympathy.—In fifty replies, received to the 20th inst., to the anti-vaccination memorial which had been sent by the Keighley Board of Guardians to all the Boards of Guardians in the United Kingdom, not one adopted the opinion contained in the memorial.

Ambrose C.—The *London Medical Gazette* (vol. vii., p. 602) contains some remarks by Sir H. Halford, on the duty of the physician in withholding from or communicating to a patient the probable result of a disease exhibiting fatal symptoms.

W. W.—Dr. Ferguson, the celebrated lecturer on natural philosophy, died in 1775. He bequeathed the whole of his valuable apparatus to Dr. William Buchan, then practising at Edinburgh, who, on his removing to London, disposed of this apparatus to Dr. Lettsom.

Metropolitan Pumps.—According to a Parliamentary return, made in 1872, of all the public wells within the metropolis, the water, with only two exceptions—the pump near the south-east entrance to Kensington-gardens, and one at Maritime Almshouses, Mile-end—was largely contaminated with soakage from sewage and cesspools.

Alexis.—The medical officers' efforts have at length succeeded. The Lords of the Admiralty have now sent orders to Chatham, that under no circumstances are boys and lads to be employed between the outer and inner skins of armour-clad and other iron vessels of war, building or repairing.

Vigilant.—"Biography may be said to approach and even to touch, follow, observe, and see the individuals in all places and in every instant of their lives, offering examples profitable to all men and in all conditions, and furnishing to the moralist matter for profound meditation."—*Bacon.*

Victoria.—According to the advices to July 31, the mortality amongst children in the colony of Victoria appears to be excessive, whole families being swept away by one disease or another. The Geelong papers mention that a little girl named Giles died in that town a few days since (July 26), making the sixth death that had occurred in the same family during the short space of eleven months. A Ballarat paper states that a sad event took place at the Smythesdale General Cemetery on July 24, where were buried the remains of a fine girl, the last of a family of thirteen born to a miner residing at Browns.

G. W. A.—"The term 'tonic,'" says Dr. Billing, "is applicable to all those medicines which cure chronic inflammation without being either stimulant or directly sedative or depletory."

Scotus.—Sir William Blizard was Professor of Anatomy to the old Corporation of Surgeons, an office that he also held in the present Royal College, of which he was twice President. He presented the Museum in Lincoln's-inn-fields with about 900 anatomical preparations.

Dr. Campbell.—The first Master of the Corporation of Surgeons was Mr. Charles Hawkins, who served the office in 1800; the last was Mr. Thompson Forster in 1820. The following year the title was changed to that of President, and conferred on Sir Everard Home, Bart.

J. P., F.R.C.S.—Your subscription to the Hewett testimonial may be sent to Mr. Charles Hawkins, 27, Savile-row, or to Mr. James Rouse, 2, Wilton-street.

Cuvier.—Yes, Professor Owen is a "C.B."; he was admitted a Member of the Royal College of Surgeons more than half a century ago. He received his professional education at St. Bartholomew's Hospital, and served a short time as a midshipman in the Royal Navy.

Tribute to Dr. Richard King.—"M." writes thus:—"Whilst all society is discussing the merits and hopes of the gallant band of explorers who have lately started for the North, it is but justice to recall the merits of older travellers, especially belonging to the brotherhood of physic. Amongst these is Dr. Richard King, of whom Sir Roderick Murchison thus spoke, in the preface which he contributed to Capt. Sir Leopold M'Clintock's 'Narrative of the Voyage of the *Fox*,' 3rd ed., Lond., 1869, p. xi.:—'It is but rendering justice to Dr. King, the former companion of Sir George Bach, to state that he suggested and always maintained the necessity of a search for the missing navigators at or near the mouth of the Back River,' where, in fact, the relics of the lost expedition were found."

Zoe.—The public exhibition of patients at Old Bethlem Asylum, Moorfields, London, was prohibited in 1771. Provisions for the erection of county lunatic asylums were made by 48 George III., c. 96, June 23, 1808.

O. O.—The College of Surgeons received a new charter in 1800, constituting it a "Royal" College, and giving it increased powers.

B. H. W.—On Michaelmas Day, 1613, the New River waters first entered the metropolis. The event was celebrated by a public pageant.

B. P.—"Natural Philosophy for General Readers and Young Persons," translated and edited from Ganot's "Cours Élémentaire de Physique," by E. Atkinson, Ph.D., F.C.S., Professor of Experimental Science in the Staff College (second edition; London, Longmans, 1875). It is a handbook for either the medical student or for the candidate for matriculation at the London University.

UNQUALIFIED PRACTITIONERS AND THE GENERAL MEDICAL COUNCIL.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—It is at all times pleasing to hear that attempts are being made to stop unqualified practitioners, and the letter of "The British Medical Defence Association" again calls attention to this subject in your paper of this week; but before the writer went so far as to state that "past experience teaches that the profession and the public have little to expect in the way of help in this matter from the General Medical Council, or the various corporations and licensing bodies, with perhaps one or two exceptions," it might have been better to bring a little "*past experience*" forward. The fact is, the Council have done a deal in this matter; but when her Majesty's judges of the Court of Exchequer decided that anyone holding a foreign degree could use his titles and practise, but could not recover, it became of little use to prosecute quacks, most of them having armed themselves with a purchased diploma. The law is not now *how* he got it; and in cases where the prosecutions have been successful, it has been owing to the defendants' ignorance of the rulings on the subject. Only a few weeks ago, a man in Scotland, named De Bansie, was convicted under the Medical Act, and fined the full penalty. He paid the fine and costs appealed to a higher court, and got the lot back. I am, &c., MEDICUS.

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COMMUNICATIONS have been received from—
Major Bagnell, Camden Fort; Dr. H. Hardwicke, Sheffield; Dr. J. E. Currey, Lismore, Ireland; Mr. B. S. Booth, Newry; Dr. Sparks Crewkerne; The Registrar of Apothecaries' Hall, London; Messrs. A. and C. Harston, London; Mr. T. Cooke, London; Dr. R. Farquharson, London; Dr. B. Foster, Birmingham; The Secretary of the Royal Institution, London; Dr. Arnison, Newcastle-on-Tyne; Dr. W. Sykes, Sheffield; Mr. F. W. Strugnell, London; Dr. C. Handfield Jones, London; Our Liverpool Correspondent; Mr. W. E. Poole, London; Mr. Jonathan Hutchinson, London; Dr. Eustace Smith, London; Mr. Henry Morris, London; Dr. Bruce, London; Dr. Byrom Bramwell, Newcastle-on-Tyne; Mr. Charles J. Cullingworth, Manchester; Mr. George Brown, London; Mr. J. Chatto, London; Mr. A. Roper, Croydon; Rev. Dr. Ridding, Winchester; Mr. T. Cooke, London; Rev. E. Thring, Uppingham; Dr. Gavin Milroy, Richmond; Dr. J. W. Moore, Dublin.

BOOKS AND PAMPHLETS RECEIVED—
Transactions of the Medical Society of State of New York for 1875—Annual Report of the Sanitary Commissioner of the Central Provinces of India for the year 1874—Annual Report of the County and City of Worcester Pauper Lunatic Asylum—Tenth Report of the Quekett Microscopical Club—Weekly Return of Births and Deaths registered in the Punjaub during the Week ending August 28—Milton on Syphilis—Milne's Materia Medica, third edition, edited by Craig—Cassell's Dictionary of Cookery, Part I.

PERIODICALS AND NEWSPAPERS RECEIVED—
Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—The Royal Leamington Spa Courier—Students' Journal and Hospital Gazette—Paris Medical—American Journal of the Medical Sciences—Revue des Sciences—Canada Lancet—Richmond and Louisville Medical Journal—The American Medical Weekly—Dublin Medical Journal.

APPOINTMENTS FOR THE WEEK.

October 30. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

November 1. ***Monday.***

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8 p.m. General Meeting for Revision of Laws. Mr. Jabez Hogg, "On Concussion of Spine, followed by Impairment or Loss of Vision." Mr. Adams, "A Patient operated on for Obliteration of Depressed Cicatrices."

Royal Institution, 2 p.m. General Monthly Meeting.

2. ***Tuesday.***

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Mr. Heath—1. Calculi of Cystic Oxide; 2. Epithelioma of Tongue and Jaw; 3. Cancer of Rectum, Colotomy. Dr. Hilton Fagge—1. Carcinoma Lipomatosum; 2. Distended Diverticula of Intestine; 3. Pulmonary Embolism. Dr. Barlow—Tubercle of Pancreas. Mr. Marsh—Tumour in Upper Jaw. Mr. Wagstaffe—Double Cancer of Male Breast. Mr. Fairlie Clarke—Tubercular Lupus of Tongue and Palate. Mr. Maunder—Fatty Tumour in Male Breast. Dr. Goodhart—Abscess in the Heart. Mr. Pearce Gould—Syphilitic Heart. Dr. Greenfield—Syphilitic Pneumonia. Mr. Clement Lucas—Parts after Tracheotomy. Dr. Ralfe—Aneurism of Aorta. Dr. Dowse—Elio-Sarcoma of Brain. Mr. Lennox Browne—Syphilitic Disease of Pharynx and Larynx.

3. ***Wednesday.***

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Dr. George Roper, "On Prolapse of the Funis during Labour." Dr. Swayne (Clifton), "On a new form of Blunt Hook and Sling for assisting Delivery in Breech Presentations." Mr. Lawson Tait, "Case of General Dropsy in a Fœtus;" and "Note on a Diseased Placenta." Dr. Heywood Smith, "Notes of a Case of Ruptured Vagina during Labour, with Recovery." Dr. Wiltshire, "Spontaneous Rupture of the Vagina, with Recovery." And other Communications.

Royal Microscopical Society, 8 p.m. Mr. H. C. Sorby, "On a New Method of Measuring the Position of Bands in Spectra."

4. ***Thursday.***

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society (Meeting of Council, 7½ p.m.), 8 p.m. Dr. Alfred Meadows, "On the Diagnosis and Treatment of the Curable Forms of Fibroid Tumours of the Uterus."

5. ***Friday.***

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 23.

BIRTHS.

Births of Boys, 1132; Girls, 1090; Total, 2222.
Average of 10 corresponding years 1865-74, 2168·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	804	759	1563
Average of the ten years 1865-74	703·3	646·9	1350·2
Average corrected to increased population ...	...	...	1445
Deaths of people aged 80 and upwards ...	...	...	80

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	6	26	...	7	...	4	1	6
North	751729	...	7	30	6	15	...	7	2	10
Central ...	334369	...	1	11	1	5	1	1	...	1
East	639111	...	12	18	1	5	2	2	1	7
South	967692	...	8	42	3	15	...	5	...	17
Total	3254260	...	34	127	11	47	3	19	4	41

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·442 in.
Mean temperature	49·7°
Highest point of thermometer	62·2°
Lowest point of thermometer	33·5°
Mean dew-point temperature	46·6°
General direction of wind	S.E., E., & E.N.E.
Whole amount of rain in the week	2·16 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 23, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Oct. 23.	Deaths Registered during the week ending Oct. 23.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2222	1563	62·2	33·5	49·7	9·83	2·16	5·49
Portsmouth ...	122632	27·3	67	41	...	...	...	...	...	...
Norwich	82842	11·1	57	39	60·0	37·0	49·0	9·44	0·92	2·34
Bristol	196186	44·1	142	105	57·7	40·2	49·1	9·50	2·62	6·65
Wolverhampton ...	71718	21·1	44	27	58·0	37·1	48·2	9·00	3·69	9·37
Birmingham ...	356325	43·6	248	175	59·1	33·0	49·0	9·44	4·20	10·67
Leicester	109230	34·3	86	52	...	...	...	...	...	...
Nottingham ...	92251	46·2	62	54	59·6	31·7	47·5	8·61	2·54	6·45
Liverpool	516063	99·1	357	265	57·1	44·2	48·0	8·89	2·23	5·66
Manchester ...	356626	83·1	230	190	61·0	33·0	48·4	9·11	2·25	5·72
Salford	135720	26·3	111	80	60·2	35·9	47·9	8·83	2·76	7·01
Oldham	87437	18·7	69	44	...	...	...	...	...	...
Bradford	168305	23·3	116	102	55·8	40·2	47·0	8·33	3·06	7·77
Leeds	285118	13·2	208	169	57·0	38·0	48·2	9·00	2·98	7·57
Sheffield	267881	13·6	193	120	55·0	41·0	46·7	8·17	4·56	11·58
Hull	133932	36·8	111	78	57·0	39·0	48·4	9·11	2·47	6·27
Sunderland ...	106342	32·2	63	39	59·0	42·0	49·9	9·94	1·71	4·34
Newcastle-on-Tyne	137665	25·6	101	62	53·0	39·0	45·3	7·39	2·76	7·01
Edinburgh	211626	50·5	120	89	...	...	...	...	...	...
Glasgow	534564	88·6	390	213	52·7	42·6	47·5	8·61	2·40	6·10
Dublin	314666	31·3	156	129	62·4	35·4	50·9	10·50	1·69	4·29
Total of 21 Towns in United Kingdm	7742889	37·0	5153	3636	62·4	31·7	49·3	9·08	2·65	6·73

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·44 in. The highest was 29·68 in. on Sunday evening the 17th inst., and the lowest 29·20 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CAN ARSENIC CURE PEMPHIGUS?

A CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL

By JONATHAN HUTCHINSON, F.R.C.S.,

Senior Surgeon to the Hospital, and to the Blackfriars Hospital for Skin Diseases; Surgeon to the Royal London Ophthalmic Hospital.

(*Continued from page 463.*)

20. In a case which was under my care in December, 1873, at the London Hospital, a man, aged forty-four (George W.), had a severe eruption of pemphigus, which first came out some weeks after the occurrence of numerous epileptic fits. He had not previously had either fits or skin disease, but had for years been ailing with various slight complaints, and had once had "asthma." In childhood he had had rheumatic fever.

The eruption in this case was of unusual interest, because combining some of the features of herpes and of erythema multiforme with those of pemphigus. From the man's account it would seem at first to have resembled urticaria. On admission, he had what looked like herpes on the lips and eyelids, and afterwards many similar patches and areas of herpetic vesications arose after having been preceded for a day or two by erythema. About ten days after the commencement of the herpetic patches, however, blebs exactly resembling those of pemphigus also appeared on various parts; some of them were very large. Later on some ringed patches of vesicles on a base of erythema appeared, somewhat like some forms of vesicating erythema or hydroa. At this stage all three types—the pemphigus, the herpes, and the vesicating erythematous rings—were present at the same time. The eruption continued to spread, fresh blebs and vesicles coming out as old ones dried up, and when he had been in the Hospital rather more than three weeks he was almost covered with sores, and in a state of the most extreme debility and emaciation. He had hitherto taken only quinine and iron; for I had doubted as to the diagnosis of pemphigus. Once, however, when he was nearly well, the arsenic was accidentally omitted for three days, and a few fresh patches came out on the face. Finding that the disease still progressed, I determined now to try arsenic. He was so ill that I doubted much whether he would survive another week. The effect of Fowler's solution in four-minim doses was almost magical. From the day of its commencement no fresh blebs appeared, and those present began to dry up and to heal. He rapidly improved in general health also, and in a few weeks was able to leave his bed. He rapidly gained flesh, and when he left the Hospital, three months after admission, there was no mark of the eruption excepting the dried remains of a recent bleb on one finger. He remained well from this time (March, 1874) to the end of June of the same year, when, after "catching cold," some blebs again appeared around the ankles, and from that date fresh bullæ continued to form for many months. During this period he was not under my care, and was not taking arsenic. I heard of him again in January, 1875, and he then had numerous blebs on the face, upper and lower extremities, and hands and feet. The disease had, however, since his arsenical cure given him but little trouble, and he had been under care at a distance from the Hospital, taking steel, and not arsenic.

21. Thos. M., six years old, was under care in the London Hospital in 1871 for rather severe pemphigus of six weeks' duration; the blebs were large, and some of them contained bloody fluid. The eruption began about a fortnight after an illness, which from description appeared to have been scarlet fever; this was confirmed by our finding on first admission that his urine was albuminous and contained blood-casts. He was admitted on October 3. Mr. Nettleship saw him on the 8th, and ordered two-minim doses of Fowler's solution. On the 13th he was much better, and no fresh blebs had appeared. There are no later notes excepting to the effect that the eruption had already begun to improve somewhat before the arsenic was ordered.

22. (L. H., E. 184.) G. F., aged four, began to suffer from pemphigus a month after an attack of scarlet fever at the age of about two years and a half. After the eruption had been out for fifteen months he came under my care at the London Hospital. He had had much treatment. The eruption affected the extremities chiefly, but a few spots were on the face. It was worst on the feet. There were a few blebs on the backs of the elbows. Fowler's solution in one-minim doses was ordered three times a day on August 17, 1871. On the 21st it is noted that most of the blebs had dried up, no characteristic ones remaining. A few days later, however, some more appeared, and a later note states that successive crops came out for a time. He then got nearly well, till two or three months later (November), when another crop occurred, although he was still taking the arsenic, and had been doing so ever since first admission. No notes of treatment during this relapse—it was well towards the end of January, 1872; but he had a third attack in March of the same year, *i.e.*, after having been well for about two months. At the end of May he was again under care for a fourth attack. The bullæ were on the penis.

23. (L. H., H. 73.) Mrs. D., a remarkably healthy old woman of seventy-one, with scarcely a grey hair, began to suffer from pemphigus for the first time at the beginning of December, 1872. She was sent up from the London Hospital out-patients by Mr. Tay on December 27, after the rash had been out for three weeks. It was tolerably copious, but none of the blebs were extremely large. It occurred on the chest, neck, arms and forearms, buttocks and thighs. There were a few on the hands, but none below the knees. For the first three weeks after her admission she was simply kept in the ward under expectant treatment. January 16, 1873: "The eruption has got nearly well spontaneously, but a few blebs still continue to come out. There are now only two recent blebs, one on each forearm." To-day three-minim doses of liquor arsenicalis ordered. January 31: "No fresh bulla has appeared since she began the arsenic, and all the old ones have dried off completely." The only probable cause of the pemphigus here was that the patient had been somewhat worried, for several months before its appearance, by business matters.

24. James McM., aged six, admitted at the Skin Hospital on March 5, 1872, with pemphigus around the mouth and on the genitals. It had begun two years before, and he had never since been free for long; in the previous year he had been for five months under the care of a colleague, and had relapsed in three months after ceasing to attend. In the present attack various local remedies only were used for the first nine weeks of his attendance. He was then no better, and Fowler's solution was ordered in one-minim doses three times a day; this was on May 14. On June 4 it is noted that he was "nearly well." A month later he ceased attendance.

25. Edward B., aged thirty-eight, a policeman, was admitted at the Skin Hospital on August 23, 1870, with a bullous eruption on the forearms, thighs, and legs, and to a less extent on the back and around the navel. The bullæ were now about as large as peas, but were described as having been much larger; their contents were amber-coloured. He had never had it before, and said that it had come out after bathing in the sea. It had, on admission, been out about a month. He had had treatment, but although many of the blebs died away, others came out, and his general condition had not improved. Fifteen years previously he had had syphilis with rash. August 23: Ordered him three minims of Fowler's solution three times a day, and zinc ointment. October 4: Has continued the medicine regularly. "The eruption is now nearly well. The arsenic began to influence it at once. Throughout the eruption he has not considered himself in bad health." Continue treatment. 25th: "Remains well." January 27, 1871: He came again with a severe relapse on backs and fronts of forearms, lower part of abdomen, and inner sides of thighs, with a few on forehead, scalp, and upper part of trunk. The eruption in many parts occurred in rings of vesications surrounding a depressed and scabbed centre, the seat apparently of the first bulla. This relapse occurred when he was feeling perfectly well and on ordinary police duty.

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Ordered six minims of Fowler's solution three times a day, and no local treatment. He continued the medicine, with several gaps of a week or two, till January 31, 1873. On December 15, 1871, it is noted that there were "no bullæ now, or any eruption of any sort." May 7, 1872: "A few blebs come out occasionally." After January 31, 1873, he did not come until March 7 (interval of five weeks). It is then noted that "he says an occasional small blister forms. There is nothing to be seen now. He says one came last week on the penis." He attended regularly, again taking the same doses, till November 21, when "no spots" are noted. Since then we have not seen him.

26. A married woman, aged about forty-five, residing at Beckley, in Kent, was brought to me by Mr. Edwards, of Keston. She was the subject of severe pemphigus, and had suffered for some months. The bullæ were numerous and very large. Arsenic was prescribed, and with the immediate result that most of the bullæ disappeared. The disease was changed from a severe to a very mild form, but at this position the case remained for some time. The fresh bullæ which formed were very few in number, and always seemed to be produced chiefly by local irritation; thus, the pressure of her dress around the waist, or on one occasion that of her husband's hand on her arm in helping her from a carriage, brought them out. She was in good health, and able to go about as usual. We continued the arsenic and increased the dose, and finally, after, I think, about six months' treatment, had the satisfaction of seeing her quite free from the eruption.

All the above cases are from my own notes, and were more or less under my observation, some of them having been under the treatment of my colleagues, and others under my own. I must now, in order to complete my statement of evidence, bring before you very briefly such statements as I find recorded by those who have recently published papers on the subject. I have already cited opinions, and shall now confine myself almost exclusively to cases. You will find, I think, that some of the following are extremely clear and definite in their testimony to the efficacy of the remedy in question:—

Von Veiel (Report of Skin Diseases observed at Canstatt, 1855-1861, *Schmidt's Jahrb.*, vol. cxvii., p. 296) found that chronic pemphigus "was best treated by a prolonged arsenical course, in the form of the Asiatic pills." (Quoted from *N. S. Society's Year-book*, 1863, p. 176g).

Dr. Habershon narrates a case of pemphigus in a man aged fifty-four. It was confined to the legs, and the bullæ were large. He was a gouty man; the fluid in the bullæ was, however, alkaline. Treatment was begun when the eruption had been out three months. Liquor arsenicalis in three-minim doses caused vomiting, and could not be continued; "other remedies were tried with partial benefit; the arseniate of iron was then given in the form of a pill, with excellent effect, and he left the hospital well." (*Guy's Hosp. Rep.*, 1865, p. 232, series 3, vol. xi.)

Dr. Dyce Duckworth supplies us with the following:—T. L., aged forty-nine, a gardener, admitted in February, 1873. His pemphigus had lasted for two years, and had never during that time been quite well. The bullæ appear to have been for the most part small. In May there was no marked improvement, and arsenic was given thrice daily during this month. In June it was thought not to be doing any good, and was therefore combined with iron, the arsenic being now reduced to five-minim doses twice daily, instead of three times. He improved considerably, and in August it was noted that he was "decidedly better and feels much stronger." (*St. Bartholomew's Hosp. Rep.*, ix., 109, 1873.)

Dr. Hillier gives the two following cases ("Handbook of Skin Diseases," p. 149, 1865):—

E. W., a girl of five, came under care in May, 1863, for pemphigus. It had begun five months before, and successive crops had come out. No arsenic was given for the first two months of her attendance (*i.e.*, till July). On July 8, the eruption still continuing to come out, four-minim doses of Fowler's solution were ordered three times a day. "In the course of a fortnight," Dr. Hillier writes, "she was much better. The medicine was stopped, and the rash soon returned. It was again repeated, and with a speedily favourable result." During the next year she continued the arsenic, with occasional intermissions of a week or two, during which the rash usually returned. At the last note she had been well for six months.

A boy, aged seven years, was admitted at the end of November, 1863, for pemphigus mixed with patches of erythema circinatum. The pemphigus was quite characteristic, and some of the blebs ware gigantic. The rash had begun two months before, with blebs. Ten days after admission (December 3) arsenic was begun in the form of Fowler's solution (three minims) with steel wine (two drachms) three times a day). Nearly three weeks later (December 21), "not much better." 28th: More bullæ; to take Fowler's solution in four-minim doses alone. On January 4 the Fowler's solution substituted by liq. arsen. chloridi in six-minim doses.(a) January 13: Improving. February 11: Much better; no fresh blebs lately. Dose has been increased to eight minims of the chloride. No fresh blebs came out till the middle of March, after the arsenic had been left off for a fortnight. Fowler's solution again given in four-minim doses, and three weeks later he was discharged cured.

Dr. Gee relates a case of severe acute pemphigus in a little girl, aged four, who had previously been in good health. The eruption was very copious; it began as separate papules, which vesicated, and at one stage resembled herpes patches; they then coalesced, and became large bullæ. There was considerable elevation of temperature. On the thirteenth day of the eruption, liquor arsenicalis was ordered in three-minim doses every six hours. On the seventeenth day, although she did not appear better, it was noted that very few fresh blebs had come out, and that many threatening spots had receded without becoming bullous. On twentieth day, diarrhœa; arsenic stopped. No new blebs. Arsenic resumed on twenty-first day. Twenty-sixth day: "Very much better; no fresh bullæ." Twenty-eighth day: "No new blebs since twenty-third day." Forty-fifth day: Arsenic stopped, no new blebs having appeared for nearly a fortnight. She was discharged, well, on fiftieth day (seven weeks). (*St. Bartholomew's Hosp. Rep.*, v. 119, 1869).

Dr. Hilton Fagge gives detailed notes of a case, under Dr. Wilks, of pemphigus, in which the bullæ were irregular in shape, formed by the coalescence of smaller ones, and situated near the edges of irregular patches of red skin. He considers it a case of Hebra's pemphigus serpiginosus. The patient was a boy, F. S., aged thirteen, pale and thin. He had been liable to the disease for four years, chiefly on the legs, but also on the mouth, and had previously been under Mr. Cooper Forster's care for "ordinary pemphigus." He was admitted on October 16, 1867, and until November 21 local remedies of various kinds were carefully tried, without any internal treatment; they failed entirely, and fresh vesicles continued to be developed. On November 21, liquor arsenicalis ordered in three-minim doses, and all local treatment discontinued. On 26th there was great improvement, and no fresh vesicles had appeared. "The change effected by the arsenic within five days was extraordinary." The improvement continued. On December 12 there were symptoms of arsenical disagreement—headache, sickness, pain at epigastrium,—and the medicine was discontinued. 20th: Some fresh spots came out, and these increased on successive days to a considerable extent; indeed, on the 27th a model of the case was made by Mr. Towne. January 4, 1868: Arsenic resumed in same doses. "It appeared to have an immediate effect; the vesicles rapidly scabbed and dried up," and he remained well with one or two slight exceptions till the end of March, when the arsenic, although continued throughout, having been reduced in quantity, he had a definite relapse, especially on the genitals. Cessation of arsenic on April 14 was followed by another relapse, and he was well again on May 26. During these relapses he took only two-minim doses. A third relapse occurred in June, a fourth in July (quickly cured by arsenic), a fifth in October, which was quickly cured by three-minim doses. Dr. Fagge considers that this case deviated markedly in appearance from ordinary pemphigus, although agreeing with it in general character. (*Guy's Hosp. Rep.*, vol. xv.)

In the same paper is recorded the case of an old woman aged sixty-nine, admitted under Dr. Wilks's care, July 8, 1868, for pemphigus of about three weeks' duration, and tolerably copious. Liquor arsenicalis, in five-minim doses, thrice daily, was given. July 13th: Scarcely any fresh bullæ had appeared, and the old ones had dried. "Under the arsenical treatment she quickly recovered." (*Guy's Hosp. Rep.*, series 3, vol. xv., p. 336, etc., 1870.)

(To be concluded.)

(a) According to the British Pharmacopœia, the old liq. arsen. chloridi had only about one-third the strength of Fowler's solution. The above change of treatment would therefore be equivalent, so far as the quantity of arsenic prescribed was concerned, to reducing his former dose by one-half.

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COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond., F.R.C.P.,

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Physician to the East London Children's Hospital,
Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest.

LECTURE X.—CHRONIC CATARRHAL PNEUMONIA AND UNABSORBED PNEUMONIC DEPOSITS—PNEUMONIC PHTHISIS.

(*Continued from page 493.*)

A CASEOUS deposit may remain a long time unabsorbed, and yet may finally disappear; indeed, in children it is difficult to fix a limit beyond which its removal by natural processes can no longer be looked for. In the adult a deposit rarely becomes absorbed after the expiration of three months, but in young subjects this term must be greatly extended, and, provided the deposit remain completely inactive, a much longer time must elapse before absorption can be pronounced to be impossible. The occurrence of pleurisy with effusion on the diseased side appears to favour a healthy removal of caseous consolidations; and a case has already been related in a previous paper where the physical signs of consolidation of some standing completely disappeared on the absorption of the effused fluid (see *Medical Times and Gazette*, July 19, 1873—case of Emma W.). This, however, is only true of cases where the deposit is perfectly inert, without any active change taking place in it. If the mass excite irritation in the tissue around, or if softening have begun to invade the deposit, the occurrence of pleurisy appears to exercise a very injurious influence upon the disease.

The presence of caseous masses in the lung often leads to the formation of the true grey granulation in the body, and cases frequently terminate in an outbreak of acute general tuberculosis.

Edwin S., aged two years, was admitted into the East London Children's Hospital on March 8. He had been ill for eight weeks. The illness began with an eruption like urticaria, and he was feverish at night. The next day he began to cough and the bowels were relaxed. He was seen by a doctor, who said he had inflammation of the lung. Since then he has been poorly, very restless, and has slept badly at night. Breathing sometimes laboured; not much cough. Motions have sometimes contained thread-worms.

State on Admission.—A small child, pale and thin; features large and coarse; complexion thick; eyelashes long; eyebrows well marked; a little eczema of nostrils; no enlarged cervical glands; and no appearance of hair on shoulders or along spine. Hands rather cold, and nails livid. Finger-ends slightly clubbed. Lips a little dry. A little dulness at right supra-spinous fossa; respiration there bronchial, with a little crepitating rhonchus heard during inspiration. Bowels slightly relaxed, and motions offensive. Temperature at night 101·4°.

The dulness at the right apex gradually increased after the child's admission; the respiration became loud and blowing, and the physical signs were noticed in the front as well as at the back. On March 19 some clicking sounds were heard at the end of inspiration, from the clavicle as far down as the nipple, and also in the axilla. By the 23rd the percussion-note had become high-pitched over all this area. During the next few days the resonance still further diminished, and on March 30 the percussion-note was completely dull from apex to base at the right front, and the respiration was cavernous, without rhonchus. Over the rest of the right side the natural resonance was impaired; the breath-sound was loud and cavernous in the axilla, and bronchial behind. At the posterior base an occasional click was caught at the end of inspiration. The pulse-respiration ratio was little altered at this time. On March 18, pulse 130, respirations 30; on March 23, pulse 104, respirations 32; on March 29, pulse 120, respirations 32; and on April 1, pulse 128, respirations 36. The child could not be persuaded to speak, and therefore the state of vocal resonance and the presence or absence of vibration of the chest-wall could not be ascertained. Heart's apex was immediately below and to the left of the left nipple. On the left side the physical signs seemed everywhere perfectly natural.

The child was evidently getting weaker and thinner. On March 15 he weighed seventeen pounds, and on March 30 sixteen pounds one ounce. His face was colourless, with an expression of distress. The bowels were occasionally relaxed, and his appetite was poor. The temperature was rarely under 100°, and in the evening usually rose to 101° or higher.

On March 29, temperature at 8 a.m. 100·2°, 7 p.m. 101·8°; pulse 120; respirations 32.

After this report the physical signs continued much the same. The dulness remained limited to the front of the chest on the right side, and the resonance laterally and at the back was little diminished. Posteriorly, the only marked dulness was at the supra-spinous fossa. Everywhere over the upper half of the chest the breath-sounds were loud and cavernous, without rhonchus even after a cough.

On April 2 the chest was punctured with the hypodermic syringe, but no fluid escaped.

On April 6 the signs were unaltered, except that the percussion-note in front had become rather tubular in quality, and a fine crepitation was noticed at the end of a deep breath immediately below the clavicle, and also at other parts of the chest. At the right supra-spinous fossa some large metallic bubbling was heard, and the respiration there and all over the upper half of the right side was loud and cavernous. Nothing abnormal was discovered on the left side of the chest. The temperature remained high, as before.

After this date the only alteration in the physical signs was a greater intensity in the cavernous respiration. The crepitation varied in quantity, and was sometimes absent altogether; when heard it was always fine. There was no approach to metallic gurgling rhonchus, and the only large bubbling heard was at the right supra-spinous fossa. The left side of the chest never at any time gave evidence of disease.

The child did not waste persistently. On April 21 his weight was seventeen pounds thirteen ounces, being a gain of nearly two pounds during the previous three weeks; on April 29 he weighed eighteen pounds; and on May 6 eighteen pounds six ounces. On this day, however, a severe attack of diarrhœa came on; rapid wasting then set in, and the boy died on May 12.

On examination of the body, the right lung was found attached by easily separable recent adhesions to the chest-wall. The two upper lobes were solidified; the lower, although firmer than natural, still crepitated to a certain extent. The surface of the whole lung beneath the pleura was dotted over with minute pearly specks, evidently grey granulations. On section, the upper lobe was found to be infiltrated with softening cheesy matter, and contained several small cavities, of which one at the apex was as large as a nutmeg. The middle lobe consisted of small yellow nodules, separated by firm inflamed tissue. The lower lobe (red, and more solid and friable than natural) contained no cheesy masses; many small greyish yellow points (grey granulations) were sprinkled over the cut surface. The left lung, partly adherent at the base, contained many yellow nodules, very closely aggregated in the upper lobe, none of them softening. Grey granulations were also numerous in this lung. Grey granulations were also seen on the surface of the liver and spleen. The intestines contained no ulcers.

In this case the acute tuberculosis was in all probability secondary to the consumptive disease. The illness began suddenly with fever and cough, and the medical practitioner who was called in pronounced the case to be one of inflammation of the lung. The child presented many characteristics of the so-called scrofulous diathesis: the large, coarse features and thick complexion; the long eyelashes and strongly-marked eyebrows; the eczematous eruption about the nares,—all indicated a state of constitution favourable to caseous degeneration, and therefore one in which the absorption of a pneumonic deposit might be expected to be slow and incomplete. On the child's admission there was still some evidence of consolidation at the apex of the right lung, and this during the next few days became more marked. The temperature at this time was higher than the normal level, showing that the inflammatory process was not yet at an end. Shortly afterwards there was a rapid extension of the physical signs, and in the course of a few days all resonance completely disappeared from the front of the affected half of the chest, and even the resonance laterally and at the back was appreciably diminished. The occurrence of dulness had been preceded by clicking sounds, very superficial, and appearing to be generated immediately underneath the thoracic wall. This superficial character of the sounds, together with the sudden cessation of all rhonchus when the dulness was established; the rapidity with which resonance was lost; and the manner

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in which the change occurred—the dulness not travelling from the apex downwards, but involving at once the whole right front of the chest,—these facts, combined with the character of the percussion-note, which soon acquired a tubular quality, and the little alteration in the ratio between the pulse and the respiration, seemed to indicate that the diminution in resonance was not due to any sudden extension of the pulmonary consolidation, but resulted from the presence of pleuritic exudation. The pleurisy was of the plastic variety, as was shown by the limited distribution of the complete dulness. If fluid had been present, the loss of resonance would have been as complete at the back as at the front, unless, indeed, the pleurisy had been localised and the gravitation of fluid had been prevented by pleuritic adhesions. That the pleurisy was general, and not local, was indicated by the perceptible alteration of the percussion-note at the back, although the dulness was much less complete posteriorly than in the front. In order that no doubt might remain as to the absence of fluid, the chest was punctured with the hypodermic syringe, but nothing escaped.

The softening of the cheesy consolidation at the apex of the lung went on rapidly; the breath-sounds soon became cavernous, and large metallic bubbling rhonchi were heard at the supra-spinous fossa. The final attack of diarrhœa occurred rather unexpectedly, and carried off the patient before the symptoms of the secondary tuberculosis had become sufficiently developed to allow of the diagnosis of the complication. The grey granulations found on inspection of the body were probably of very recent origin; and, no doubt, had the child survived a few days longer, some evidence of their presence would have been discovered in the left lung. In this lung some unsoftened cheesy nodules and many fine grey granulations were found, but no irritation appeared to have been excited by their presence in the organ. It is remarkable that this child, although the subject of so exhausting a disease, and although suffering from so much pyrexia, did not lose flesh. On the contrary, the weight of his body increased from 16 lbs. 3 oz. on his admission, to 18 lbs. 6 oz. on April 29, when the attack of diarrhœa occurred which put an end to his life.

The diagnosis of chronic catarrhal pneumonia is more difficult in the child than it is in the adult. This arises partly from the physical peculiarities of children before referred to, partly from the frequent occurrence of wasting in early life independent of organic disease, and partly from the readiness with which a slight cough may be induced by irritation of distant organs,—so that this symptom becomes a common complication of other complaints. A child may waste for a considerable time, and be troubled with a teasing cough, without being the subject of chronic pulmonary disease; and, although pulmonary consumption is always feared in such cases, the most careful examination of the chest may reveal nothing to encourage our suspicions. In the condition which I have elsewhere described under the name of "mucous disease,"(a) a hacking cough is a common symptom, and this may continue for months without being followed by disease in the lung. Elevation of temperature, combined with the above symptoms, is a very important addition, and, if persistent, at once marks the case off from the ordinary forms of wasting disease. Whenever fever is present it is necessary to assure ourselves of the absence of common sources of irritation which might give rise to pyrexia. Thus, the mouth should be inspected for signs of aphthæ or inflammation of the gums. Dentition produces a rise in temperature which may persist for weeks together; but here the pyrexia is very irregular, and the temperature rises much higher than is common at the beginning of chronic catarrhal pneumonia, being often as high as 104° or 105° in the morning. In children between five and six years old such a cause of fever is often seen, and at this age wasting from mucous derangement of the bowels is most frequently met with. In these cases, therefore, the gums should be looked at, and will often be found to be tense and swollen over the position of the back molars, which are the first teeth of the second crop to make their appearance. Still, it must not be forgotten that any of these causes of pyrexia may be complications of the pulmonary complaint.

(To be continued.)

DR. CHARLES MÜLLER, Professor of Anatomy at Königsberg, has just died.

(a) See "Wasting Diseases of Infants and Children," second edition 1873.

ORIGINAL COMMUNICATIONS.

THE ANTISEPTIC SYSTEM IN SURGERY.

By GEORGE THOMSON, M.D.,
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SINCE the address delivered before the British Medical Association in 1871 by Professor Lister, comparatively little has been said or written regarding the antiseptic system of treating wounds, if we except the repeated condemnation it has received at the hands of three of the eminent surgeons who gave the Address in Surgery in the following years. The summer of 1875, however, has been considerably more eventful from an antiseptic point of view, and we hear of the distinguished surgeon, whose name is associated with the origin and development of the system, making an almost triumphal progress through appreciative German towns, and soon afterwards holding crowded and seemingly enthusiastic *levées* of the profession at his demonstrations during the recent meeting of the Association at Edinburgh. The fact that nearly ten years have elapsed since attention was first directed by Professor Lister to the alleged advantages of the system, while its place in surgical practice is as yet far from being settled, makes it desirable, in the absence of statistics of results for comparison with those of other systems, to make some attempt at collecting what evidence is before the profession, with a view of arriving at some sort of a decision. In order to do so intelligibly, it will be well to consider separately upon what principles this system is based, by what means it is sought to carry it out, and what advantages are claimed as its result.

The antiseptic system in surgery, as practised by Professor Lister and his followers, is based upon the supposition that there exist in the atmosphere great numbers of minute germs, which, when admitted to wounded tissues, give rise to putrefactive changes. This is, in a word, the panspermic theory of Pasteur and others, for the processes of fermentation and putrefaction are held by Lister to be alike originated by these germs, which give origin, as he imagines, to the bacterial and allied organisms, the development of which is assumed to be essential to the occurrence of putrefactive change. An absolute belief in the omnipresence and omnipotence of these germs has been until recently insisted on by Professor Lister as indispensable to success; and, indeed, the suggestion(a) lately made by him, that it is possible for those who hold the physico-chemical theory of fermentation to adopt his system in its entirety upon that basis, really yields no inch of the ground he had previously taken, inasmuch as the obvious inference to be drawn is that they will hit the mark, not in consequence of their belief, but in spite of it.

All the numerous devices and appliances in use among antiseptic surgeons have two ends in view, viz.—firstly, the entire exclusion of all these septic germs from wounded surfaces; and secondly, the destruction of all germs that may have already gained admission. In order to attain the first of these objects it is attempted to surround the wounds with what is termed an antiseptic atmosphere, which means, during the performance of operations and dressings, a cloud of spray containing carbolic acid, and at other times the careful covering over of the wound with layers of some substance impregnated with an antiseptic—generally carbolic acid. These dressings are applied with various details (for a full description of which see Professor Lister's papers in the *Lancet* of March and April, 1875), the chief objects of which are to protect the wounded surface from direct irritation by contact with the antiseptic substance in use, and to prevent the discharge soaking through the dressings and coming in contact with the external air, thus forming a direct channel for the admission of the dreaded germs. The second object is said to be effected by the application of a tolerably strong solution of an antiseptic, such as carbolic acid or chloride of zinc, to the tissues that have been injured or exposed. Of such importance are these precautions deemed, that during an operation, if the surgeon's knife, or even his finger, be extended for a moment beyond the charmed margin of the cloud of spray, it has to be carefully rendered antiseptic by being dipped in an antiseptic lotion before it can be again approximated to the wound: while we find Professor Lister asserting that, "there are cases

(a) *Lancet*, March 27, 1875.

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in which the slipping of a single pin might, by allowing the dressing to shift its place, endanger the life of a patient."(b) It will readily be seen that antiseptic precautions are capable of an indefinite number of refinements, and present, by their possible omission in unguarded moments, ever-recurring loopholes to account for the absence of the desired result. When, however, these precautions are carried out in all their details, it is claimed by Professor Lister and others that the results are of the most brilliant character. Not only is constitutional disturbance after severe injuries very much diminished, but putrefaction may be entirely prevented, and, as a consequence, suppuration much diminished, and all the complications most dreaded by surgeons, such as erysipelas and pyæmia, entirely got rid of and set at defiance. All this, if I mistake not, was claimed absolutely by Professor Lister at least six or seven years since, and is undoubtedly claimed by him as a certain result at the present moment.

Unfortunately for the system under consideration, the theory on which it is based is open to objections of a kind so serious that it may be questioned whether it has any scientific value whatever. Without entering minutely into the vexed question, it may be taken for granted as the present position of affairs that the establishment of the panspermic theory cannot be looked upon as more than a bare possibility,—the balance of evidence being decidedly against the possible presence of numerous living germs in the air,—while such experimental evidence as has been brought forward by Professor Lister and others proves as much for the physico-chemical theory as for the theory they desire to support. The most that can be said for Professor Lister's hypothetical germs is, that if they exist, they are in such an impalpable form as to be impossible of detection by any known means of observation. On the other hand, those low organisms of a palpable kind, which are looked on by antiseptic surgeons as the essential accompaniments of putrefactive changes and the consequences of the admission of the invisible germs, are, it is now pretty generally admitted, to be found within the body in situations which preclude any possibility of immediate contamination from without, and may even be introduced into the circulation without apparent injury. Damaging to the antiseptic system as these considerations appear, they are rendered doubly so by the support they receive from the results of clinical observation. In the treatment of wounds of any kind, provided that the general conditions favourable to healthy action are secured, it must be conceded, even by the most enthusiastic of antiseptic surgeons, that fairly good results are obtained without the aid of antiseptic precautions. Assuming the germ theory to be correct, it is difficult to see how this should be the rule and not the exception, more especially where the wounds are treated under precisely opposite conditions so far as antiseptic precautions go. And yet many surgeons of repute claim to have obtained excellent results by freely exposing wounded surfaces to the air, and treating them throughout without any dressing at all. It is scarcely necessary to point out that the presence of germs in great numbers in the air would be a fruitful source of danger at all times, with such facilities for gaining admission to the human body as are presented by the mucous tracts; while it is difficult to see how any woman could escape their baleful influence after parturition, when the tempting surface of the uterine cavity is exposed to their attack, especially when aided, as Nunneley expressed it, by an "accompanying obstetric hand."(c) It would be easy to multiply such objections as these, were it necessary to go further in attacking a theory which is so destitute of evidence in its support.

But even if we concede to Professor Lister and his followers a surrounding atmosphere teeming with germs, and admit their importance and danger, we might be disposed to question the efficacy of the measures adopted by them, either for destroying or excluding these germs. Carbolic acid must be looked upon at present as the agent they most depend on for both purposes; and, strangely enough, there is good experimental ground for believing that it is the very reverse of a germicide. Taking bacteria as types of injurious germs—and in doing so we follow the lead of Professor Lister,—it has been proved by Dr. Dougall, of Glasgow, that in a solution of carbolic acid, such as is in use for germ-killing purposes by antiseptic surgeons, these organisms are not only not killed, but that they actually flourish and rapidly reproduce therein. Again, if we take vaccine lymph as a fair sample of a specific poison, analogous, say, to that of erysipelas or pyæmia, we find that so far from being destroyed by an atmosphere rendered antiseptic by carbolic acid, it retains its activity longer than when exposed to ordinary air. Since these results were made public by Dr. Dougall, I have repeatedly verified them by experiment. Now, it seems to me that we are fairly entitled to argue from these results, not only that carbolic acid has no power to destroy septic germs, but that it may even be the reverse of beneficial when a specific poison has to be got rid of. It might well be argued that pyæmia or erysipelas, once introduced into an antiseptic atmosphere, would linger there longer than they could do under ordinary conditions.

With regard to the advantages claimed as the result of a faithful adherence to this system, it is extremely difficult, in the absence of statistics, to arrive at any conclusion. The utterances of enthusiasts are always to be looked on with suspicion; and the published reports of strikingly successful cases may be matched, case for case, as I have frequently observed, by equally striking cases where no antiseptic measures have been used. That cases do very well under the antiseptic system, no one who has visited Professor Lister's wards will be disposed to question, however much the alleged cause of that success may be doubted. That cases do much better under that system than under any other, is denied by many whose opinion carries weight. While we may well doubt that such evils as pyæmia and erysipelas, so far as external causes go, are got rid of, the important fact remains that pyæmia, for example, occurs in cases where no abrasion of the surface of the body has taken place. And it is scarcely necessary to appeal to the general experience of surgeons for evidence that pyæmia occurs over and over again most unexpectedly after injuries of a comparatively trifling character; while, on the other hand, after very severe injuries, there is often the most unlooked-for absence of all such complications. It is impossible, in the face of such facts, to resist the conviction expressed by Mr. Wood in his address,(d) that there must be, at least in a proportion of cases, agencies operating on the general system of an occult kind, and that, if these agencies are atmospheric in their origin, they gain admission by other channels besides the wounded surface. But it remains to be seen how the hospital wards of antiseptic surgeons will stand the test when pyæmia makes its appearance in that hospital. When such a test has been applied, there is evidence on record that antiseptic wards have not escaped their share; and rumour says that even in the wards of Professor Lister the boasted immunity from pyæmia has been attained partly, at least, by a departure from the usual interpretation of diagnostic signs. Be this as it may, it has become imperative on Professor Lister and others to publish statistics of all their results extending over the last eight or ten years. On the comparative proportion of deaths after serious injuries thus shown will chiefly depend the place of the antiseptic system in the surgical practice of the future.

There is no doubt that the persistent manner in which Professor Lister and his followers make everything fit the theory they postulate, and ascribe failure to the imperfect observance of details which nothing but a complete acceptance of that theory can render rational, has been one great bar to the more general carrying out of this system of treatment, even by way of trial. This seems to me to be the more deplorable, inasmuch as it is quite possible that a certain amount of success has been achieved, which is not at all difficult to account for in a way deserving the attention of surgeons generally. It is well known to practical surgeons that a careful personal attention to dressings is sure to be rewarded by a considerably greater amount of success than when these details are relegated to assistants or nurses. Attention to such things as cleanliness, compression, suspension, temperature, and, above all, the insuring of free drainage, are matters of the utmost importance, and are a most noticeable feature in Professor Lister's hospital wards; while it is impossible not to admire the self-abnegation that gives hours of precious time day after day to the personal superintendence of hospital dressings. All this must carry its reward with it, and however impossible it may be for surgeons whose time is valuable to emulate Professor Lister's example in every particular, there is no doubt that if the success of antiseptic surgery only leads to greater and more general attention being paid to these conditions, a great advance will have been made. But, in addition to these, there is something to be allowed for other precautions used. Discarding as

(b) *Lancet*, March 13, 1875. (c) Address in Surgery, 1872. (d) Address in Surgery, 1873.

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theoretically unsound all measures devised for the exclusion and killing of the imaginary germs, we have still remaining for consideration the effects of antiseptic agents when applied to injured tissues. It is well known from experimental evidence that a piece of dead animal tissue which has been soaked in any of the antiseptic solutions in general use, and then exposed to the air, resists decomposition for a much longer period than a similar piece exposed without such preparation. In the same way, there can be no reasonable doubt, the tissues of the living body, after being wholly or partially devitalised by accident or operation, will resist decomposition much better after being saturated with an antiseptic solution than they would otherwise have done. The injured tissues are, in fact, subjected to a sort of pickling process—a term which is actually used by Professor Lister in speaking of the action of a solution of chloride of zinc applied in the way indicated. The antiseptic agent which has been found most generally useful is certainly carbolic acid; and it seems probable that, in addition to this pickling, it acts as a stimulant, and perhaps somewhat of an anæsthetic as well. Anyone who has operated under the spray is familiar with the peculiar effect it has on the skin, causing it to tingle in a remarkable way, and also to shrivel somewhat, after which it remains roughish and somewhat impaired in sensation for a time. This, together with its effect on a granulating surface, may be held as indicating a stimulating property. The anæsthetic qualities of carbolic acid are well illustrated by the application of carbolised oil to extensive superficial burns and scalds, which is followed by striking relief of pain, and consequent diminution of shock and constitutional disturbance. To the latter of these properties much of what is claimed for the antiseptic system in the way of lessening irritative fever is probably due, and to the former a share in what success is obtained in the treatment of severely injured tissues. Yet, reasonable as all these suggestions seem, we find Professor Lister dogmatising thus:—"Anyone using carbolic acid as a remedy without reference to antiseptic principles will be sure to meet with unsatisfactory results."

So far as personal experience of the system goes, mine has been limited to a careful trial extending over six months, and carried out in every detail, in Oldham Infirmary. By the end of that time, not having experienced any marked improvement in my results (which was possibly due to our Infirmary being new, and having plenty of space per patient), and having found the time necessary for personal superintendence of dressings an intolerable tax, I modified my treatment in accordance with the rational considerations detailed above. I use an antiseptic, generally a solution of carbolic acid, to saturate injured tissues where I consider there has been any damage to the vitality of the parts, and afterwards dress without further antiseptic precautions beyond what may be necessary to deodorise. I have become a good deal more alive to the importance of drainage, and of the careful regulation of the temperature of the surroundings, and I find my results so far very gratifying. Individual experience, especially where the surroundings are favourable, goes for very little, and I think some such modification of the antiseptic system as the above, in conjunction with the other precautions, worthy of a comparative trial by surgeons generally. But the troublesome and expensive elaborations of the antiseptic system insisted on by Professor Lister, I trust soon to see relegated to the oblivion that awaits the results of misdirected ingenuity. I cannot think that scientific surgeons will ever adopt what, as hinted by Professor Spence in his recent address, recall the spells and incantations in use by surgeons of a less enlightened age, before it was discovered that wounds could be healed without having a fuss made over them.

CASE OF SNAKE-BITE—RECOVERY.

By JAMES W. GUNNING,
Surgeon, Army Medical Department.

No. 105, Private Matthew G., 51st Royal Oudh Light Infantry, stationed at Fyzabad, Oudh, India, is a low, well-built, muscular man; fairly good health. For some years past he has been in the habit of handling snakes of all kinds. Yesterday morning (July 29, 1875) he came to my bungalow, bringing a krait (*Bungarus cæruleus*) and a cobra (*Naja tripudians*). The krait he allowed to crawl about, and on taking it up in a very careless manner it bit him on the little finger of the left hand, at the base of the first phalanx, on the posterior surface. The snake held on for a few seconds before he got it off. He immediately began sucking the wounds (punctures), and sucked them for about two minutes before showing them to me. He treated the matter very lightly, but I could see by the expression of his countenance and the large beads of perspiration on his forehead that he was uneasy about it himself. I brought him into the house, and cut into the wounds with a bistoury, and freely applied strong nitric acid. I also applied as tightly as I could a silk tie above the wrist, and gave him a glass (℥ij.) of neat brandy. While the vehicle was being got ready to take him to hospital, he walked about, sweating very freely, but otherwise, except slight swelling of the hand, showing no symptom of danger. On the way to hospital he told me that the snake was "sickly," and had lost one fang, and he did not expect it to bite him. It was about three feet long, and moved about sluggishly. We reached hospital at 10.5 a.m., and there and then I gave him liq. ammon. fort. ℥x., with brandy ℥j. He immediately began to walk up and down the verandah, sweating profusely. Pulse 120. At 10.30, Surgeon-Major Leask saw him. The hand was much swollen and œdematous. Surgeon-Major Leask recommended the brandy and ammonia treatment, also a poultice of ipecacuanha, to the bitten part. 10.40: Brandy ℥j., and ammon. ℥x. 10.55: Walking about and inhaling ammon. carb., and bathed in sweat. 11.10: Brandy ℥j., and ammon. ℥x.; seems more cheerful; no swelling or uneasiness above the ligature, nor any increase in that of the hand. 11.40: Brandy ℥j., ammon. ℥xx. Feels better. No pain above the ligature; very slight pain in the hand, which is still swollen. 12.10 (12 by gun-fire): Brandy ℥j., ammon. ℥xx. The hand swollen and painful. Pulsation could only be felt in the index-finger. Had a bottle of soda-water. 12.40 p.m.: Brandy ℥j., ammon. ℥xx. Pulse 108. Feels a sickish sensation at the pit of the stomach. Hand much the same. 1.10 p.m.: Brandy ℥j., ammon. ℥xx. Has taken a dislike to the brandy, as he says it hurts his throat, which he states has been sore for some days past. Certainly he does not take the dose with the same relish he did at first. Ordered a pint of beef-tea made from Liebig's extract, there being no other available. Wants to get a glass of beer, also to go out. The brandy, however, seems to have affected him very little. Beads of sweat on the forehead. 1.40: Great difficulty in getting him to take the beef-tea. Utters low moans, and presses his hand on his heart. Examined chest stethoscopically; sounds normal but quick. Pulse 112. Pupils contracted. Does not appear quite so well. Brandy seems to be working him now, as at times he is lively and at others drowsy. 1.50: Feels spasms "striking across the chest from left to right." 1.58: Surgeon Turner came and took the following notes, as I had to leave:—"2.5 p.m.: Brandy ℥j., ammon. ℥xx.; took a little sip of it at first, and said that it hurt his throat, but swallowed the remainder easily and altogether. Pulse 120; sweating profusely; seems pretty cheerful, and says that his hand is getting all right. Still wishing to leave hospital. At 2 p.m. he finished the beef-tea ordered by Dr. Gunning, but immediately ejected it. 2.12: Passed water freely. 2.15 p.m.: Got very drowsy, and wanted to lie down; lay against the door-post, and I had to get the orderlies to make him walk about. In about a minute and a half this feeling passed away, and he became lively, talking to me in a very sensible manner about the habits of different kinds of snakes. 2.37: Says he is thirsty. Repeated brandy and ammonia. He still asks earnestly for his beer. Still complains of the shooting pains from left to right across his chest, much increased upon stopping after walking. Takes his brandy easily, and no pain. 3.12 p.m.: Since last entry has been walking and talking to me in a lively manner, and has no pain whatsoever. Repeated brandy and ammonia. Pulse 120." 3.25: I again returned, and took over from Surgeon Turner. He now complains very much of pain, and feels drowsy the moment he stands still. Seems suffering from the effects of brandy: face flushed; eyes suffused; pupils contracted; pulse 120. 4.5 p.m.: Brandy ℥j., ammon. ℥xx., which he partly swallowed, as he said it hurt his throat so. Hand not so much swollen. Is inclined to be drowsy, and sweats most profusely. Examined the throat; no swelling either external or internal. 4.40: Walking about, and quite sensible. Swelling of the hand much reduced. Still complaining of his throat. Trying to take some tea. 5.25 p.m.: Brandy ℥j., and ammon. ℥xx. Had great difficulty in swallowing it. Ice being applied to the hand; he also sucks lumps of it, which gives relief. To have one pint of Liebig's extract beef-tea.

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Still the tightness across the chest. 5.45: Has taken plenty of strong beef-tea. 6 p.m.: Much the same. 6.30 p.m.: Visited by Colonel Carey. Spoke quite rationally, and gave a full description of how he was bitten, etc. Complains of thirst. 7 p.m.: Had a pint of beef-tea, which he took easily. 7.30: Wants more brandy, but I think he has had sufficient; sweating freely. 7.45: Wants brandy still; gave a pint of beef-tea in place. Has been walking about all the time. 8 p.m.: Feels tired. 8.30: No change; had another pint of beef-tea. 8.45: Gave an effervescing draught. 9.15: Pulse 108. Has some difficulty in swallowing; wants brandy; feels sleepy and worn out from the effects of brandy and exercise; breathing quite easy. Ordered brandy ʒiv., and lots of ice to be given during the night, and left orders to be called if any untoward symptoms occurred, and then left.

July 30.—At 6 a.m. to-day I learned that he slept little or none during the night; dozed a good deal. Complains of his throat very much, also of pains all over the body; seems heavy and sleepy; passed water freely; bowels moved once. Pulse 82; temperature 99°; hand nearly normal. Cannot swallow very well. Ordered the inhaler to be frequently used. Examined the throat, and found it apparently healthy. To have brandy ʒiv., two eggs, two pints of beef-tea, and beef-tea diet. 1.30 p.m.: Called to see him. Since morning visit has taken his eggs, brandy, and one pint beef-tea. Complains of great pain and constriction about the throat, more especially when swallowing; can discover no signs of any swelling or inflammation about it. Passed no urine since 5 a.m. To have plenty of beef-tea. 6.45: Temperature 98°; pulse 80. Seems worse. Complains of great pain across the chest every fifteen minutes, and starts up when it leaves. There is also a partial paralysis of both eyelids. His speech is perfect, and he talks sensibly, but the pain in the neck and throat is still the same, especially when swallowing. Has taken one pint and a half of beef-tea since I saw him last. Hand slightly swollen and painful to-night. The ligature was removed. Passed water freely. Ordered brandy ʒij. and two eggs with a little milk, at once. To have ammon. carb. gr. v., tinct. cinchonæ ʒss., ad decoct. cinchonæ ʒj., every four hours. Does not feel uneasy about himself. 9 p.m.: Took all his egg-flip, and is now asleep. Pulse 84. Breathing very quiet. During my visit he woke up with a start; pain in his chest and throat. I ordered hyd. chloral gr. xxv. to be given at once.

July 31.—Slept last night after the draught, at first in a very restless manner, but towards morning soundly, and on awakening went out to the verandah for a walk. Feels better—*i.e.*, aching pains have left his body; his throat is easier, and he can swallow with less difficulty; but the paralysis of the eyelids still continues. Pulse and temperature normal. Hand swollen, and where the ligature was it is black; wound where cauterised looks yellow and sloughy. Continue the ammonia mixture ordered last night; also plenty of beef-tea. Brandy ʒiv. and four eggs during the day. 6 p.m.: Had a senna draught (not mentioned) this morning, which operated three or four times. Feels quite easy. Took lots of nourishment, and swallows all without any difficulty. Hand a little swollen; wound same as morning. Not yet able to open eyelids. Ordered hyd. chloral gr. xxx. at bed-time. Temperature and pulse normal.

August 1.—Slept fairly, and is in every respect quite free from any effects of snake poison, except for the partial paralysis of the eyelids. The hand is nearly normal in size, very slightly swollen; wound sloughy. Continue the ammonia mixture and cold water to the hand.

2nd.—Quite convalescent in every way. Is able to "half" open his eyes. Treatment as before.

3rd.—Seems quite well to-day. Can open his eyes perfectly; wound of little finger scabbing. Hand normal, and only feels numb. In every other respect feels quite well. No treatment.

4th.—Quite well and fit for discharge.

5th.—Discharged. Duty.

COLLODION FOR DENTAL CARIES.—Dr. Lardier recommends this as a most excellent application. The cavity in the tooth is first to be carefully dried by means of a little charpie or cotton, or the collodion will not adhere. One or two drops are then introduced, which, while liquid, exactly fill the cavity. As the ether evaporates, the pain becomes assuaged, and a protective layer of collodion is formed.—*Union Méd.*, October 30.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

GUY'S HOSPITAL.

CASE OF POISONING BY THE INDIAN MARKING-NUT.

(Under the care of Dr. FREDERICK TAYLOR.)

[Reported by Mr. C. DURAN.]

CHARLES McI., aged 13, a schoolboy, was admitted into Guy's Hospital, May 18, 1874. He stated that on May 9 he had painted the figure of an anchor on his left arm with the juice of a fruit which had been given him by a soldier coming from India. The juice was not pricked in, as in tattooing, but when it dried it turned of a black colour, and would not rub off. During the week it appears to have caused some smarting, but he felt no other inconvenience until the following Saturday, May 16, when he noticed that his left arm was red, and that a number of small pimples had appeared. In the night his face became swollen and red, and the next day (Sunday) he came to the hospital, and had some lint placed round the sore arm. During the night he rested his arm on the abdomen and thighs, and the following morning these parts were red. He then came among the out-patients to Dr. Taylor, and was admitted.

With the exception of the eruption, presently to be described, the boy was in fair health, the appetite good, the bowels natural; urine of specific gravity 1012, not albuminous; pulse 91; respirations 24; temperature 98·6°.

The left hand, forearm, and the lower half of the upper arm were swollen, and of a bright-red colour resembling that of erysipelas. On the front of the forearm was an abrasion of the skin, shaped somewhat like an anchor, and presenting some black points, which the boy stated were the remains of the material used. Over the rest of the forearm were many vesicles of various sizes and shapes, mixed, especially at the back of the forearm, with minute pustules. The swollen arm did not pit on slight pressure, but the colour readily disappeared for the time.

On the back of the right hand, and on the front of the wrist, were a few raised red spots, surmounted by minute white pustules.

The face presented a similar inflammatory condition. The redness and swelling affected both eyes (the left being quite closed), as well as the upper lip, the chin, and the back of the right cheek, where there were a few isolated, raised red spots. The colour was sharply defined, and on the chin was a yellow crust resembling those of eczema.

On the inner side of each thigh at the upper part was a large, red, less sharply defined patch, with one or two transparent vesicles; and on the lower part of the abdomen were a few spots resembling those on the right hand and wrist.

The eruption caused considerable itching.

The patient was ordered to take mist. magnesiæ cum magnes. sulph. ʒj. three times a day, and to apply liq. plumbi subacetatis diluti to the affected parts.

On May 21 the colour of the face had faded, and the œdema of the eyelids was nearly gone. On the chin, the upper lip, and around the nose were translucent yellow crusts. The left arm was less swollen and red, but presented a great number of small pustules, and the original excoriation was larger in size. Itching was relieved. Pulse 69; respirations 24; temperature 98·4°.

25th.—Pulse 66; respirations 24; temperature 98·4°. There was now no swelling of the arm and face; the pustules above mentioned had broken and formed yellowish scabs, some of which, falling off, had left a healthy surface, especially on the front of the forearm. There were still crusts on the sides and back of forearm, as well as on the face. The thighs and abdomen presented crusts, but less swelling.

Scabs continued to fall from his face on the following days, and on the 31st he went out quite well, except for a few scabs on the face, some redness and crusts on the left arm, and a faint scar marking the place where the poison was first applied.

During his stay in the hospital he had no appreciable constitutional disturbance.

A playmate of the above patient was painted with the

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juice at the same time, and, in consequence, suffered from symptoms which Mr. J. D. Roberts, under whose care he was placed, describes as being similar to those of the present case.

Remarks.—The history of the case and the localisation of the eruption rendered it certain, in spite of the peculiar delay in appearance of the latter, that this was due to the juice of a fruit, which proved upon inquiry to be that of the *Semecarpus anacardium*, or marking-nut tree, belonging to the natural order *Anacardiaceæ*. The dried nut is ovoid in shape, about an inch long, and three-quarters of an inch broad, of a black colour, and shiny surface. In the interior is a kernel, but the pericarp is composed of two laminæ, between which are cells containing a black, corrosive, resinous juice. This produces an indelible stain on linen, and is used by the natives of India for marking purposes; and it was, no doubt, applied on this occasion to the arm of the patient with the intention of making a permanent mark. In works easy of access little information can be found as to the effects which it has upon the skin, but the observations are in accordance with what is described above. Sir W. O'Shaughnessy states, in the *Bengal Dispensatory*, that by boiling the nut an oil is prepared, which, undiluted, acts as a vesicant; and that, during the operation of heating, the vapours have often been known to occasion erysipelatous inflammations; a fatal case of poisoning is also recorded in the third volume of the *Bombay Medico-Physical Transactions*.

The semecarpus is, however, not the only plant of this order which will cause inflammatory symptoms on application to the skin; indeed, the order is characterised by the presence of an acrid resinous juice, and includes the various species of *Rhus*, of which two—*Rhus toxicodendron*, or poison-ivy, and *Rhus venenata*, or poison-sumach—are well known for their toxic effects. They grow abundantly in the United States, and the symptoms which result from contact with the juice, or exhalation from the leaves or twigs, have been fully described by Dr. White, of Harvard University, in the *New York Medical Journal* for March, 1873.

In one case, for instance, the face and neck were œdematous, and covered with vesicles, some in the papular stage, others seated on an erythematous base; and there were numerous excoriations from which serous fluid was exuding; the hands were also affected, and the patient had itching and burning of the parts, sensation of local discomfort, and slight general febrile reaction; new efflorescences continued to appear for several days. Dr. White characterises the eruption as eczematous, and states that he has never seen it take on a really erysipelatous type. The duration generally varied from five to six weeks.

It will be seen that this agrees closely with what was observed in the case of C. McI., and the correspondence is further maintained in regard to another point—namely, the period of time which may elapse between the application of the irritant and the development of the symptoms. In the case of C. McI., to whom the Indian marking-nut was applied, the symptoms were so long delayed that it was difficult at first to connect them with their real cause. But the same peculiarity has been observed with the American genera; and Dr. White observes that the time required for the development of the visible manifestation of the poison upon the skin, after contact with the *Rhus* or its emanations, seems to vary greatly; for he found that, though shorter periods might occur, three, four, and five days were repeatedly given, by patients especially susceptible to its action, as the interval between contact and the appearance of the eruption.

The treatment was of a simple kind, little more being done than to apply lead lotion to allay the sensations of smarting and itching.

THE MIDDLESEX HOSPITAL.

CAN A BURSAL TUMOUR BE MISTAKEN FOR POPLITEAL ANEURISM?

(Case by Mr. MORRIS.)

Bursal tumours in the popliteal space are so common that every surgeon is now and again called upon to treat them. Their diagnosis is by no means difficult, and, compared with many affections, their treatment is successful. But occasionally the treatment has not only failed to cure, but has led to disastrous consequences to the patient, while at times an exact diagnosis requires much care, even if it does not remain uncertain.

Now, although in ordinary works on surgery one finds very little or nothing said as to the intimate situation, the mode of origin, or the variations of popliteal bursæ, yet their differential diagnosis is generally pointed out; and in the enumeration of the swellings from which they are to be distinguished, popliteal aneurism most frequently gets a place. Generally, however, their elasticity, mobility, and outline are sufficient, in the absence of pulsation, to indicate their bursal nature. But it is said that an enlarged bursa is occasionally found in this region as a pulsating tumour of large size, and then its true nature is by no means so clearly indicated. I have never myself seen in the living subject a popliteal bursa that pulsated, or which could in any way be mistaken for an aneurism. Recently, however, I have seen one in the cadaver, which I think during life might have given rise to such a mistake.

Before referring further to this case, I should like briefly to point out the usual situations of popliteal bursæ, and then to consider in which of them a bursa is, *à priori*, most likely to present any of the symptoms of aneurism.

Popliteal bursæ are of two distinct kinds—viz. (1) those over which the tendons of muscles glide, and (2) those which are either new formations or hernia of the synovial sac of the knee-joint.

These latter are generally attached by a pedicle to the fibrous capsule of the joint, and sometimes communicate with the cavity of the joint, and sometimes do not; they occupy a position between the posterior aspect of the femur and the popliteal vessels.

The former, from their connexion with the tendons of muscles, are necessarily situated along the internal and external borders of the space. On the inner border there are two bursæ—one placed between the internal condyle on the one hand, and the internal head of the gastrocnemius and the semi-membranosus on the other; it sends also a process between these two muscles. It is the largest of the popliteal bursæ, and reaches from the posterior inferior part of the internal condyle of the femur to the back of the inner head of the tibia, as low down as the upper border of the popliteus muscle. Its inner border extends beneath the semi-membranosus tendon; its external border does not normally project beyond the inner head of the gastrocnemius. Occasionally it is divided into two parts, more or less completely—one portion for the gastrocnemius, and the other for the semi-membranosus. In adult life and in old age it generally communicates with the cavity of the knee-joint, either directly or through a secondary bursa contained within it. From its size, its constancy, the frequency with which it is in connexion with the joint, and its proneness to enlarge—sometimes alone, sometimes in association with synovial effusion into the joint—it is the most important of the hamstring bursæ. The second, the bursa proper to the semi-membranosus, is situated obliquely, close to the insertion of the muscle, and separates the anterior surface of the tendon from the inner tuberosity of the tibia. It sometimes communicates with the preceding bursa, and rarely with the synovial cavity of the joint. Along the outer border of the space there generally exist four bursæ—one between the tendon of the popliteus muscle and the external lateral ligament of the knee-joint, which does not as a rule communicate with the synovial cavity; another, situated obliquely beneath the tendon of the popliteus, and separating it from the external tuberosity of the tibia. This communicates with the cavity of the joint, and is in reality only a diverticulum of the synovial sheath. A third, which separates the tendon of the biceps from the external lateral ligament of the joint, is situated immediately above the head of the fibula, and has the external popliteal nerve running along it. A fourth small bursa is sometimes found beneath the tendon of the external head of the gastrocnemius; it is sometimes only a prolongation of the bursa between the popliteus and the external lateral ligament. Neither of these last two are by any means constant; yet it is to one of them that the subjoined case refers.

In considering the question which of all these bursæ is most likely to present any of the symptoms of aneurism—*e. g.*, pulsation and a bruit along the popliteal artery—we may exclude, with a fair amount of confidence, (1) the bursa proper to the semi-membranosus, and (2) the bursa beneath the biceps tendon, as being altogether out of the way of the artery; (3) the bursa behind the popliteus, because, besides being some distance from

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the line of the artery, it is beneath the fibrous capsule of the joint; and (4) this last objection applies to the bursa beneath or in front of the popliteus, and in addition it must be remembered that any enlargement of this will almost certainly be associated with general effusion into the joint. There remain, then, the bursæ beneath the inner and outer heads of the gastrocnemius muscle, and those which occasionally are found attached to the fibrous capsule of the knee-joint, between it and the popliteal vessels. Certainly one would say, *à priori*, that a large bursa in the latter situation would be the most likely to be mistaken for an aneurism growing from the front of the popliteal vessel, as under the circumstances the artery would be passing down over the tumour, which would itself be bulging on each side of the artery and pulsating. But though several such bursæ have been dissected, I am not aware of one in which this mistake in diagnosis had been made.

The following case is one of enlargement of the bursa beneath the outer head of the gastrocnemius muscle. It came under observation in the dissecting-room of the Middlesex Hospital in the winter session of 1874-75.

Enlarged Bursa in Popliteal Space, pressing upon the Popliteal Artery and its Superior External Articular Branch.

Abraham A., aged forty-three, died November 5, 1874, in the Middlesex Hospital, of phthisis. The body was taken to the dissecting-room. Nothing unusual was seen on removing the deep fascia over the popliteal space. On clearing away the fat, a thin-walled bursa, in shape and size resembling a pigeon's egg, was seen extending inwards and slightly upwards beyond the middle of the space. It was crossed about its centre by the peroneal communicating nerve, which was stretched and flattened where it passed over it. The internal popliteal nerve was pressed inwards and backwards, curving round its inner free end superficially. In like manner the popliteal vessels were carried inwards, being placed on the deep surface of the bursa. The upper external articular vessels crossed its long axis and were greatly stretched. The injection, which had fully distended the other vessels, only partially filled this artery, which remained flattened out. Further dissection proved the bursa to spring from beneath the outer head of the gastrocnemius. The upper fibres of this muscle and the belly of the plantaris were stretched over its outer attached portion. So far as I could ascertain, no notice had been taken of the swelling during life, and it was only in the course of dissecting the popliteal space that the bursal tumour was discovered. Still, it is more than probable that, had the man been actively occupied instead of being an invalid, his attention would have been excited by some aching pain or weakness about the knee. Then he would have sought advice, and a pulsating tumour must, I feel sure, have been detected. The bursal matter was of a very fluid character, and after the sac was exposed its contents rapidly disappeared, and the tumour shrivelled. But even when first laid bare there seemed to be no strain from distension on the walls of the sac, so that the conditions were such as to make the tumour very susceptible of communicated pulsation. It is true this pulsation would have been more lateral than expansile, but owing to the position of the popliteal vessels on the posterior aspect as well as on the internal side of the bursa, there would have been some antero-posterior pulsation as well. It is possible, too, that in this case a line of arterial pulsation would have been felt running transversely across the tumour, owing to the position of the superior external articular artery. This might be the case with any tumour, aneurismal or otherwise, in the popliteal space.

When, however, we consider the resistance which the strong tense fascia covering the popliteal space offers to the pulsation of a small aneurism, and remember that sacciform aneurisms of the popliteal arise from the anterior or lateral wall as well as from the posterior, and that a small aneurism projected from the side of the artery and bound down by the fascia lata would pulsate most strongly in the direction of least resistance —*i.e.* in a lateral rather than an antero-posterior direction,— we must admit that there would be some possibility of mistaking a bursa, situated as the one described above, for an aneurism of the popliteal artery. In all probability, however, the diagnosis, even in such a case, would be easily cleared up by flexing the leg on the thigh. By thus relaxing the hamstring muscles and enabling the tumour to be drawn away from the line of the artery, all pulsation would cease in the tumour, even though the anterior and posterior tibials continued to beat.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 6, 1875.

"MEDICAL DESPOTISM."

The opponents of vaccination are exceedingly angry, and, under the cerebral stimulus of polemic excitement, have made a discovery. They have detected the existence of a "medical despotism," to which the people have become slaves after having undergone the previous narcotising and mysterious operation of having their spirits stamped out. We have heard of legislative attempts which have aimed at the stamping out of rinderpest and similar bovine afflictions, but it has been left for a gentleman of the familiar name of Skipworth, and an agitator, who, by his prefix, may be presumed to play usually upon the "drum ecclesiastic," to discover that "the spirit of the people" is being stamped out by the action of legislation through the agency of a "State medical despotism." To the people of Leeds this wonderful revelation was first made, and the occasion of its utterance was the first "Annual Conference of the Anti-vaccination League." The lengthy report of this "Conference," which occupies several columns of the *Leeds Mercury*, shows the existence of certain conditions which might have been anticipated without the expenditure of railway expenses and other outlay associated with conferential proceedings. The first is the notion amongst anti-vaccinators regarding the existence of the despotism just referred to; the second circumstance is, that very few people came to hear what the zealots had to say for each other, even though the latter believe that 80 per cent. of the public are against vaccination; the third was, the discovery that the reverend agitator already spoken of was willing at any time to make speeches on the subject; the fourth was, the statement that the press, being opposed to anti-vaccination, is "therefore utterly unworthy of public confidence"; and a fifth and less predicable disclosure was the fact that Mrs. Hume-Rothery, one of the speakers at the meeting, is not only the daughter of the late Joseph Hume, but a secretary of the League, and the wife of

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the Reverend Rothery. It is difficult to criticise seriously the proceedings of a meeting which, if in any sense it was a "conference" at all, was little more than the conference of a clergyman and his wife, met to incite the few people who came to listen to them to defy openly and at every step a recognised law of their country, because their views on vaccination do not happen to agree with those of the great mass of the people, who, to the chagrin of the "League," not only have their children vaccinated, but will not come to listen to the transplanted utterances of the clerical orator.

The Rev. W. Hume-Rothery, President of the "National Anti-vaccination League," believes more in language than in lymph. He himself uses and volunteers speech freely, and recommends every anti-vaccinator utterly to ignore a magistrate's summons unless he has a liberal command of it. His own use of language is strictly theological, inasmuch as it is inclined to be at variance with all religious and sound social principles. Thus he is reported to have come to the following conclusion with regard to the Vaccination Acts:—"They are," he says, "wrong in themselves and in all that emanates from them; and as we ought never to countenance wrong, we ought not to pay the slightest respect to these Acts." In advising his persecuted followers as to how they, when summoned, should treat the civil powers, he added—"If a man has good nerves and a good flow of language, let him attend the court and do all he can to expose the iniquity of these laws; but in every other case do not pay the slightest attention to the magistrate's summons. The magistrate," he said, "had no right to summon them, and when the magistrate imposed a penalty he advised them not to pay. . . . If they had to deal with men who were open-minded and genuine lovers of truth, he would not advise such strong measures; but as they had to do with men who were unprincipled, he should strongly advise them to adopt the course which he had ventured to recommend." If Mr. Hume-Rothery's Sunday teaching corresponds at all with his week-day principles, it would be interesting to know what book he takes his texts from. Defiance of existing laws has never been recognised, amongst Christians in general, as one of the duties of a clergyman; and Christians, even when they suffered under indubitable hardships, were never encouraged to revolt against law and order for the promotion of their physical welfare. It would be more in keeping with the agitator's profession, if, when a medical despot vaccinated him on one arm, he were immediately to lay bare the other also. We are not told, however, that Mr. Hume-Rothery does belong to the Christian persuasion, and, in fact, looking only at the internal evidence supplied by the speech from which we have quoted, we have no right to assume that he does. The insight which Mrs. Hume-Rothery gives us into the working of the League is amusing as well as interesting. When a man's name appears in the birth-list of the *Times*, a post-card is forwarded to him by the Reverend Rothery, warning the ardent parent against the dangers of vaccination. Still, notwithstanding the fact that the clerical president strikes the iron while it is hot, Mrs. Hume-Rothery has to confess that "ludicrously insolent rejoinders" are sometimes returned to these somewhat ignominious missiles. But Mr. Hume-Rothery has his revenge. When an address is given by the persons who are wise enough or good citizens enough not to believe in his principles, they receive "a further dose of anti-vaccination literature." The punishment is sufficiently heavy for any amount of recalcitrant insolence, and even Mrs. Hume-Rothery does not state that any further infliction is ever required. From the accounts submitted to the "Conference" it appears that the "National League" is in a very cachectic condition. The income of this national institution is barely £200, and Mrs. Hume-Rothery herself states that the London spring meeting was attended by only five or six persons. Borrowing a term from the phraseology of her antagonists, the lady secretary might have said that the movement did not appear to "take." At the Leeds "Conference" the anti-vaccinators did not receive much professional support, but what there was went a long way. At an evening meeting the proceedings were as unsuccessful as at the Conference itself. The attendance was meagre, the hall being only one-third full, so that unless medical despotism is to be entirely unearthed and overcome by the strong nerves and ready talk of the domestic Rothery Conference, it may return into the unseen regions, and remain there till rediscovered by the advocate of Language *versus* Lymph for the entertainment of the next annual meeting of the speech-makers of the National Anti-vaccination League.

THE WORCESTER GENERAL INFIRMARY.

Peace once more reigns at the Worcester Infirmary. We are glad to say that the now long existing differences between the Medical Staff and the Executive Committee have been arranged, and harmony is restored. The dispute has terminated, as is so often—and well—the case, in a compromise; neither party being able to boast of an unqualified victory. We need not here again repeat the whole story of the quarrel, but it will be remembered that the medical staff have been contending for an alteration of one of the rules concerning the attendance of the honorary medical officers. They asked that the rule in question should be so altered as to permit that, in the event of the unavoidable absence of any one of the honorary medical staff from the Infirmary at the time appointed for his attendance, and of his failure to secure the services of a colleague, the House-Surgeon should attend to such out-patients as might be waiting to see the absent Physician or Surgeon; and they were willing to agree that "on every such occasion the particulars of such absence, and the reason for failing to comply with the rules, should be laid before the House Committee at their meeting." This most reasonable request the Executive Committee, as unreasonably, refused. The consequence was that a special general meeting of the Governors of the Infirmary was demanded, in order that the matter might be laid before them. Meantime, the executive tried to fill up the vacancy on the medical staff, but failed to get even an eligible candidate. This—and, we may suppose, a growing conviction that at least a large number of the governors would support the medical staff—brought the executive to a better state of mind; and at their monthly meeting on October 25 they agreed to recommend the addition to the disputed rule of a clause providing that, "In case of the unavoidable absence of the honorary medical officer and his substitute, the House-Surgeon shall attend to the out-patients of such absent officer." This authorised attendance of the House-Surgeon is the very point contended for by the medical staff; and, gaining this, they wisely made no objection to the following rider, proposed by one of the executive, viz., "and the House-Surgeon shall record the fact of his having done so in a book to be laid before the Executive Committee; and the honorary medical officer, when called upon to do so, may furnish such explanations, not in violation of professional confidence, as the Executive Committee may require." The rule thus revised and enlarged was proposed at the special general meeting on October 29, and unanimously carried. The small victory of adding the rider was a pleasure which the medical staff and their supporters did well to allow to the executive, for of course all the medical staff take office with the intention of performing all their duties as fully and exactly as possible, and can have no objection to justify any involuntary absence from the Infirmary on their days of attendance. Whether the alteration will, according to the expressed hope of one of the governors, be the means of renewing and keeping up that "harmony and conciliatory action between the Executive Committee and the medical staff, which had been the source of so much prosperity in the past," must

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depend very largely on the Executive Committee. If they, as gentlemen, and remembering the teaching of the past few weeks, will always meet their medical officers with the courtesy, consideration, and liberality that they themselves would desire and expect from others, all will no doubt go on smoothly and well. We heartily hope that it will be so.

We observe that, at the special general meeting, one of the governors complained of the manner in which the Executive Committee had been treated by the medical press. Under the circumstances, a desire for the kind of relief that may be derived from such an expression of feeling is so natural, that we certainly cannot think of making the smallest objection to it.

AFFAIRS AT WESTMINSTER HOSPITAL.

A WEEK or two ago we called attention to the extraordinary address of Mr. Cooke, the Senior Assistant-Surgeon at Westminster Hospital, on the occasion of his standing for the post of Surgeon to the same institution. That such an address or any appeal to the governors should be at all necessary, under such circumstances, is an anomaly, and we are not aware that it exists elsewhere than at Westminster. In other hospitals the Senior Assistant-Surgeon for the time being becomes, on a vacancy in the post of full Surgeon occurring, Junior Surgeon, and so on; but at Westminster this is not so. Nay, more, the practice has prevailed of resigning the post of Assistant-Surgeon before becoming a candidate for the senior post. Such a practice, except carried out with the greatest possible moderation, is fraught with elements of dissension and bad feeling, and we fear that these have been let loose in full flood on the present occasion.

If we are to take Mr. Cooke's address as accurate in its essential details (and certainly, though we invited contradiction, nothing of the kind has reached us, or has in any way appeared—for the so-called reply by one of the junior officers of the Hospital which appeared in another journal is unworthy of a moment's notice)—if, then, we are to accept these statements as true, we must go back for some time to reach the first beginnings of the present undesirable state of things. Some time ago a body was constituted (by what power does not appear), which called itself the Council of the Westminster Hospital Medical School, which seems to have had regular meetings, and to have kept regular minutes. There appears to have been a meeting of this body on September 24, 1874, of which, if we are to believe Mr. Cooke's uncontradicted address, the following minute was recorded:—"September 24, 1874. Special Meeting of Council.—The Dean having made some allusion to the great loss the school had sustained by the death of Dr. Anstie, both as regards the Hospital and the chair of Medicine, and to the movement on foot to contest the usual course of promotion, Dr. Gibb made a statement to the Council, wherein he mentioned his desire and intention of retiring in twelve months if his present promotion was not opposed. It was proposed and seconded, and carried, 'That the handsome offer of Dr. Gibb, in the interests of the school, be accepted, and that those present pledge themselves not to oppose that gentleman's election.'" Was anything more extraordinary ever brought before the public and the profession? By what name would such an agreement be called in ordinary every-day life? A set of colleagues promising to support another, and not to oppose him in what most people would call his just rights, on condition that he should retire within a twelvemonth, to make room for one of their number, and give a step to all the juniors on the medical side! We have heard much of disagreements among hospital physicians and surgeons, but we do not think we have ever heard of such a state of things as here disclosed. And see what it introduces. No man among the juniors is henceforward to hope for his promotion except he consent to give up the independence of thought and action which should be dear to all men! Truckling for a year or two's occupation of a post for which a successor is already indicated, is not a dignified position for any member of our profession. But what are we to say of the body which can turn round and thank a man for such conduct, and call it a handsome offer? The whole conception of such a scene is so full of littleness, and all that is debasing to self-respect, that we should be heartily glad to be assured that it never existed. When these things are reduced to the rude test of money, as is done in some places, a man knows what he has to expect; but for men, members of the staff of a general hospital and teachers of a medical school, thus to demean themselves, approaches nearly to an insult to the whole of their professional brethren.

All this has nothing to do with Mr. Cooke. Unfortunately for that gentleman, he seems to have fallen into the evil graces of that august body the Council of the Westminster Hospital School, and it reached his ears that they were prepared to serve him in the same way as they proposed to serve Dr. Gibb, only there was no loophole here as to a term of years. Driven to desperation, Mr. Cooke appealed to the electors, publishing what we have just cited, with other damaging statements, to not one of which, so far as we know, has there been any answer made. Many other things he inserted in his address which a wise man would hardly have done; but when a man is hard driven we cannot expect him at all times to exercise the highest wisdom. Howbeit, he made his appeal to the governors, and they have elected Mr. Macnamara in his stead. Not having resigned, however, he still holds the post of Assistant-Surgeon. There may have been sound reason for electing Mr. Macnamara instead of Mr. Cooke to be Surgeon to Westminster Hospital, and to the whole of this part of the subject we shall again direct attention. We are sorry that in so doing the governors seem to ratify the proceedings of the "Council," but we are still more sorry to hear that a member of the hospital staff should be so far left to himself as to bring forward a motion proposing that in all future cases resignation should be necessary before applying for a higher post.

THE HOSPITAL SUNDAY FUND AND PROVIDENT DISPENSARIES.

A TRANSACTION which cannot but be fraught with consequences of vital importance to the Hospital Sunday Fund has recently been recorded. The Haverstock-hill Provident Dispensary considered itself aggrieved by the smallness of the grant awarded to it by the Distribution Committee of last year. This amounted to £12 15s. 6d. Accordingly, this year they appealed to the local clergy, who, out of the sums collected in their churches, gave the Dispensary £70. Had the local clergy any right to do so? They had ample right to make a collection for any object they pleased, so long as their intention was distinctly expressed, but they had no right whatever to interfere with any money collected for a specific purpose, as was the Hospital Sunday Fund. This money was undoubtedly collected for the purpose of being sent to one special fund, and to no other; to be under the control of one special committee of distribution, and no other. In point of fact, the proceeding we refer to, though done with good enough motives, has an unfortunate resemblance to a process possessed of an ugly name, whereby one person's money is directed to another person's use. But by how much the better the Haverstock-hill institution is, by so much the worse are the hospitals and other medical charities; and we happen to know by personal experience that the district supposed to be provided for by this institution sends a formidable contingent of patients to several hospitals. There is a similar groan from the Royal Pimlico Dispensary; they desire that local wants shall be satisfied before any money shall be devoted to metropolitan uses. Were that to be the rule, we can easily reckon how

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much would go to the latter purpose. The sum would soon amount to £0 0s. 0d., for wants grow fast when there is an ample fund to supply them. But we would ask by what right the Royal Pimlico Dispensary would arrogate to itself the right of disposing of all the money which might be subscribed to meet the wants of the district which it is supposed to be prepared to supply? Are there not other provident dispensaries in the district, and are they to be overlooked? From the beginning we pointed out the evils of the so-called provident system, and we fear that the regeneration of mankind is not progressing rapidly, even at the low rate of twopence a week. The truth is, the dispensary system has had its day; the morality of dispensing a quinine mixture consisting of quassia, sulphuric acid, and water had better pass too.

THE WEEK.

TOPICS OF THE DAY.

THE recent outbreak of cholera at Simla has roused the Government to action. A Commission—consisting of Dr. Cunningham, Sanitary Commissioner to the Government of India; Mr. Smith, a superintending engineer from Bengal; and three or four other members—has been appointed, and is now sitting to inquire into the sanitary condition of the station. It would seem as though the founders of Simla had been satisfied with the pureness of the mountain air as a safeguard against the diseases of the plains, for, on the face of every hill, houses are piled one above another from the bottom to the top, and thus the drainage from the uppermost houses saturates and poisons the soil around those below them. In the very centre of the station, on the worst possible site that could have been selected for it, is placed a foul and crowded native bazaar; the principal thoroughfare leads through this bazaar, and everyone passing along it is exposed to the malarious vapours which such a locality must needs generate. The removal of this eyesore to a more distant and isolated situation will, no doubt, be one of the measures recommended by the Commission. The supreme Government are bound to hurry on whatever reforms the Commission may suggest, in order that their summer retreat may at once regain the character for healthiness which it undoubtedly possessed before the recent outbreak of cholera.

The Clerk of the Peace at Oxford has just placed a marble tablet at the outer entrance to the County Hall of that City, to commemorate a sad event which occurred 300 years ago. The inscription on the tablet is as follows:—"Near this spot stood the ancient County Hall, unhappily famous in history as the scene, in 1575, of the Black Assize, when a malignant disease, known as the gaol fever, caused the death, within forty days, of the Lord Chief Baron (Sir Robert Bell), the High Sheriff (Sir Robert Doyley, of Menton), and about 300 more. The malady, from the stench of the prisoners, developed itself during the trial of one Robert Jenks for scandalous words uttered against the Queen."

Last week a gentleman from the office of the *Morning Advertiser* waited on Alderman Owden, at the Guildhall Police-court, to ask whether some steps could not be taken to put a stop to a most disreputable and disgusting mode of obtaining money by demoralising means. A man styling himself a "doctor," and giving an address in the City, whenever a barmaid advertised for a situation, sent her a circular relating to certain disreputable quack medicines. The magistrate said he was afraid he could do nothing in the matter, because there was nothing before him which could be dealt with by the law. He would, however, place the documents in the hands of the police, and they would see if they could bring the man before the Court.

Mr. Griffiths, the Medical Officer of Health for Sheffield, in his report upon the sanitary condition of that town for 1874, makes the following remarks in reference to planting trees in streets:—"In the formation of new streets, and on the eve of the contemplated widening and alteration of old ones, it is to be hoped that an effort will be made to provide for the planting and establishment of trees wherever practicable. From a sanitary point of view, the benefits are of incalculable value; it has been asserted that the aggregate surfaces of the leaves of well-grown elm, lime, and sycamore trees, with their 6,000,000 to 7,000,000 leaves, equal about 200,000 square feet, or about five acres; and these are almost constantly absorbing and digesting the carbonic acid and various exhalations given off by the putrefaction of animal and vegetable matter, and, as if grateful for such support, return into the air pure oxygen, which re-invigorates and renews animal life. Trees thus remove poison from our midst, and to be without them is an oversight. Trees can be had which will exist, with suitable attention, in any part of the city." Just now public attention would seem to have been very generally directed to this question, and we hear it is in contemplation to plant trees in that very handsome thoroughfare, Portland-place.

The Liverpool Town Council has adopted a recommendation of the Health Committee for the immediate application of the Artisans' Dwellings Act. The scheme is for the improvement of the district called Nash-grove. It will include an area containing about 22,487 superficial yards, of which 3717 are laid out as public streets, and 18,770 are covered with low-class dwellings, and buildings or yards in use for trade purposes. The population of the district is at present about 1300, of which 1100 are of the working class. Most of the dwellings are in a bad sanitary condition; many of them are in a hollow much below the level of the neighbouring houses, and the drainage is generally old and defective. In order to make the scheme efficient for sanitary purposes, it is proposed to purchase or take compulsorily the whole of the property within the area in question, to remove the buildings and fill up the hollow to a proper level for building purposes. By a judicious arrangement of dwellings with the best sanitary conditions, a much larger number of persons will be able to be accommodated than at present, and an important street improvement will, at the same time, be effected. The net cost of the improvement is estimated at £60,000.

The vexed question of the retention or removal of Knightsbridge Barracks seems likely to be settled by the buildings themselves, which have recently exhibited an unmistakable tendency to come down upon the heads of their occupants. It is rumoured that the regiment stationed in them is to be removed to other quarters at once, and it will then be for the First Commissioner of Works to decide upon the steps to be taken for the reconstruction of these barracks. We presume Lord Henry Lennox has long since decided that it would not be expedient to seek another site, and if the whole block has now to be rebuilt, much of the objection which really existed against the old building will be at once removed.

The northern counties of this country have been generally distinguished for the quality of astuteness, yet it is singular to notice the mistaken feelings with which they evidently regard vaccination. An agitation has been going on in Leeds against this practice, which has culminated in a public meeting, held last week. The Mayor, who presided, stated that he had received a requisition to hold the meeting, signed by upwards of 500 persons. The following resolution, although somewhat disputed, was eventually carried: "That, in the judgment of this meeting, vaccination is an unprincipled, unscientific, useless, and pernicious practice; that the law which enforces the practice is a violation of political science, and an offence against the free Constitution of England; and that this meeting therefore pledges itself to use every legitimate means to free the country entirely from this unwise and

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despotic law." Another resolution was also agreed to, to the effect that the meeting sympathised with the Keighley Board of Guardians in their resistance to the existing law despotically administered by the Local Government Board.

The epidemic of typhoid fever on board the school-ship *Cornwall* still continues with but little abatement, although most of the cases are of a comparatively mild character. The authorities have obtained from the Port Sanitary Committee permission to send some of the boys to the hospital-ship *Rhin*, and from twenty to thirty are now being treated on board her. Several cases have been sent to St. Bartholomew's, and more to the Seamen's Hospital at Greenwich. The suggestion made by the Port Medical Officer, as to the conveyance of drinking-water from the shore to the ship, has been already adopted; so that if, as is supposed, the water-supply, or rather its mode of conveyance to the ship, was defective, a week or ten days ought to witness the decline of the epidemic.

It is very satisfactory to find that the ratepayers of St. James's-street have at last made a determined stand against the relaying of their thoroughfare with granite blocks. The wood pavement on Ludgate-hill and on the incline leading to London-bridge has now been down sufficiently long to justify an opinion as to its durability and general advantages; and the reports received upon it are said to be most favourable. From a sanitary point of view, the lessening of the noise and dust inseparable from the enormous traffic of our streets would be an immense gain, and we sincerely trust that the united Vestries of St. George's and St. James's will arrive at a sensible determination on the subject, now that so good an opportunity has presented itself.

At the last meeting of the Metropolitan Board of Works, the General Purposes Committee presented a report on the water-supply of the metropolis. The report advocates some very important changes. The charges for the supply of water are at the present time regulated by the annual value of house property, and are thus subject to periodical fluctuations, according as the value of house property is increased or diminished, whilst the consumption of water need not necessarily vary; moreover, the term "annual value" is open to much question, as it has never been judicially decided whether it is to be taken to mean "gross" or "net" value. It is, therefore, desirable that the whole subject should be submitted to Parliament in the next session, more especially as there is reason to believe that the valuation-lists of metropolitan property, which will come into force next April, will show a very large increase in the value of house property. It is also suggested that the consumer should have the important option of being supplied by meter, which would have the effect of regulating more accurately the quantity of water consumed, and also of preventing the enormous waste which at present exists. The following recommendation was then put, and almost unanimously carried:—"That the Board do introduce a Bill into Parliament to alter the terms on which water is supplied to the metropolis, the existing basis (annual value) having been found to be uncertain in terms and unequal in results, and the water companies claiming to charge a higher rate when there has been no increased consumption; also, to provide for the right of the consumer to be supplied by meter, and generally to make such amendments as the circumstances of the metropolis may require; and, further, that the solicitor be instructed to retain such legal and scientific assistance as may be requisite in connexion with the Bill."

The Council of the Royal Medical Benevolent College had the gratification, at their last meeting, of receiving a donation of ten guineas to the funds of the institution from Mr. W. Johnstone, lately one of the foundation scholars. Mr. Johnstone, having passed highest in his year, in the first class, the matriculation examination of the University of London, obtained a free medical scholarship at that University, and one of the Carr Exhibitions of £50 a year for three years. Having just obtained his qualification to practise medicine, he sent the donation above mentioned to Epsom, "as an acknowledgment of what he owed to the Royal Medical Benevolent College, and the benefits he had received through the Carr Exhibition."

We regret to announce the death of Mr. John Hamilton, of Dublin, at the age of sixty-six years. The melancholy event occurred on the morning of Tuesday, November 2, at Mr. Hamilton's residence in Merrion-square, Dublin. We hope to give a short obituary notice of the deceased gentleman next week.

THE SALE OF FOOD AND DRUGS ACT, 1875.

A CIRCULAR has recently been issued by the Local Government Board, calling the attention of county authorities to the Sale of Food and Drugs Act of last session, which came into force on the 1st ult., and which repeals the similar Act of 1872, together with the Adulteration of Food and Drink Acts of 1870, and Section 24 of the Sales of Poisons and Pharmacy Act of 1868. Amongst the amendments effected in the previous law, it may be mentioned that by Section 10 express power is now given to the Local Government Board to require, in the case of any future appointment of an analyst, satisfactory proof of his competency; they are, moreover, empowered to qualify their approval by such modifications with respect to the period of appointment and removal, or otherwise, as they may think proper. It is, however, to be distinctly understood that these provisions do not in any way relieve the local authority from the responsibility of satisfying themselves that the person appointed is duly qualified for the office. Further, no analyst is to be appointed for any place in which he is directly or indirectly engaged in any business connected with the sale of food or drugs. The late Act laid down that every analyst should possess competent medical, chemical, and microscopical knowledge; the new Act requires that he shall possess competent knowledge, skill, and *experience*. The Town Council of any borough may engage the services of the analyst of the county or any neighbouring borough, and it is hoped that local authorities will freely avail themselves of this new power. Section 13 requires that the analysis of articles shall be made with all convenient speed; and a form of certificate is prescribed which requires the analyst to state the parts or percentages of the foreign materials, but he is at liberty to express an opinion as to the purpose for which the mixture was made, and whether the ingredients are injurious to health. Another important amendment will be observed in Section 14, which requires the purchaser to notify to the seller his intention to submit the article purchased for analysis, and to offer to divide it into three parts, each to be marked and sealed up. Samples need no longer be personally delivered to the analyst, but, under certain reservations as to distance, may be forwarded by post in accordance with regulations laid down by the Post-office. An important amendment in the law will be found in Section 21, which enables a defendant to tender himself and his wife to be examined on his behalf. The foregoing are some of the most important amendments effected by the new law, and it will be seen from them that whilst much has been done to afford such protection to the trading community as was considered reasonable, something has also been done to render the law more stringent and effectual in the interest of the public.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following very important modification of the constitution of the Examining Board of the Royal College of Surgeons has, we believe, been finally agreed upon:—There will now be two bodies, the one termed the Board of Examiners in Anatomy and Physiology, the other the Court of Examiners on Surgery.

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The Board of Examiners in Anatomy and Physiology shall consist of nine members to be appointed by the Council to conduct the examinations in anatomy and physiology for the Membership and the Fellowship of the College. The examiners shall be elected from the Fellows of the College. One member, at least, of the Board shall be a member of the Court of Examiners, and shall act as chairman of the Board; and in the event of more than one member of the Court being also a member of the Board, the senior of such members of the Court shall act as the chairman of the Board. The Examiners in Anatomy and Physiology shall be elected annually. An Examiner in Anatomy and Physiology shall not hold office for more than five consecutive years, but after an interval of one or more years shall again be eligible for election. A committee of three members of the Council shall be annually appointed, to be entitled, together with the President and Vice-Presidents, "The Committee on Examinations in Anatomy and Physiology." At least two of the members of the "Committee on Examinations in Anatomy and Physiology" shall be or shall have been members of the Court of Examiners. The duties of the "Committee on Examinations in Anatomy and Physiology" shall be to consider applications from candidates for the office of Examiner in Anatomy and Physiology, to report thereon to the Council, to recommend the candidates deemed fittest for election, to be visitors of the examinations in anatomy and physiology, and to make representations and recommendations to the Council respecting the examinations. The members of the Council appointed as members of the "Committee on Examinations in Anatomy and Physiology" shall be ineligible for the office of Examiner in Anatomy and Physiology. The regulations as to the Court of Examiners are not yet published.

ROYAL COLLEGE OF PHYSICIANS.

At the Comitia of the College of Physicians, on October 28, a letter was received from Dr. Charles Mayo, Government Medical Officer, Fiji Islands, offering to make a special investigation into the alleged immunity of that group of islands from fever. It was decided to accept Dr. Mayo's offer, and to request him to furnish the College with particulars respecting the recent epidemic of measles. A letter was received also from the President of the Royal College of Surgeons, proposing that a conference should be held of representatives of the several universities and colleges engaged in the formation of a "Scheme for an Examining Board for England," and suggesting that each body should send two representatives. The College acquiesced in the proposal, and appointed the ex-President and their Registrar to attend the conference as their representatives. Drs. R. H. Semple, G. F. Burder, C. A. Adey, J. B. Montgomery, H. Fearnside, D. H. Tuke, W. S. Falls, W. Matterson, Stephen Monckton, R. Thorne Thorne, A. B. Shepherd, W. Miller Ord, and W. H. Corfield, having been elected at a former Comitia, were formally admitted Fellows of the College. Drs. D. J. Leech and G. E. Herman having passed the necessary examination, were admitted Members of the College; and Dr. Richard Hassall, an extra-licentiate, was elected a Member under the by-law of February 16, 1859. And it was announced that in the year 1876 the Gulstonian Lectures would be delivered by Dr. A. B. Shepherd, the Lumleian by Dr. Habershon, and the Croonian by Dr. Dickinson.

A NOVEL SANITARY SUGGESTION.

There exists in Dublin an intolerable nuisance, against the maintenance of which the Volunteer Sanitary Association of tha city has been inveighing for years. We refer to a lane, called Maclean's-lane, situated in a densely populated district ear the Coombe. This lane is bordered on both sides by a series of yards used for storing manure. After many futile prosecutions of the dealers in manure by the Public Health Committee of the Corporation, matters were brought to a climax in the Southern Divisional Police-court on October 13, when Christopher Daly, of Maclean's-lane, an ash-pit cleaner, and several men in his employment, were prosecuted by Sanitary Inspector Halligan for creating a nuisance in Maclean's-lane, by accumulating manure-heaps in their yards. It appeared that the defendants were in the habit of depositing the contents of all the dust-holes and ash-pits they emptied in their yards until a sufficient quantity had been accumulated for disposal to manure purchasers. This the sanitary inspectors stated was prejudicial to the public health of the district. Mr. Boyle, C.E., and Dr. Mapother attended on behalf of the Public Health Committee. The former suggested that the magistrate should make an order requiring the defendants to mix the manure accumulations with coal-ashes and road-scrapings, which are deodorisers, and would counteract the prejudicial influence of the nuisance. Dr. Mapother concurred in this view. Mr. Rynd, on the part of the defendants, undertook to adopt the remedy, and the case was allowed to stand for four weeks. To those who know what the road-scrapings of "dear, dirty Dublin" are like, and what the value of ash-pit manure is—not to say anything of the nuisance arising from the stirring up of the manure in the process of mixing and deodorisation,—this solution of a sanitary difficulty suggested by an officer of a sanitary authority must seem as extraordinary as it will surely be inoperative.

THE CAMBRIDGE CERTIFICATE IN STATE MEDICINE.

The following is the form of certificate to be given to candidates who pass both parts of the examination in State Medicine, viz.:—"Know all men by these presents that —— having been duly examined by ——, the examiners in that behalf appointed by the Chancellor, masters, and scholars of the University of Cambridge, and having approved himself to the aforesaid examiners by his knowledge and skill in sanitary science—to wit, in chemistry and physics, in the causes and prevention of epidemic and infectious diseases, and in the means of remedying or ameliorating those circumstances and conditions of life which are known to be injurious to health, as well as in the laws of the realm relating to public health—is certified to be well qualified in respect of his knowledge and skill aforesaid to fulfil the duties of a medical officer of health, in testimony whereof the Vice-Chancellor of the said University, by the authority of the said Chancellor, masters, and scholars, has hereto set his hand and seal," etc. The following gentlemen have been examined and approved in both parts, and will receive a certificate, of which the above is a copy, viz.:—Messrs. Peter Hinckes Bird, F.R.C.S. Eng.; T. Britton, M.D.; A. Carpenter, M.D.; J. Cunningham, M.B., C.M.; S. Drew, M.D.; A. Dunlop, M.D.; B. N. Earle, M.B.; G. H. Fosbroke, M.R.C.S.; C. Harrison, M.D.; W. McBeath, M.D.; H. H. Mason, M.R.C.S.; J. Morison, M.D.; E. Nicholson, M.R.C.S.; H. H. E. Phillips, M.D.; C. E. Saunders, M.D.; S. T. Steele, L.R.C.P. Edin.; E. H. W. Swete, M.D.; G. Turner, L.R.C.P. Lond.; and A. S. Underhill, M.B., C.M. Mr. J. Simpson, M.D., was examined and approved in Part I. only. The next examination for a certificate in State Medicine will be held June 13, 1876, and any gentleman whose name is on the Medical Register may present himself for the examination, provided he has reached the age of twenty-four years.

THE BRITISH MEDICAL DEFENCE ASSOCIATION.

A meeting of the Provisional Committee of the British Medical Defence Association was held on the 29th ult., when Mr. George Brown, the hon. secretary, reported that since the last meeting he had sent out about 1500 copies of the "Preliminary Circular Letter" to members of the medical

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profession residing in the metropolis. The replies, although not numerous, were of a very encouraging character, and sufficient to indicate that the Association would be well supported. The East London Branch was in good working order, and had already accomplished a great deal of good by prosecuting visiting and prescribing chemists under the Apothecaries Act. In three cases of unqualified practice penalties of £20 had been recovered. Branches were in course of formation for North and West London, also in Durham, Newcastle-on-Tyne, the Forest of Dean, and other places in the provinces. A letter was read from the Honorary Secretaries of the South London Medico-Ethical Society, in which it was stated that the members of that body were willing to become a branch of the British Medical Defence Association, and would transfer its funds to the parent society. The Secretary was requested to acknowledge the receipt of the letter, and to say that the Committee learnt with pleasure that the South London Medico-Ethical Society had determined to amalgamate with the Defence Association. It was decided to hold a general meeting of medical practitioners, to discuss the affairs of the Association, on the 30th inst. Due notice as to time and place will be advertised in the medical papers.

PROVINCIAL MEDICAL SCHOOLS.

THE annual return of the number of gentlemen pursuing their professional studies at the eight provincial medical schools recognised by the Council of the Royal College of Surgeons has just been made to Dr. J. W. Ogle, the Government Inspector of these establishments, as follows:—

	This Year.	Last Year.
Owen's College, Manchester	119	142
Liverpool Infirmary	63	72
Queen's College, Birmingham	59	72
Leeds School of Medicine	45	45
Cambridge University School	36	44
Durham University School	28	37
Bristol Old Park Medical School	31	26
Sheffield Medical Institution	17	15
Total	398	453

This return shows a decrease of fifty-five students at the provincial schools this session from the last, whereas at the eleven metropolitan hospitals it has increased from 1745 last session to 1769(a) this year, showing an increase of twenty-four more students.

OVER-BUILDING IN GLASGOW.

WITH the view of checking the system of over-building, which is going on largely in Glasgow at present, a report has just been submitted to the Health Committee by a sub-committee of that body. In this report it is recommended that all dwelling-houses of four storeys in height should have in front a street seventy-five feet wide, and a back space of forty-five feet; all houses of three storeys a front street sixty feet wide, with a back space of thirty-five feet; all houses of two storeys a front street forty feet wide, with a back space of twenty-five feet; and all houses of one storey a front street twenty feet wide, with a back space of fifteen feet. It is also recommended that the ceilings of dwelling-houses should not be less than ten feet in height, and that all staircase windows should be open at the top for ventilation. Though these regulations apply to dwelling-houses only, it is proposed that they should also include other buildings which may be converted into dwelling-houses. It is also recommended that the Home Secretary should be applied to for a provisional order to carry out these regulations in the form of by-laws.

(a) It will be observed that this represents a few more than published a fortnight since, the President having allowed these exceptional cases. It includes also five more new entries, one to each of the following hospitals:—St. Bartholomew's, St. George's, University College, the Middlesex, and the Westminster.

DISTRIBUTION OF THE HOSPITAL SUNDAY FUND.

ON Monday last a meeting of the Council of the Hospital Sunday Fund was held at the Mansion House, for the purpose of receiving and considering the report and awards of the Committee of Distribution for the present year. We have not space this week to record the details of the meeting, but we hope to be able on a future occasion to give all the particulars. The recommendation of the Committee was that £22,945 12s. 11d. be granted to seventy general and special hospitals, and four institutions; and £2531 0s. 2d. to forty-seven dispensaries.

Amongst the awards to the general hospitals are the following:—Charing-cross, £797 10s.; French, £108 15s.; German, £601 1s. 6d.; Great Northern, £286 19s. 8d.; King's College, £1266 13s.; London, £2404 13s. 4d.; Metropolitan Free, £280 6s. 8d.; Poplar, £314 3s. 4d.; Royal Free, £531 13s. 4d.; St. George's, £2175; SS. John and Elizabeth, £151 0s. 10d.; St. Mary's, £954 11s. 8d.; Seamen's, £845 16s. 8d.; Middlesex, £1741 1s. 8d.; University College, £930 8s. 4d.; West London, £338 6s. 8d.; Westminster, £725. A discussion ensued after the reading of the report was concluded, in which some very dangerous opinions were expressed on the subject of a right of appeal to the Council, on the part of any of the institutions feeling themselves aggrieved by the awards of the Distribution Committee; but, in the end, the report was adopted with the understanding that, in future, documents of such importance were to be circulated among the members of the Council a week before the day of the meeting.

THE VIENNA UNIVERSITY.

A COMMISSION appointed in January, 1875, to examine the condition of the Vienna University, has just issued its report, which contains some interesting details as to the Medical Faculty, a few of which we here reproduce.

The teaching staff consists of 111 persons—*i.e.*, of twenty-two ordinary and thirty-two extraordinary professors, and fifty-seven *privat-docenten*, or independent tutors. Only two of the professors (Billroth and Brücke) have been "called" from abroad, the rest are all of Austrian nationality.

The nine laboratories and fifteen clinics belonging to the Medical Faculty receive a total annual endowment of 13,039 florins (a florin equals about two shillings). The highest sum received by any professor is 2058 florins (about £200), while the two professors of aural surgery only get 100 florins apiece!

Since 1870 the number of students has, from some unexplained reason, steadily diminished, whereas from 1865 to 1870 it had steadily increased. Thus, in the winter session of 1864-65 there were 708 students; in that of 1869-70, 1470; and now, again, in 1874-75 the number is 877. In order to give larger opportunities to the rising medical generation in Austria for educating themselves, and for qualifying themselves for important positions in the future, the Commission advises, not only an increase in the number of posts open to assistants in the existing institutions, but also an increase in the number of German-speaking medical faculties in Austria. At present there are only five chairs of anatomy in the four German(a) universities of Austria, and only four chairs of physiology, materia medica, pathology, and forensic medicine respectively. An aspirant to any of these chairs must therefore either wait fifteen or twenty years until he gets it, or take the chance of being called to some foreign university.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE usual general meeting of this Society was held on the evening of Friday, 29th ult., by the liberality of the Royal

(a) By German are here meant those universities in which the German and not the Hungarian or Bohemian language is the educational medium.

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Medical and Chirurgical Society, in their library. Sir George Burrows, Bart., President, took the chair punctually at half-past eight o'clock. The attendance was very limited; out of more than 400 members, only ten were present to support the President, and four of the ten were officers of the Society. Although it may be very complimentary to the officers, as showing how satisfied the members are with the management, still it would be more gratifying to them if the members would attend at the general meetings, and manifest an interest in the workings of the Society. From the half-yearly statement of accounts read, it appeared that during the last half-year fifty-eight widows and twenty children had received grants amounting in the aggregate to £1236 10s. The expenses had been £130 11s. 5d., which sum included the cost of the circular in the beginning of the year to all members of the profession eligible to become members of the Society. The total receipts for the half-year available for payments had been £1598 10s., and the payments £1367 1s., leaving a balance of over £200. A legacy of £1500, less duty, had been received from the executors of Alexander Barker, Esq.; and a legacy of £100, less duty, from the executors of T. F. Chilver, Esq., a member of the Society; and another legacy of £1000, duty free, was reported from the Rev. H. C. Morgan. Sir Thomas Watson, Bart., and Dr. Billing were elected Vice-Presidents, in the places of Dr. Latham and Sir Charles Locock, Bart., both deceased; and Mr. Streatfeild was elected a director, in place of the late Mr. Sercombe. It was announced at the meeting that the directors intended, out of the balance in hand, to make a present at Christmas of £4 to each widow, £1 10s. to each child, and £4 to each of the recipients from the Copeland Fund. The meeting closed at about half-past nine o'clock with a vote of thanks to the President for his attendance at the meeting.

DEPUTATION TO THE LOCAL GOVERNMENT BOARD.

A FEW days ago a deputation of guardians from the Islington Board waited on Mr. Sclater-Booth, President of the Local Government Board, to endeavour to obtain his consent to the appointment of Mrs. Sustins, the present matron of the workhouse, to the additional and now vacant post of matron of the infirmary. Such an arrangement would be in direct contravention of an order of the Board by which the infirmary is required to be kept quite distinct from the workhouse; but the deputation urged that Mrs. Sustins' qualifications were of such a high order that the usual regulations might be held in abeyance. The President seemed to upset the calmness and assurance of the deputation by asking them if, in the event of such an arrangement being permitted, they could always rely upon finding a person of such singularly befitting qualifications of disposition and mind as the person they were now so anxious to serve. One cannot but feel surprised that the guardians should go before the President of the Local Government Board on such a mission. The two offices require totally different qualifications, and, if the duties of each are to be performed satisfactorily, should be held by different persons; and we trust that Mr. Sclater-Booth will not be induced to depart from the principles which have hitherto guided the Board in such cases.

ROTUNDO LYING-IN HOSPITAL, DUBLIN.

DR. GEORGE JOHNSTON'S term of office as Master having expired, the election of a new Master is about to take place probably it will have occurred before this paper reaches our readers' hands. It is considered in medical circles in Dublin that the claims of Dr. Lombe Atthill as a candidate are paramount. He is the Vice-President of the King and Queen's College of Physicians, and is well known as a successful teacher and lecturer, and his admirable text-book on the Diseases of Women has gained for him a reputation both at home and abroad. Dr. Johnston, the outgoing Master, has contributed largely to the practical and statistical literature of midwifery by the annual reports of the Hospital, which he has year by year communicated to the Obstetrical Society of Dublin.

THE MAUNSELL MEMORIAL FUND.

WE are happy to find that this most deserving movement has so far prospered. Already the sum subscribed in aid of it amounts to nearly £400. The profession in Dublin have given it their hearty and generous support, and it is to be hoped that their provincial brethren, for whom especially Dr. Maunsell laboured throughout his professional life, will follow their good example. Handsome subscriptions handed in by the Chief Secretary for Ireland, the Lord Chancellor of Ireland, and the Secretary of the Irish Local Government Board, testify to the appreciation in high quarters of Dr. Maunsell's worth. It should not be forgotten that it was owing chiefly to his untiring efforts that the obnoxious clause which obliged the Irish dispensary medical officer to examine dangerous lunatics "without fee or reward" was removed from the statute-book, and that under the Irish Lunatic Asylums Act (1875) the said medical officer is entitled to a fee.

THE DISCOVERY OF INFANTS' BODIES AT SOUTHAMPTON.

WE are glad to find that the Government have decided to prosecute in the case of the Southampton undertaker on whose premises some fifteen or sixteen infants' bodies were recently discovered in an advanced state of decomposition. It is far from satisfactory to know that undertakers can conceal on their premises, for an indefinite period, the bodies of children entrusted to them for burial. Decency, as well as sanitary considerations, demand that the possibility of the recurrence of such scandals should be prevented; and although the subject is beset with difficulties, we trust that the Legislature will place such power in the hands of municipal authorities as will enable them to exercise strict supervision over all who are engaged in business as undertakers.

ST. ANDREWS GRADUATES' ASSOCIATION.

UNDER this revised name the St. Andrews Medical Graduates' Association has been re-constituted. The council is actively engaged in promoting the re-election of Dr. Richardson, F.R.S., as Assessor of General Council in the University Court of St. Andrews—an office which has fallen vacant by the resignation of Patrick Anderson, Esq. Dr. Paul is honorary treasurer, and Dr. Leonard Sedgwick honorary secretary.

AN IMPROVED METHOD OF DETECTING SUGAR IN THE URINE.

IN the new edition of his work on Diabetes, Dr. J. Seegen recommends a modification of Trommer's test, which consists in filtering the suspected urine two or three times through animal charcoal, and then washing out the latter with a very little distilled water. To this wash-water Trommer's test is applied in the usual way. Very small quantities of sugar can be detected with certainty thus, for the wash-water is generally as sensitive to the test as an aqueous saccharine solution—that is, much more sensitive than the corresponding urine, in which the reaction of the sugar is impaired by the presence of other constituents.

BUCKTHORN AS A PURGATIVE.

UNDER the title of "A Pleasant Aperient," Dr. Reich, of Stuttgart, strongly recommends (*Berl. Klin. Woch.*, No. 41) a tincture of rhamnus frangula, of the following composition:—℞. Corticis rhamni frangulæ 25·0 grammes; boil with sufficient spring water to give 150 gr.; on straining, evaporate to 25 gr., and add 20 grs. spiritûs vini rect. The dose is from one to four teaspoonfuls in a little water at bedtime. Usually two spoonfuls suffice to produce a single pulpy motion. The

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use of the drug may be continued, if necessary, for a considerable time. (*Cf.* Ogilvie, *Medical Times and Gazette*, February 6, 1875.)

GLASGOW UNIVERSITY.

The Opening of the Medical Session.

The medical session of Glasgow University was formally opened on the 26th ult., with an introductory address by Dr. G. Buchanan, Professor of Clinical Surgery, in the lower hall of the museum. Principal Caird occupied the chair, and beside him on the platform were nearly all the professors, while the body of the hall was well filled with students.

Dr. Buchanan took the opportunity, which his lecture afforded, to welcome, in the name of his colleagues, the students to the University, and expressed the hope that ere they parted at the close of the session, to that respect which ought always to be entertained by students for their professors might be added that confidence and warm feeling which was the privilege of true friendship. He remarked that upon the senior students devolved a great responsibility. He did not hesitate to say that the value of the session would depend very much on how they conducted themselves. The 300 old students would have a most important influence on the study of the juniors by their conduct and example; while the 100 junior students would have no effect on their seniors. He consequently appealed to the latter, by their love of the University, and by their hope of success in future life, to show such an example that the session would not fall behind, but would even excel, in the diligence of the students. He expressed sympathy with those who were attending the class for the first time, for he could easily understand the feeling of dismay with which they would look at page ninety-nine of the Calendar, where there was set forth the amount of study required of them before leaving the University. Most students on entering college were comparatively ignorant, if not altogether so, of medical science; and between that day and the time, four or five years hence, when the Principal would place upon their heads that much-coveted velvet cap, they required to undergo a very remarkable metamorphosis. The only way to obtain the requisite information within the period was by using as their talisman the three words—regularity, method, and economy of time. Dr. Buchanan then went on to say that medical science or medical study might be divided into two great parts, that of the principle and that of the practice of the healing art. The latter was certainly the aim of all medical education, but in order to a sound practice, a man must be well acquainted with the principles of his profession, and hence he maintained that the grand object of the student in attending the University was to store his mind with these principles. The foundation-principles of the science were chemistry, anatomy, and physiology. Chemistry was a fascinating science, but he was afraid there was a tendency on the part of students of the present day in the study of it to substitute ideas for things, and some were able to emit correct answers to chemical questions in hieroglyphics of which they could hardly expound the signification. It was better for a student to know well, and to be able to handle a few substances, than to make any number of figures of which he did not thoroughly comprehend the meaning. As to physiology, he called upon the junior students to use their powers of observation, and of reasoning upon that observation, and suggested the formation of a microscope club for the carrying out of this object. He alluded to the benefit to be derived from the construction of theories to account for observed facts, and said there was no more beautiful example of a theory almost proved, but still waiting corroboration, than the germ theory of putrefaction. Then, of the studies that engaged the attention of students, if there was one more important than another it was anatomy. It was almost the only one that had this peculiar characteristic, that upon the day the students got their degrees they were supposed to have a knowledge of the subject. After leaving the University, however, their advance in the practical branches would make them forget what they had learned of anatomy, and he asked them, therefore, to give this science their best attention during the time they attended the classes. He cautioned them against preparing, not for what was to occupy their whole life, but simply with the view of passing their examinations. It would be of great advantage if another year were added to the curriculum, whereby the students could be allowed to attend the University for that time after they had successfully undergone their final examinations. Acquisition, he said, was the result of years of earnest and laborious study; and, although there were many difficulties in the way, the students should only think of them with the determination to master them—not to succumb. When fairly engaged in active duty, they would rarely find a medical man who would exchange his profession for any other. If the highest triumph of man's genius were to save a fellow-creature from destruction, how pleasing the reward which they would reap in the grateful thanks and untold blessings of the affectionate wife to whom they had restored a much-loved husband, of the fond parent to whom they had rendered back a darling child, of the faithful companion for whom they had regained a much-valued friend. It was in this view that they were to regard the true aim of medical science, and in this aspect that they were to estimate its rewards.

Dr. Buchanan during his address was frequently applauded. The students, who up to the time of his commencing had been somewhat boisterous in their mirth, listened to his remarks with earnest attention.

ANDERSON'S UNIVERSITY.

Opening of Medical Classes.

The opening lecture of the medical winter session of Anderson's University was delivered by the Dean, Dr. Alexander Lindsay, Professor of Medical Jurisprudence.

Professor Lindsay said he would direct the attention of his hearers to three of the general conditions that rule the world of matter—viz., the law or condition of diversity; the law or condition of economy; and the law or condition of unity. He pointed out the prevalence of the law of diversity on the surface of the globe, in the waters on that surface, in the ocean, and in the clouds. Examples of the same law were quoted from the vegetable and animal kingdoms. These diversities are still more marked if we compare one climate with another. And we have not only diversities in space, but diversities in time—night following day, and the seasons succeeding each other in order. After referring to the exhibition of the same law in the past history of our globe, the lecturer went on to speak of the second law—economy. This signifies simply that we have the greatest possible results following from the fewest possible means. The diversities to which he had directed their attention in the movements of the water and of the clouds are all accomplished by only two forces—gravitation and heat. Again, in the organic world, if we take the tissues of animals or vegetables, we find only three or four elementary bodies that are held to be essential in them. But economy is found where we least expect it. We find economy in plan. Vegetables are all formed on modifications of a few general types, and the same is the case in the animal world. As examples from the animal world, the lecturer directed the attention of his audience to the varieties of form in which the vertebral column was the type: and, again, to the contrast between the varied purposes served by the anterior extremities in some of the lower animals as compared with each other, and with the upper extremities in man. Entering upon the consideration of the third law—unity—Dr. Lindsay first referred to matter, pointing out its properties, which were unvaried, no one kind of matter passing into or assuming the properties of another. He next directed attention to energy, speaking of it in action and as potential or latent. He described shortly the integral parts of the great whole in which this law of unity displays itself, speaking first of the globe, then of the waters of the earth, particularly referring to the changes going on throughout the world. He illustrated this by referring to the tumbler of water which he held in his hand. It was not beyond imagining to suppose that the water had at one time laved some coral strand, cooling the feet of some dusky beauty, might then have fallen as a snowflake within the Arctic circle, seemingly dead till returned as an iceberg; that this, melted in the sun's embrace, set the water again free, which, in the joyousness of its freedom, danced merrily in the moonbeams, again ascended into the air, taking now a new direction, and as a dark cloud was seen amid the flashing of lightning and the noise of thunder to fall in torrents in one of our most beauteous Scottish lakes, whence by the ingenuity of man it was brought to the centre of our city, and was now about to play a new *rôle*—one physiological

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—in wetting the parched lips of the speaker now addressing them. He then spoke of the air, plants, and animals, and directed attention to the constitution of the sun. He next referred to the action of the waters upon the earth, as waves, rain, etc. He then pointed out how the denudation process so occurring was counteracted. The part played by the vegetable was then referred to, which he showed was the storer-up of the potential energy of the sun, which again was set free by the animal in the form of nervous and muscular energy, etc. He concluded his address by referring to medicine, recommending the students present to cultivate their mental powers, their moral nature, and their spiritual aspirations.

The lecturer was frequently applauded, and at the close a hearty vote of thanks was awarded, on the motion of Dr. Perry.

FORESHORES OF RYDE AND COWES, ISLE OF WIGHT.

I BEG to draw the attention of those interested to the present insalubrious state of the sea-beach in front of Ryde and Cowes in the Isle of Wight, which have now attained a sufficiently obnoxious prominence to be considered nuisances. These towns are both on the north shore of the island, and have populations of 11,260 and 6077 respectively, and have extensive mud-flats in front of them, exposed at low water in the Solent and Spithead sea-channels. These flats are covered at high water entirely by the tide, which flows and recedes from the westward at Cowes, and flows and recedes by the eastward at Ryde, and back again in the reverse way on its return. These banks may be from about one mile to half a mile broad at Ryde, and about half a mile to a quarter of a mile at Cowes, and are now covered with brown mud and marine vegetation, with various layers of blue and yellow clay lying beneath to a considerable thickness. Before these towns rose in population, these foreshores were sandy and pebbly, as may now be seen by going eastward or westward along the beach for about two miles beyond each place, where there is no mud deposited.

Now, when the wind happens to blow from the north over these banks into the towns, very offensive odours and vapours in hot weather are borne to the esplanades and strands and marine views, and may be perceived even up the main streets leading from the beach. This deposit of decomposable mud has been accumulating from the former want of comprehensive drainage, when the drains of each street ran down independently to the sea-walls, and emptied themselves there by open mouths. This has been attempted to be rectified in late years at Ryde by two common sewers, one on each side of the pier, taking some of the town sewage to the margin of low water in front. These have now played out their functions, and the mass of sewage has got beyond their carrying and distributing powers, so that it bursts out above and clings around the outlets, and is driven, therefore, backwards, on the flowing in of the tide, up to the towns.

At open sea-bathing places—as Brighton,—the plan has been adopted of carrying the main intercepting sewer along the shore to some distance below the town, in reference to the direction of the tidal current. This plan will have to be adopted for both Cowes and Ryde, and the outfall of the sewage removed to Nettleton Point for Ryde, and Gurnet Head for Cowes, by which each outfall would have the benefit of the receding tide to clear away the refuse.

The prodigious increase of population, streets, and houses in all seaside places of popular resort has far outgrown these direct means of drainage for sanitary purposes, which could only meet the increase laterally of the town by adding fresh direct drains outside the old ones.

The mud-banks at Cowes are also still further increased by the outflow of the Medina River into the Solent, which deposits there all the sediment and refuse brought down from Newport, and Parkhurst Barracks and Prison, situated towards the interior of the island.

The results of late experiments conducted at Glasgow on the influence of sea-water on the outflow of rivers, show that it is a much more active agent in precipitating the mud of river-water entering it than fresh water. The impurities, therefore, brought down by fresh rivers are deposited at once on the beach in front of the outfall, and do not float out to sea, as formerly supposed, and are therefore not carried away by the tides. This may easily be seen on the beach at Ryde and Cowes, which has become foul mud in front, but which may be found east and west further on a perfectly good and pure sandy stratum, though the rise and fall of the tide are very considerable, and the east and west current pretty rapid.

Now, the beaches on the Southsea sides and at Anglesea can be seen to be much cleaner, and the sea-water there much purer than on the northern coast of the Isle of Wight, and very little littoral deposit there taking place.

How is this to be explained, especially when we have the drainage and sewage of an enormous population of Portsmouth, Southsea, Gosport, and Fareham, amounting to 127,958, or eight times that of the opposite coast, passing along its surfaces, and not deposited. Here we may observe marked physical differences in the conformation of the beach, which is shingly and of rapidly descending slope, and that the exit of the harbour is composed of sea-walls.

These oblique banks, therefore, are not favourable for retaining sedimentary deposits, which require a much lower angle, so as to prevent them sliding off, as well as a more prolonged stay of the muddy water above them, to give time for precipitation.

Hence we are led to the suggestion that large portions of the Ryde and Cowes mud-flats should be taken in by an extensive sea-wall, and the enclosed space filled up and utilised; then the beach in front would become shortened and steeper, and assimilated to that at Southsea. In the reclaimed foreshore there would be ample space for the construction of a large intercepting sewer, both for rainfall and sewage, and for tidal or wet docks also, which are much needed, as the coasting shipping at present is obliged to be beached to unload cargoes, which are discharged into carts alongside them. This reclaimed esplanade will also give the opportunity for the formation of a long drive and promenade, and new streets for building, space for which is now much required at both places, as there is no more to be got along the coasts on account of private properties extending down to the sea-shores.

There is, in this case, no objection to be raised against such encroachments on the sea and tide on behalf of navigation, as the mud-banks already had prevented that. That some remedy for this obnoxious state of the Ryde and Cowes beaches is urgently required may be inferred from the fact that sea-bathing on them has been almost abandoned by visitors, who now resort to the cleaner shores of Southsea on the other side of Spithead, or to those of Shanklin on the east coast.

An additional reason for the embanking of the foreshores at Ryde is now furnished by the want of a railway pier separate from the promenade pier; and the same inconvenience will be felt by-and-by at Cowes, on account of the great increase of traffic, and the crowds of visitors and passengers obstructing each other on the landing-places. The Ryde and Ventnor Railway might then be brought straight down the valley to the east end of the strand, and thence be carried on to a pier of its own out to sea, to meet the through railway steamboats from Stokes Bay, and thus be enabled to abolish altogether the tramway running along the esplanade, and the great pier, and leave them free and unobstructed.

Both Ryde and Cowes appear to the travelled tourist to be lagging behind in modern improvements, as they look rather old-fashioned in the absence of a fine esplanade in front of their terraces of houses and hotels, made lively with carriages, horses, and pedestrians, as may be seen at Brighton and Southport, or Ostend and Blankenburg. There cannot exist any difficulty, in the way of engineering, finance, or navigation, against the adoption of some such improvements, as towns of much later date in origin, and less blessed with wealth, have already undertaken and completed such works as are now suggested, to constitute the material essentials of a prominent resort for pleasure and health.

W. T. BLACK, Surgeon-Major.

PROFESSOR DUMREICHER, one of the most respected surgical teachers at Vienna, has been obliged to get leave of absence for the winter session, owing to ill-health; at the same time it is a fortunate event that Professor Pitha, another surgical light, should have so far recovered from an illness which had laid him by as to be able to resume his duties.

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FROM ABROAD.

Prosecution of Illegal Practitioners in France.

M. Amédée Latour, the founder of the French Medical Association in 1858, reviewing (*Union Méd.*, October 19) its operations with respect to the suppression of illegal practice, observes that these at first were, perhaps, somewhat too energetic. However, the local branches, which then were so eager in pursuing all forms of charlatanism with the penalties of the law, after a while became hesitating and timid, and at last declined undertaking these prosecutions. Among the causes which are assigned for this change in procedure are the following:—First, the trifling penalty which is inflicted, a fine of a few francs not only being nowise deterrent, but sometimes, owing to the publicity obtained, acting as a profitable advertisement. Then the tribunals and officials usually show great indulgence towards the offenders, and are little disposed to enforce the law against them. This backwardness is especially exhibited with respect to the most diffused and most injurious of all the forms of illegal practice in France—that carried on by the religious congregations and priests. Against these powerful associations the medical profession receives no protection or assistance; and so serious has this grievance become, that the keeping up the necessary supply of medical practitioners is becoming difficult over a large portion of France, and will, if a remedy to the evil be not forthcoming, soon be impossible in the western departments. A third cause is found in the too easy discouragement of these local societies in face of the ridiculous fines inflicted. "But this is a characteristic of our race, and we ought not to impute to medical practitioners, any more than to any other classes of French society, that after an explosion of enthusiasm they are defective in tenacity and perseverance." A fourth cause is to be found within the medical body itself, which is divided in opinion upon the question of prosecuting illegal practitioners. There are even journalists who do not hesitate to cover with blame and ridicule the few societies which have the courage to carry on the war against illegal practice. These objurgations have had their echoes within the societies themselves, wherein the senseless doctrine of absolute liberty for the practice of medicine has had its defenders. However, some reaction seems to have taken place, and this has been much brought about by the zeal, talent, and devotion of the advocates employed by the Association, who have succeeded in getting adopted by the courts wherein these causes are tried the principle of the accumulation of penalties—so that the fine may amount to several thousand francs when a great number of infractions of the law can be proved.

Nursing of Infants.

In continuation of his lecture upon the Artificial Feeding of Infants (see *Medical Times and Gazette*, page 167), Prof. Buckingham publishes the abstract of another (*Boston Journal*, September 2) upon their nursing. After the statement that American women, though to all appearance in as good health, are much less able to nurse their children than Irish or German women of the same position in life, he goes on to say that if the breasts have not been seen before labour, they should always be examined before leaving the house. If this be done carefully, the nipples will be found of different colours, some being dark and others pale, or even pink. All nipples are liable to crack, especially if not washed and dried after nursing; but the darker they are, the less liable are they to crack, and a pink nipple is sure to be sore. It cracks easily; the blood is easily drawn through the skin, the epidermis appearing to be sucked off. The dark nipple may bear early suction without ill-effect; but the longer the child is kept from the pink nipple, the less suffering will there be for the mother. Prof. Buckingham does not believe that the breast may be hardened by drawing the nipples out during pregnancy by the pump, while he thinks that the practice sometimes induces abortion. Oiling the nipples is a better preparation for them than the application of borax and brandy. The brandy dissolves the oil out from the skin, and the borax forms a kind of soap with this oil—so that the remedy may even give rise to sore nipples itself. The nipples had better be left alone, or simply washed like other parts. The child is often recommended to be put early to the breast, on account of the supposed beneficial action of the colostrum; but it is very difficult to squeeze anything out of the breast for the first forty-eight hours after delivery. If the breasts are left alone until they begin to swell, nursing will then be commenced with most comfort to the woman and ease to the child. Some nipples will become sore, take what care we will; and some women bear pain much worse than others, so that nursing has to be suspended. As a shield the dark rubber nipples should be preferred, as the white ones irritate the mouth; and the long tube, with a glass shield at one end and a nipple at the other, although of use before the mother is able to sit up, should not be used continuously, as it is apt to become foul, and both mother and child may fall asleep while nursing, exhausting the one and disturbing the stomach of the other.

Prof. Buckingham is in favour of prolonged nursing, and would not wish a child fed before the first sixteen teeth are cut; and if the mother cannot nurse it so long, it should have no other diet than milk. Careful observation for years has confirmed him in this opinion; for although early deaths may be produced by other causes, the great majority of infants who die fall victims in their second summer, when the changes due to teething are going on, and their stomachs have been loaded with indigestible food. Many women have but little difficulty in drying up their breasts, and some find it difficult to furnish much of a supply after five or six months. The little that remains, however, if kept on, may be useful for a sick child to fall back upon when its stomach will retain nothing else. When weaning is determined on, let it be begun at night, and not when a tooth is irritating, and let the abstinence be positive. The better way is to separate the child, and if it cries it may be soothed with some cold water. It will probably, however, get very little sleep; but by the second night, if the mother has not yielded, half the work will have been done. The third night the child will probably sleep the whole time, or it will be satisfied with a drink or two of water. If the attempt at weaning is made by day, the fatigue of the mother will be likely to render her so sleepy at night that she will probably yield, and both will be "used-up" by the morning. Too sudden a change of diet should not be made after weaning, the various articles being each tried singly in succession for a few days, in order to ascertain which is most suitable for digestion. Drying up the breasts when they furnish an abundance of milk is sometimes a painful process, whether attempted before the child has touched them or after nursing for two years. The best plan is to let them alone. The pain will be great for a day or two, but before the end of that time the milk will begin to drip, and will become watery; and as soon as the demand ceases the supply will stop. The greatest curse here is the breast-pump. If the pain be excessive, three or four doses of one-fifteenth or one-twelfth-grain of morphia may be given at intervals of an hour or two; but if the breast be drawn with the pump, the continuance of the pain and risk of abscess are increased. The best chance of preventing a broken breast is to leave it absolutely alone. Abscess of the breast, when threatening, cannot be stopped by leeches. If there is only hardness, with pain in the gland, suckling should be stopped from that breast, the child only resorting to the other; and if this precaution do not suffice, the breast may be strapped with adhesive plaster, with as few wrinkles as possible, the straps remaining on until the hardness has gone or the matter comes to the surface. The support is grateful, and the parts are kept warm and soft without the weight and uncleanliness of a poultice. If the strapping has to be removed, this may be done easily in an hour by laying a folded cloth wrung out in warm water over it, or by rubbing a little lard or oil over the plaster, so as to soften it. We should not be in too great a hurry in resorting to the knife; and the best after-dressing for twenty-four hours will be the wet towel, then followed by simple cerate or lard.

The abstract concludes with some rules for the selection of wet-nurses and their diet; but although these are marked by the good sense characteristic of the lecturer, they do not differ sufficiently from those usually accepted to call for notice.

Digestive Power of the Gastric Juice in Dyspepsia.

In a paper bearing the above title, read at the meeting of the German *savants* at Graz (*Wien. Med. Zeitung*), Prof. Leube, of Erlangen, observed that it is well known that, in order to render the process of digestion regular, a certain amount of the two constituents of the gastric juice—hydrochloric acid and pepsin—must be present, dyspepsia resulting where this is not the

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case. He has convinced himself that in the majority of cases in which this is produced a deficiency of the acid is the cause of such disturbance of digestion. A very minute quantity of pepsin will suffice for the digestion of a large amount of albumen, provided a sufficient quantity of acid be present; but for the actual demonstration that the deficiency of the acid is the cause of the difficulty, properly directed experiments have hitherto been wanting. Prof. Leube has, however, contrived a simple procedure for this purpose. Having prevented the person to be experimented upon from eating anything the previous evening, next morning he washes out the empty stomach with some lukewarm water, which is found to be in a clear and neutral condition. About 750 grammes of barley-broth (*Graupensuppe*) are then administered, care being taken that the individual does not masticate, so that no saliva may enter the stomach; and, after ten minutes, this is withdrawn by means of the stomach-pump, filtered, and examined for an acid reaction. The experiment was tried on four persons—one in good health, two dyspeptics, and a drunkard. The degree of acidity was estimated by a solution of soda, thirty parts being required for neutralisation in the healthy person, and nearly one-half that quantity in the dyspeptics, the fluid being neutral in the drunkard, who was suffering from chronic stomach disease. Microscopic slices, of exactly the same size, of a hard-boiled egg were introduced into the fluid extracted from the stomach, and artificial digestion set on foot at a temperature of 35° C. In about six hours the slices were entirely dissolved in the fluid derived from the healthy stomach. In one of the dyspeptics the albumen remained quite unchanged at the end of fourteen hours, and was visibly and plainly acted upon only after twenty-four hours. In the drunkard no influence was cognisable at the end of three days. In all these instances the addition of small quantities of the acid greatly expedited digestion, though in very different degrees.

The conclusion to be drawn is, that in cases of disturbed digestion the mucous membrane of the stomach secretes less acid than in health, and that the digestive powers of the organ can be strengthened by administering this substance. As an example of what may be done in this way, there may be mentioned the case of a patient suffering from dilatation of the stomach, in whom the contents of the organ removed by the pump every evening always exhibited flesh-food eaten seven hours previously in an undigested condition. When, however, eight drops of acid were given in a glass of water two hours after eating, very little food was found to be undigested in the evening; and when a second dose of eight drops of the acid was given two hours after the first, complete digestion was quite secured. When, therefore, in dyspepsia, the analysis of symptoms is obscure, the stomach-pump or tube should be resorted to, and when six or eight hours after a meal there are still found remains of food, and especially of flesh-food, the acid should be experimentally administered. The tube employed should be thirty centimetres in length.

REVIEWS.

Effectual Reform in Man and Society. By Henry Travis, M.D. London: Longmans, Green, Reader, and Dyer.

The present age, with all its shortcomings of omissions and commissions, can scarcely be said to be deficient, in a moderate sense, of philanthropy; but if, after a perusal of Dr. Travis's book, we could honestly declare ourselves converts to the Utopian ideas contained in it, and recommend the adoption of its ideas to an (as it appears) unenlightened British public, we should lay ourselves open to a charge of advocating philanthropy run mad. The "fundamental truth," according to the author, is "that the formation of man's determinations (and of his opinions and his character) is dependent upon conditions in the individual, or internal, and in the outward means by which he is influenced, or external"; to which must be added a second truth—"that man forms his determinations, or is a personal agent in the forming of them." After a series of elaborate arguments intended to establish this theory, we come to a description of how the "new system" is to be initiated: new villages are to be formed for the reception of families of the working classes, each constructed for a population of from 300 to 1000 or 2000 persons or more; in these, under the guidance of "enlightened benevolence" and combined industry, everything is to proceed in a manner which even fairy tales, with all their improbabilities, never dreamt of. Poor-rates are to become things of the past, compulsory education a myth; costly arrangements for the detection and punishment of crime unheard of—simply because crime under such an arrangement would be unheard of. The community are "to agree together that their wants should be regulated by considerations of expediency and mutual kindness; the object being, in accordance with the golden rule (that we should do to others in all things as we would have others do to us), to promote the rational happiness of all the members of the village as much as possible." The system is to entail no sacrifice of independence or of property on the part of the rich, but new property is to be created for those who are now poor, by the united industry of these villages, "and in due time, under the inspiration of 'enlightened benevolence,' the rich will make over their present property to the new system, by donation or by legacy."

We have, in our time, studied the crotchets of many wild reformers, but we have no hesitation in asserting that anything more visionary than Dr. Travis's "Effectual Reform in Man and Society" never yet came under our notice: Dr. Richardson's "Hygeiopolis" was a pleasant dream of a sanitary paradise, but Dr. Travis's "new villages" leave it utterly in the background.

Food Manufacture versus River Pollution. A Letter addressed to the Newspaper Press of England. By W. Hope, V.C. London: Edward Stanford, 55, Charing-cross, S.W. 1875.

In the above-mentioned pamphlet Mr. Hope is terribly severe on the press of the country for not uniting to insist upon the adoption of his schemes for the utilisation of our sewage; yet, with all due deference to the author, we must express an opinion that the power of the Fourth Estate is not quite so great as he imagines. We have carefully read Mr. Hope's letter, and from the indisputable facts he adduces there can be but little doubt that he has not been well treated in his earnest endeavours to settle satisfactorily one of the most important questions of the time. His views on sewage-farming seem founded on correct data; and we should have thought in the present day he would have found but little difficulty in procuring the acceptance of his services by some of the many town authorities who are casting about in every direction for some competent person to relieve them of their difficulties. We shall still expect to hear that, without the powerful assistance of the press, the energies of Mr. Hope have finally succeeded in bringing about the adoption of his plan for preventing the pollution of our rivers by sewage.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, November 2.

Opening of the Winter Session in Edinburgh.

The Session 1875-76 of the Edinburgh University was opened yesterday with an address by the Principal, Sir Alexander Grant, in the Queen-street Hall. There was a large attendance of students and others interested in the proceedings. The usual preliminary pleasantries were indulged in by the junior students, but the address was listened to attentively and with little interruption.

As for some years past, the subject to which the Principal allotted the first place in his address was the extension of the University buildings. This was, he thought, "the most important matter of the year, as affecting the future welfare of the Universities for many years to come." This time last year he had to report a subscription-list of £70,000. "Very shortly afterwards," he said, "a meeting was held in London, under the presidency of his Royal Highness the Duke of Edinburgh, who is an old *alumnus* of the University, to advocate the cause. The Royal Duke, with cordial *bonhomie*, related his own personal experience of the inadequacy of our scientific class-rooms, and the Earl of Derby and many other speakers of weight and authority afterwards set forth the great public importance of the objects aimed at. No pains were spared in following up this commencement of the year's work, and in bringing the matter before our countrymen in London and abroad. But everybody knows that collecting a large subscription is like ascending an Alpine height. You begin with rich meadows and easy slopes, but you soon leave these behind, and find yourself continually in a more and more

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rarefied atmosphere, in a more bleak and barren region. Greater exertions are required as you go on, and the results are less. At the same time, one's views become more moderate, and one's appreciation of any assistance more lively. In the present case, those brilliant days are gone when each morning used to bring me a hundred letters, conveying an aggregate of at least £1000 subscribed. The total result of the past year's appeals has been something under £10,000; but this, looked at by itself, is still a goodly sum, and brings up our total list to near £80,000. All honour to the friends who have carried us so far on the way towards supplying the material necessities of the University. Towards this consummation one most important point has been gained during the year, for the Duke of Devonshire's Commission on Scientific Instruction has reported strongly in our favour, and has recommended the Government to give us a grant in aid of our extension scheme. The report briefly but pointedly refers to the present College building, in which only eighteen class-rooms are provided for no less than forty distinct courses of instruction, and in which the 'Professor of Pathology has to lecture in a room which is used only one hour before he enters it by the Professor of Moral Philosophy, and one hour after he leaves it by the Professor of Geology.' To show how much importance is attached abroad to the provision and equipment of proper buildings for scientific research and teaching, I will mention some of the grants which have been made within the last few years in Germany for laboratories and theatres such as we now require:—In Berlin, buildings of this kind have been erected at a cost of £163,275; in Kiel at a cost of £204,000; in Prague at a cost of £162,000; in Bonn at a cost of £73,638; in Wurzburg at a cost of £68,570; in Munich for £60,860; in Tübingen for £51,267; in Freiburg for £29,250; in Erlangen for £25,067; in Graz for £25,000; and in Breslau for £24,300. Some of these amounts have been expended merely on additions to already existing scientific institutions, but all of the sums have been entirely provided by the Government—that is to say, defrayed from general taxation. In this kingdom the practice has hitherto been different, and even objects of very general, and indeed national utility, are not provided out of the general taxation, but only aided in proportion to the amount of private contributions from those of the community who may feel a more special interest in seeing them carried out. This system has, at all events, the advantage of encouraging those virtues of generosity, self-reliance, and public spirit for which, as a nation, we are not undistinguished. To the community of Edinburgh and Scotland, and to Scotchmen resident abroad, we must, in our own case, still appeal to make up for us that sum of £100,000, which has always been set down in our calculations as the people's share in our great undertaking. In the meantime, with confident trust in the future, the committee have secured the services of a most accomplished architect. Mr. Robert Anderson was selected entirely on the merits of his internal plans for the accommodation of the different scientific departments. At the same time, however, his external elevations for the buildings, in the Early Italian style, were considered to be full of merit, and to display much architectural genius. But the design for a great building cannot, any more than a great poem, be thrown off in a day, nor even in several weeks. Such a work must be perfected by long thought and much reconsideration. Mr. Anderson has, accordingly, during his autumn sojourn in the North of Italy, obtained many new inspirations, and has remodelled his designs. I trust that the buildings which he will provide for us will, for their beauty, be a source of pride to the city of Edinburgh as long as Edinburgh itself is admired for its beauty and its architecture—that is to say, for ever."

After discussing various subjects, which need not be referred to here as they had no special medical bearing, he turned to the internal condition of the University, which, he said, "in every respect during the past year has been prosperity itself. The number of matriculated students has been 2076, being an increase of 146 upon the number of the former year. This aggregate is made up of an increase of eighty-two students in the Faculty of Arts, sixty students in the Faculty of Medicine, and seven students in the Faculty of Theology, while there has been a decrease of three in the attendance on the Law Classes. Just seven years ago, the number of the University students stood at 1513; since then those numbers have been increased by 563, or no less than 37 per cent. In 1868, there were only 445 medical students, whereas last year there were 899. Thus, during the last seven years, we have rapidly got back to that state of things in the medical department which prevailed before the establishment of the Queen's University in Ireland, of the London University and King's College, and of many rival universities and medical schools in America, Canada, and the English colonies. We used to have almost a monopoly of the medical education of Irish and colonial students. We have long lost that monopoly, but our medical school, by its own intrinsic merits and its fame, has of late been in as good a position as when we possessed it. But it is not to the Medical Faculty alone that our increase of students is due. The Faculty of Arts has increased since 1858 from 536 students to 793—an increase of nearly 50 per cent. This is partly due to the lately formed classes of engineering, political economy, and geology. Yet still during last session almost every class in the Arts Faculty was overflowing. A university is not to be tested only by the number of its students, but by the way in which they are taught. And I make no doubt that if our present state could really be compared with that of the University as it existed about the year 1820, when the students were as numerous as now, a very great superiority would be found in the present teaching as to thoroughness and efficiency. There is no question that medical teaching is now more enlightened, and at the same time more practical, than it used to be, and that the medical examinations are much more thorough; and the same statement would generally hold good of the Faculty of Arts. It is by itself a great matter that the graduations in Arts should have risen from an average of eight or ten per annum to an average of over sixty. This University last year conferred 189 degrees upon its students, being 104 degrees in Medicine, sixty-eight in Arts, ten in Science, five in Divinity, two in Law. On the whole, I can have no hesitation in expressing the opinion that this University was never at any former period in so prosperous and efficient a condition as now." Referring to the chair of Natural History, and Professor Wyville Thomson's explorations, he said—"During the last three years, while we have been circulating around the old site of Kirk-o'-Field, now the Senate Hall of the University, or through the streets or squares of modern Edinburgh, with an occasional trip perhaps to North Berwick, or at the most a flight to the Island of Skye or to the Continent of Europe, her Majesty's good ship *Challenger* 'has slipped across the summer of the world,' and has grappled with the ice of the Southern Pole, and has since been wandering 'from island on to island at the gateways of the day.' And our friend, Professor Wyville Thomson, in command of that scientific expedition, has been everywhere wresting from Nature those secrets which lay hidden in the depths of ocean. It now seems certain that a few months' more exploration will be required before our friend can return to present a completed and rich budget to the world of civilisation and science. But I have the pleasure to announce that, under these circumstances, Professor Thomson's place during next session will be again taken by that greatest of living natural historians, Professor Huxley, to whom many of us listened with so much admiration last summer." "The University annals would be incomplete," he said, "if I were to omit to mention that in August last we had the honour of placing our academical departments at the service of nearly 1200 sons of Æsculapius, constituting the congress of the British Medical Association. This august, and I might almost say formidable, body comprised many hundreds of Edinburgh graduates from all parts of the kingdom, who in revisiting their *Alma Mater* were able at the same time to compare their own experiences with those of their medical brethren, and to hear and discuss the latest and most advanced ideas of scientific medicine. It was a very pleasing week, and the two great heroes of it were Sir Robert Christison, who, as President of the Association, shone forth in the zenith of his power, and Professor Lister, whose antiseptic theory formed the centre-point of attraction to all, and who received from foreign, as well as British, visitors the tribute of their adhesion to his views." He concluded an admirable address with some general advice to the students as to the spirit in which they should prosecute their studies.

The winter session of Edinburgh Extra-mural Medical School was opened yesterday by an introductory lecture by Mr. Chiene. He dwelt on the importance of the Extra-Academical Medical School beside the University, "the efficient teaching staff of the School acting as a tonic to the University professors, encouraging a friendly rivalry, which was constantly spurring them on to continued effort, and by insisting that they perform their work in a thorough manner directly advancing medical science. The presence of an extra-

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academical school of medicine is," he said, "in my opinion, the principal reason why the Faculty of Medicine is more prosperous and famous than the other faculties in our University. The establishment of an extra-academical school in Arts and Law, with the same privileges as we at present possess as medical teachers, would be an advance in the right direction, and would, I feel sure, be followed by greater efficiency in the teaching in these faculties, and by a marked increase in the number of students. Another reason which has a very material bearing on our success lies in the fact that here each teacher is free to choose his subject. He begins early as a lecturer on some particular branch. An early and special training in teaching is the only way to true success. This is not a training-school for our *Alma Mater* alone; it not unfrequently supplies our sister universities. In every Scotch university there are now professors who once were efficient lecturers in the Extra-Academical School of Edinburgh. Since the delivery of the introductory lecture of 1874, two of our lecturers have thus been promoted. Dr. Pettigrew has been appointed Professor of Anatomy and Medicine in the ancient University of St. Andrews, and the University of Aberdeen has chosen Dr. Stephenson as Professor of Midwifery." In order to true teaching, he held that individuality and freedom must have the sway. In order to true learning, he believed the same rule held good. To interfere with the individuality of a student appeared to him to be the great mistake of the systems of the present day. "Rules, regulations, statutes, visitors of examinations, assessors, councils, are the order of the day. The result, perhaps, is a better training of the mass to mediocrity—a necessity, no doubt. Would that it could be attained without damaging and distorting the individuality and freedom of the student! There must undoubtedly be a certain amount of restraint, but let it be as little as possible. There must be examinations, but let them be more frequent and less formal. The student should be allowed to pass in any one subject—always supposing that he knows it thoroughly. To judge of this thoroughness, the standard the examiner has to remember is, that an extensive knowledge is not so much required, as that the knowledge should be precise and accurate. A mistake is infinitely worse than an omission. The man who does not know has only to learn; the man who is in error, has to unlearn and then to learn." Mr. Chiene next paid a graceful tribute to the memory of John Hughes Bennett, and passed on to consider the future of the School. Referring to the successful efforts put forth by the University to obtain suitable class-rooms, laboratories, etc., he insisted on the necessity of having proper appliances for teaching outside the University. "To whom," he asked, "are we to apply? It appears to me that the Colleges of Physicians and Surgeons should undertake the work. The College of Surgeons started the Anatomical School, the College of Physicians the Royal Infirmary. Let the same spirit now rule their councils, and let them see that before very long we owe to their joint efforts a well-equipped building, with well-paid demonstrators, in which the scientific subjects may be taught with comfort to both teachers and taught."

LIVERPOOL.

October 19.

LIVERPOOL AND MR. CROSS'S BILL—LITERARY AND PHILOSOPHICAL SOCIETY—THE MEDICAL INSTITUTION.

AT a recent meeting of the Toxteth Board of Guardians, Mr. Alpass, one of the members, remarked that there was one court, viz., No. 2 Court, Gore-street, from which thirteen cases of fever had been admitted into the Workhouse Hospital since July 1 of this year. Only five other cases had been admitted from the whole of the rest of the district during the same period. He contended, therefore, that it would be better for the houses to be pulled down forthwith. A resolution embodying Mr. Alpass's suggestion having been passed, the clerk was instructed to communicate with the Health Committee of Liverpool on the subject. He did so, and his communication and others having reference to the unhealthy condition of various parts of the town have been under the consideration of that Committee. It is but fair, as some surprise has been expressed at the tone of Dr. Trench's advice to the Committee on the matters in question, that the grounds on which some caution in demolition was recommended should be set forth. Liverpool is by far the most densely crowded town in the empire, and no other town is perhaps so deficient in suitable structures for the lowest class of the poor. The consequence of this is that this typhus-producing class congregate together in dense masses in certain well-known districts. That the crowding constitutes a grave evil, nobody, and least of all Dr. Trench, who for years has been labouring to overcome it, denies; but would there be no injury in rashly and suddenly demolishing the dwellings in such districts, and as a consequence driving their inhabitants to other parts, but little better at present than the ones they would quit? Dr. Trench thinks that there would, and that a scheme of construction should go alongside of or precede that of destruction. He has an instance, pregnant with warning, of the probable ill effects of such demolition, and it seems to me that with this before his eyes he could not fail to inculcate the caution which he gave. That instance occurred some eleven years ago, when a very sudden and extensive migration of the tenants of cellars was induced by the abrupt closure of their miserable tenements. These fever-producers were at once planted in localities but one remove less favourable for the development of disease than those which they had quitted, and the result of this wide-spread distribution of its seed was one of the most terrible harvests of epidemic disease that the town in late years has reaped. Dr. Trench, therefore, while recognising the immense importance of attacking the evil of overcrowding, and expressing his great willingness to certify officially in such terms as will leave the Corporation no alternative but to demolish, strongly urges that the work of construction shall be immediately entered upon, so as to obviate the evils which his experience shows may follow any extensive demolition. He asks the Committee to examine his fever-map, constructed after the cellar migration, and to "contemplate the injury to the whole borough by any certificate which would displace such large sections of a community without previous or contemporaneous arrangement for their housing"; and adds, "persons who remember the effects of removing the population of cellars, under the direction of Mr. Newland, will readily understand the evils which might accrue from the sudden and unprepared displacement, not alone of the inhabitants of cellars, but of the houses of streets and courts, and the necessity, therefore, of our seeing our way to a reconstruction scheme contemporaneously with the enforcement of the demolition clauses. In the event of my not being able to find any area or vacant space for the purpose of permitting capitalists to erect thereon improved dwellings without displacing large and, speaking in a sanitary sense, dangerous classes of the community, I intend to suggest the plan" of "running streets through the districts from east to west instead of, as at present, from north to south, and such an alteration in the direction of streets could be made gradually, and without any sudden displacement, and would be, I am led to believe, a paying improvement of property." There can be no doubt that in the long run the application of Mr. Cross's Bill to Liverpool will be productive of much benefit; but in order that this shall accrue with the smallest amount of counterbalancing injury it will be necessary that Dr. Trench's advice be followed.

The Literary and Philosophical Society devoted its second evening meeting to a *conversazione* on natural science, in the course of which Dr. William Carter, Lecturer on Botany at the Royal Infirmary School of Medicine, detailed some experiments which he had made on the *Dionœa muscipula*, or Venus's fly-trap. He stated, however, at the outset, that a gentleman to whom he was mentioning his experiments had a few hours previously informed him that they had all been performed by Mr. Darwin, and related in his book—a fact which Dr. Carter fully believed (though he had not yet read the book), from the exhaustive manner in which Mr. Darwin was known to treat every subject on the investigation of which he entered. Dr. Carter's experiments had been directed to the determination of the following points:—1. The effect, if any, exerted on the contractility of the leaves by the anæsthetics chloroform and ether. 2. The power of secretion and digestion, if any, possessed by the fresh leaf when detached from the plant. 3. The mechanical power exerted by the leaf in the act of closing. 1. The exposure of the whole plant to the vapour of chloroform or ether did not affect its contractility. When ether was dropped on a leaf and allowed to evaporate, the contractility appeared to be unimpaired, though, in this case, in addition to any anæsthetic effect producible by the vapour, there was the effect of intense local cold produced by the rapid evaporation of the liquid. 2. A fresh leaf, when detached from the plant, had the power of dissolving alimentary substances. He had

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detached such a leaf, very carefully dried it by means of blotting-paper, and had then administered to it one grain of dried beef. An acid secretion was soon poured out in sufficient abundance to ooze from between the edges of the closed halves of the leaf, and in forty-two hours the meat, on being collected and carefully dried and weighed, was found to have lost exactly half its weight. 3. To determine the mechanical power exerted in the act of closure, Dr. Carter had fitted to the inner surface of a healthy leaf, the back of which was supported on a small wooden frame, a piece of cardboard cut to its shape; this the leaf closed on and tightly grasped. Into two notches cut at the fore and back part of each lateral half of the cardboard, and situated at about an equal distance from the middle of the leaf and its outer margin, he placed a noose of silk, to the lower end of which was hung a small pill-box. Lastly, he weighted the pill-boxes with mercury, and he found that it required ten grammes and a half (or rather over 160 grains) pressure on the halves before they could be kept permanently asunder. It was impossible, therefore, that any insect small enough to be imprisoned within the leaf could exert sufficient power to overcome the enormous pressure which the leaf was thus proved to exercise upon it.

The winter session of the Medical Institution was commenced on Thursday, the 7th inst., by an inaugural address from its President, Mr. McCheane, F.R.C.S. The Institution has now a far larger number of members than at any previous period of its history.

REPORTS OF SOCIETIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, OCTOBER 26.

Sir JAMES PAGET, F.R.S., D.C.L., President, in the Chair.

ON THE USE OF THE ACTUAL CAUTERY IN THE ENUCLEATION OF FIBROID TUMOURS OF THE UTERUS.

Dr. ROBERT GREENHALGH, in this communication, after briefly alluding to the infrequent use of the actual cautery in this country, as compared with its application on the Continent, stated that during the last twelve years he had used it frequently, and with more or less success, in chronic enlargements with induration of the cervix uteri due to inflammatory or fibroid disease; in epithelioma and cancer of the neck of the uterus, where the organ is movable; in some cases of vascular tumour of the meatus urinarius; in slight cases of recto- and vesico-vaginal fistula; in incontinence of urine due to dilated urethral canal; and in certain cases of interstitial and intra-uterine fibroid growths. But it was to its use in the two latter classes of cases that he limited his present observations. He then gave the details of five cases, three of intra-mural, one of extra-mural, and one of intra-uterine fibroid growths, with the plan adopted and results in each case. He expressed an opinion that diffused fibroid deposits of the uterus in the early stage were more amenable to treatment than was generally supposed. He observed that although the large majority of cases needed no surgical interference, yet there were others which, through the large losses of blood to which they give rise or the mechanical effects they produce, imperatively demand such aid. The author then drew attention to the occasional ill-effects of dilatation and enucleation by the knife, and summed up the advantages of the actual cautery under the following heads:—1, Facility of application; 2, occasions but little pain; 3, rapid in its action; 4, occasions no bleeding; 5, no plugging needed; 6, the charred opening not favourable to absorption; 7, no offensive discharge from charred surface; 8, opening readily dilatable and without bleeding; 9, permits of manipulation through opening immediately after its use; 10, by its use portions of the tumour may be rapidly destroyed, its size reduced, and its lower segments rendered conical, thereby facilitating dilatation of the opening and the subsequent detachment, expulsion, or removal of morbid growth. He then remarked that spontaneous expulsive efforts shortly followed its use, and the density of the tumours appeared to be more or less reduced after its application. The author, in conclusion, drew especial attention to the three following points:—1. The advisability of the gradual detachment of the growth from its surrounding capsule, especially in cases where the tumour is of large size, or where the patient has been much reduced by previous hæmorrhages, by which further losses of blood are avoided and more perfect contraction of the investing tissues is secured, and the chances of pent-up offensive discharge is almost certainly prevented. 2. The removal of only so much of the tumour at each operation as is external to the opening, by which the opening is kept dilated and all chance of its closure upon the remainder of the growth avoided. 3. The speedy destruction by the cautery or removal by the écraseur or hand of the tumour should sloughing ensue.

As an addendum to his paper, Dr. Greenhalgh read a note from Dr. Marriott, of Leicester, as to the success of one of the cases recorded. The patient had become pregnant, and had been delivered quite easily at the full time.

Dr. MEADOWS considered the proposal valuable, but difficult to apply to suitable cases. Such tumours varied in consistence and cohesion, as well as in their relation to the uterus. Many could be enucleated quite easily, especially if their attachments were loose; but, again, others adhered so firmly that enucleation was quite impossible, and it was difficult to diagnose the one from the other. He had seen the cautery applied, and he thought it would suit best where the tumour grew in the substance of the uterus, with a fair covering both externally and internally. Here the tissues of the uterus would act as a protective; but if the tumour was near the outer surface, the mode would be inapplicable. He could hardly go so far as Dr. Greenhalgh as to the advantage of the cautery over excision. If one could trust to the cautery alone, no doubt that would be better, but in most cases they had to use the finger for separation, which was in itself an element of danger.

Dr. BARNES concurred with much that Dr. Meadows had said, especially as to the difficulty of diagnosis. According to the report before them, some cases had done well, others badly. When the tumours grew to the cervix they were not so dangerous as when they grew from the body of the uterus. He would dissent from the absence of risk in the use of the cautery; though sometimes the patients did very well, yet often, after a time, a necrotic kind of inflammation was set up, which ran up into the uterus, and the patient died. In some of Dr. Greenhalgh's cases this happened, and would arise with the use of the cautery just as of other means. The cautery did not even secure them against hæmorrhage. Running the cautery into the substance of the tumour might, however, do good. Gouging—a method introduced some time ago—did not do well, and he feared this would not do better. It should only be had recourse to where there was a risk of cases going badly. The cautery was actually painless in many cases.

In reply, Dr. GREENHALGH said that in three of his cases the cervix was involved, but he only proposed the method for special cases, especially when the tumour was soft and fluctuating. If operative interference was really necessary, the cautery was the safest; moreover, it did not interfere with the lining membrane of the uterus.

THE LARYNGEAL MOVEMENTS.

Mr. EDMUND J. SPITTA read a paper entitled "An Original View of the Laryngeal Movements, accompanied by a New Movable Model." The model illustrates the present theory by exhibiting mechanically the two operations of the larynx, under which all its movements may be included—viz., the tensing and relaxing the cords, and the opening and closing the glottis. The "new view" principally concerns the last-named operation. It shows, in the first place, from the construction of the crico-arytenoid joints, how neither forward nor rotatory movements of the arytenoids are possible, and that these cartilages can only move laterally, but that by this very movement the interval between the cords is horizontally increased, and the glottis opened. It then describes the laryngeal muscles, and how they effect the two operations above-named, giving them fresh names in accordance with their actions; the arytenoidens, for example, is called the occludens. Lastly, the new view adds a remarkable though totally unexpected corroboration of its truth, derived from the peculiarity in distribution of the laryngeal nerves.

Mr. CHARLES BROOK pointed out that the membranous portion of the vocal cords, which had been shown to be of so much importance, were not represented.

Mr. NUNN and Dr. WHIPHAM made some observations on the articulation and movements of the arytenoid cartilages.

Mr. SPITTA, in reply, said the membranous portion was unrepresented for want of a proper material.

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MEDICAL NEWS.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Fellows on October 28, viz.:—

Adey, Charles Augustus, M.D. Edin., St. Leonard's.
Burder, George Foster, M.D. Aber., Clifton.
Corfield, William Henry, M.D. Oxon., 10, Bolton-row, W.
Falls, William Stewart, M.D. St. And., Bournemouth.
Fearnside, Henry, M.B. Lond., Preston.
Matterson, William, M.D. St. And., York.
Monckton, Stephen, M.D. Lond., Maidstone.
Montgomery, James Barclay, M.D. Glasg., Penzance.
Ord, William Miller, M.B. Lond., 11, Brook-street, W.
Semple, Robert Hunter, M.D. St. And., 8, Torrington-square, W.C.
Shepherd, Augustus Burke, M.B. Oxon., 49, Seymour-street, W.
Thorne, Richard Thorne, M.B. Lond., 52, Inverness-terrace, W.
Tuke, Daniel Hack, M.D. Heidelb., Falmouth.

The following gentlemen were admitted Members, viz.:—

Herman, George Ernest, Bethnal-green Infirmary, E.
Leech, Daniel John, M.B. Lond., Manchester.

The following gentlemen were admitted Licentiates, viz.:—

Chapman, Paul Morgan, 39, Camden-park-road, N.W.
Dyte, David Hyman, 15, Bury-street, E.C.
Gibb, Robert Charles, Guy's Hospital, S.E.
Harvey, Thomas Prickard, 6, Pyrland-road, N.
Herman, George Ernest, Bethnal-green Infirmary, E.
Hobson, John Morrison, Guy's Hospital, S.E.
Lancaster, Henry Francis, 9, Amersham-park-villas, S.E.
Randle, James Mayne, 61, Guilford-street, W.C.
Rawlings, Alfred, Newlands, Sherborne.
Taylor, Henry Cumberland, Guy's Hospital, S.E.
Weakley, Samuel Joseph John, Upton, Essex.

The following candidate, having passed in Medicine and Midwifery, will receive the College licence on obtaining a qualification in Surgery recognised by this College:—

Pickford, John Kemble, Maiden Newton.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, October 28:—

Bark, John, Royal Infirmary, Liverpool.
Harvey, Henry Frederick, 126, Gower-street, W.C.
Morcom, Augustus, Coniston, Lancashire.
Taylor, James, Stoke's Croft, Bristol.
Williams, Wm. Venables, Easingwold, Yorkshire.

The following gentleman also on the same day passed his primary professional examination:—

Capon, Herbert James, St. Bartholomew's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ARCHER, ROBERT KENDRAY, L.S.A.—House-Physician to the Westminster Hospital, *vice* W. R. Basham, M.R.C.S.E.

BIRTHS.

BARWELL.—On October 25, at 32, George-street, Hanover-square, the wife of Richard Barwell, F.R.C.S., of twins—boy and girl.

BIDDLE.—On October 28, at Kingston-on-Thames, the wife of D. Biddle, M.R.C.S. Eng., L.S.A., of a daughter.

BLACK.—On October 28, at 15, Clarges-street, Piccadilly, the wife of J. Watt Black, M.A., M.D., M.R.C.P., of a daughter.

BUSHELL.—On October 8, at the British Legation, Pekin, the wife of S. W. Bushell, M.D., B.Sc., of a son.

DUKE.—On October 23, at Fernside, Sydenham Hill, the wife of Allen Duke, M.D., of a daughter.

MAFFEY.—On October 27, at Clarendon, Bradford, Yorks, the wife of John Maffey, L.R.C.P., of a daughter (Lillian Winifred Raine).

MERCER.—On October 26, at Tudor Lodge, Brixton, the widow of the late John T. Mercer, M.B., of Leicester Villa, Brixton, of a daughter.

RIDGE.—On October 31, at Carlton House, Enfield, the wife of J. James Ridge, M.D., B.S. Lond., of a son.

SKINNER.—On October 31, at Clevedon, Somerset, the wife of Stephen Skinner, M.B., of a daughter.

MARRIAGES.

AMOS—PIKE.—On November 1, at St. Ippolyte's Church, Herts, the Rev. James Amos, vicar of St. Steven's, Southwark, and eldest surviving son of the late Andrew Amos, Esq., of St. Ibbs, to Anne Elizabeth Pike, only daughter of Anthony Lax Fisher, M.D., of York-place, London, and widow of the late Rev. W. Bennett Pike, formerly Fellow and Tutor of Downing College, Cambridge.

BRUCE—ANGAS.—On October 30, at Notting Hill, Peter Bruce, M.R.C.S. Eng., L.D.S., of Colville-square, Bayswater, son of the late Peter Bruce, of Valparaiso, to Annie Alicia Margaret, eldest daughter of George French Angas, F.L.S., of Norland-square, Notting-hill, W.

BUDD—KINGSTON.—On October 27, at Trinity Church, Barnstaple, Wm. Alexander Budd, of 23, Southernhay, Exeter, second son of Dr. Samuel Budd, of 20, Southernhay, Exeter, to Mary Catherine, second daughter of the late George Kingston, Esq., of Barnstaple.

DUKE—MELLERSH.—On October 27, at St. George's, Hanover-square, Stephen Duke, M.D., M.R.C.S., L.S.A., second surviving son of the late Henry Duke, Esq., of Earnley House, Chichester, to Harriet Elizabeth (Lilly), only surviving child of the late Thomas and the late Harriet Sophia Mellersh.

EDWARDS—ALEXANDER.—On October 28, at St. Matthew's, Ipswich, Branford Edwards, L.R.C.P. Lond., of Ipswich, to Jane Sophia, only daughter of E. A. Alexander, Esq., of Ipswich.

PATON—RUSSELL.—On October 28th, at St. Mary's, Twickenham, Robert Elliot, youngest son of John Paton, Esq., of Crailing, Roxburghshire, to Eleanor Isabella, youngest daughter of the late James Russell, M.D., of Edinburgh.

OWEN—GREENWELL.—On October 20, at St. George's Church, Poynton, Cheshire, S. Holgate Owen, M.D., eldest son of Henry Owen, Esq., of Manchester, to Catharine Jane, eldest daughter of G. C. Greenwell, Esq., of Poynton.

SMITH—KAINES.—On August 18, at St. Bartholomew's Church, Norwood, Adelaide, South Australia, Arthur W. Smith, M.D. Lond., youngest son of Solomon Smith, Esq., Halifax, Yorkshire, to Elizabeth Susan (Bessie), eldest daughter of J. H. Kaines, Esq., Halton Brook, Adelaide.

WEGG—RICKARDS.—On October 28, at St. James's Church, Westminster, William Wegg, M.D. Cantab., of 15, Hertford-street, Mayfair, to Mary Ann, daughter of the late Samuel Rickards, Esq., of Shalimar, Acton, Middlesex.

DEATHS.

ALLARTON, GEORGE, M.R.C.S. Eng., L.S.A., at South Molton, on October 29, aged 62.

AVERILL, ALFRED HORACE, youngest son of Alfred Averill, M.R.C.S. Eng., L.S.A., at Bank House, Longton, Staffordshire, on October 27, aged nine months.

BARROW, ELIZA, widow of the late Edward Barrow, M.R.C.S., at Park-road, Hackney, on October 30, aged 56.

BENNETT, THOMAS TYRWHITT W., L.S.A., at 386, Oxford-street, W., on October 30, aged 56.

BROXHOLM, CATHERINE, dearly loved wife of Frederick Giles Broxholm, M.D., of Richmond-road, Barnsbury, N., on October 29.

DRUMMOND, ELIZABETH ARNCIL, widow of the late John Drummond, Esq., surgeon, Glasgow, at 11, Avington-grove, Penge, Surrey, on October 22.

GREEN, MARRYATT HAHNEMANN, elder surviving son of Thomas Joseph Green, M.R.C.S. Eng., L.S.A., at Parliament House, Peckham, on October 29, in his 23rd year.

REID, MARIA AUGUSTA, widow of the late James Reid, M.D., of Brook-street, Grosvenor-square, at St. James's-road, Wandsworth-common, on October 15, in her 72nd year.

THEOBALDS, MABEL IRÈNE, infant daughter of Surgeon-Major J. B. Theobalds, 16th Regiment Madras Native Infantry, at Jubbulpore, on October 8.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

CHRISTCHURCH UNION.—Medical Officer for the Eastern District. Applications, with testimonials, to the Clerk of the Union, before November 6.

DOVER HOSPITAL AND DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Mr. Elwin, 13, Castle-street, Dover, before November 30.

HUDDERSFIELD INFIRMARY.—Physician.

INFIRMARY FOR CONSUMPTION, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Physician-in-Ordinary. Candidates must be M.R.C.P. Lond. Applications, with testimonials, to the Secretary, on or before Nov. 18.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Hon. Sec., Mr. J. Calder, Liver Chambers, Tithebarn-street, Liverpool.

METROPOLITAN FREE HOSPITAL, DEVONSHIRE-SQUARE, CITY, E.—Honorary Assistant-Physician. Candidates must be M.R.C.P. Lond., or pledge to become so within twelve months. Applications, with testimonials, to the Committee, on or before November 6.

MIDDLESEX HOSPITAL.—Resident Physician's Assistant. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, before November 13.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-ON-TRENT.—House-Physician. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before Nov. 16.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

RADCLIFFE INFIRMARY, OXFORD.—House-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 24.

ROCHDALE INFIRMARY.—House-Surgeon. Candidates must possess both medical and surgical qualifications, and be registered. Applications, with testimonials, to Mr. E. M. Royds, Lechurst, Rochdale, before November 6.

WEST RIDING PRISON, WAKEFIELD.—Resident Surgeon. Candidates must be duly qualified, and registered. Applications, with testimonials, to J. Hamerton, Esq., Clerk of the Peace, Wakefield, on or before November 15.

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WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Executive Committee, under cover to the Secretary, Mr. Watkins, 50, Foregate-street, Worcester, on or before November 17.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Anglesey Union.—Mr. Thos. Hughes has resigned the Amlwch District; area 25,856; population 9098; salary £50 per annum.

North Witchford Union.—Mr. J. Mitchell Wilson, Medical Officer for the Fourth District, has resigned; area 14,126; population 2905; salary £60 per annum.

Ulverstone Union.—Mr. John Allen Bolton has resigned the Conistone District; area 16,967; population 1815; salary £20 per annum.

Worksop Union.—Mr. Joseph Kenny, Medical Officer for the Whitwell District, has resigned; area 9054; population 2758; salary £20 per annum.

APPOINTMENTS.

Bath Union.—James Batteraby Bailey, M.D. Queen's Univ. Ire., L.R.C.S. Edin., to the Sixth District.

Boston Union.—E. Fitzgarret Butler, L.K. & Q.C.P.I., L.R.C.S.I., L.A.H.I., to the Boston District and the Workhouse.

Clifton Union.—James McBride, M.R.C.S. Eng., L.R.C.P. Edin., to the Second North District.

Hexham Union.—Robert Talbot Beamish, M.D. and M.C. Queen's Univ. Ire., to the Third District.

Neath Union.—William Hopkin Thomas, L.R.C.P. Edin., M.R.C.S. Eng., to the Llangonoyd District.

Stokesley Union.—Christopher Young, M.D. Edin., M.R.C.S. Lond., to the Yarm District.

Thirsk Union.—John Roubel Gray, M.B. and C.M. Aber., to the Knayton District.

Torrington Union.—Edward Sutcliff, M.D. and M.C. Aber., L.R.C.P. Lond., M.R.C.S. Eng., to the Peters Marland District.

Uckfield Union.—William John Trentler, M.B. and M.C. Edin., to the Maresfield District.

THE Medical Society of London will henceforth meet on Mondays at 8.30 instead of 8 p.m.

GUY'S HOSPITAL MEDICAL SCHOOL.—The Entrance Scholarships have been awarded as follows:—L. C. Wooldridge, £60; W. H. White, £30; J. T. J. Morrison, honorary certificate.

THE final examination for the degree of Bachelor of Science (Department of Public Health) was passed at the University of Edinburgh, on October 22 and 23, by Samuel Drew, Doctor of Medicine, Aberdeen, Diplomate in Sanitary Science, Cambridge, and Medical Officer of Health of the Union of Wortley, Yorkshire.

PROFESSOR BILLROTH'S clinical assistant at Vienna, Dr. Gussenbauer, has been elected Professor of Surgery in the Belgian University of Liége. This is the second time, in the seven years that Professor Billroth has been at Vienna, that one of his assistants has been thus honoured.

THE *Berliner Klin. Wochenschrift* understands that the foundation of a Health Department for the German Empire will take place next year. It will consist of a director, two or three councillors, and a staff of clerks, and will be a kind of sub-department of the Imperial Chancellory. Its function will probably be not only vigilant, but executive.

THE COST OF CARLESSNESS.—Last year the sum of £355,876 was paid by railway companies in the United Kingdom as compensation for personal injuries, and £251,293 for damage to goods, etc. How much of these large sums might have been saved if the servants of the companies had only exercised ordinary care in the discharge of their duties!

TESTIMONIAL.—The Paddington Vestry have presented a testimonial to Dr. Hardwicke, on his resignation as Medical Officer of Health and Public Analyst for the parish, and his promotion to the office of Coroner for Central Middlesex. The testimonial consisted of the complimentary resolution of the Vestry, illuminated and engrossed on vellum, in a handsome gilt frame.

SURGICAL SOCIETY OF IRELAND.—The election of Council for the ensuing Session took place at the Royal College of Surgeons, Stephen's-green, on the afternoon of Monday, November 1. The following were elected, the names being arranged in alphabetical order:—*Council:* John Barker, Edward Halloran Bennett, Charles Benson, Philip Bevan, Richard George Butcher, William Colles, Anthony Corley, Henry Gray Croly, James Stannus Hughes, Benjamin Francis McDowell, Rawdon Macnamara, Edward Dillon Mapother, Humphrey Minchin, John Morgan, George Hornidge Porter, Benjamin Wills Richardson, Michael Harry Stapleton, William Stokes, Jolliffe Tufnell, Albert Walsh, James Henry Wharton. *President:* Edward Hamilton. *Honorary Secretaries:* Humphrey Minchin and Benjamin Wills Richardson.

ADMISSION OF PATIENTS INTO THE FRENCH HOSPITALS.—The present mode of effecting this (which has often been criticised) is proposed by the Préfet de la Seine, in a communication to the Assistance Publique, to be altered. At present all patients who desire to be admitted are examined by the medical officers of the Bureau Central, close to the Hôtel-Dieu, and are thence despatched to the different hospitals in which they are to be located. The Préfet has pointed out the advantage of establishing, in the different arrondissements, offices for the admission of patients, to be kept in telegraphic communication with the central administration. The patients then might apply to the office nearest their residence, and after examination receive an order for the hospital where they are to be received—thus avoiding the double journey, first to the Bureau Central, and then to the hospital fixed upon. —*Union Méd.*, October 18.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

C. B.—Arguments for the antiquity of syphilis are to be found in Mr. Beckett's papers in the *Philosophical Transactions* for 1717 and 1718. Much stronger evidence to the contrary will be derived from Mr. Gaskoin's translation of the works of Villalobos, a Spanish physician, who flourished at the time syphilis was brought by Columbus from America. There is no doubt but that physicians of that time thought it a new disease. As to the notices of contagious ulcers in Celsus and other writers, it must be remembered that syphilis is not the only disease which begins on the genitals, not yet the only contagious disease.

Curiosus.—The scientific pharmaceutist is bound to know all about drugs in their chemical and botanical relations, and the method of preparing them so that they may be administered agreeably and efficaciously. The professor of materia medica is expected to teach all that concerns the action of drugs on the animal economy; and the professor of medicine to show the precise share they should take in the cure of disease.

THE "OBSTETRIC HAND" AS AN HERALDIC DEVICE.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—The ancient coat-of-arms of the Borough of Honiton, in Devonshire, exhibits a pregnant woman praying to an idol, with an obstetric hand at the top, and a branch of honeysuckle below. The origin and meaning of this singular device, which is said to be of Saxon origin, are quite unknown, though it is said that they commemorate a time when the town contained a large number of barren wives. The "obstetric hand" is a right hand, with the little and ring finger doubled down, and the fore and middle fingers extended, as if about to perform the act of examination, which the French call *toucher*. Anyone who will elucidate this curious old device will oblige Yours, &c., ARCHÆOLOGIUS.

THE SOCIOLOGY OF CITY DINNERS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—Medicine combines the blessings of being not only a learned and humane, but a social, philosophical, and convivial profession. On these grounds, as the season for City dinners is now at hand, I send you an extract from a poem by an unknown author, written at a time when the Prince of Wales and Duke of York were in their prime, some eighty years ago. This will enable the sociologist to compare new things with old. Do dinners *à la Russe* conduce, like learning the ingenuous arts, to soften our manners and render them less savage? Are haunches of venison now eaten in such a state as described here? Would not Dr. Sedgwick Saunders lay an embargo on putrid food intended for the chief magistrate of the City? The art of carving seems to be a lost art; but was the office of carver conducive to sanctity? Such are the questions which this extract may help the sociologist to solve. I am, &c., IMPRANSUS.

"Rough are the manners of a City dinner,
Where cuckold elbows cuckold, sinner sinner;
Let wisdom, then, supply the place of force,—
Choose well your seat, and calculate each course;
Manœuvring, now, you know is all the rage.
Be sure at dinner get the weather-gauge;
Then, if the ills in steaming haunch confined,
Burst furious forth, and poison all the wind,
Secure you sit, while leeward stomachs fail,
And half the table sickens at the gale.
Timely advised, the coming pheasant wait,
Nor high with beef incautious heap your plate
If some nice thing at distance tempt your eye;
Catch, as it flies, the dainty passing by;
And if some talon pounces on the dish
That holds your favourite fowl or favourite fish,
At once cry out, 'The Prince, sir, drinks your health!'—
And, as he bows, secure the prize by stealth.
Of him who carves, how dreadful is the fate!
Arm crosses arm, and plate succeeds to plate—
'Cut there—just there, sir,—where you stick your fork!'
'I beg your pardon, sir—the Duke of York—
The Prince must first be helped.'—'God d—n 'em both,'
Exclaims the son of freedom, with an oath,
''Twas I called vurst—vurst come vurst served;
Because the Prince is here must I be starved!'
Curst be the man, how well soe'er he talks,
Whose ill-timed wit our eager hunger baulks,
Who sets the senseless table in a roar,
And dares to jest ere half the dinner's o'er," etc.

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COMMUNICATIONS have been received from—

Mr. A. Forbes, Glasgow; Dr. Wiltshire, London; The Registrar of Apothecaries' Hall, London; Mr. W. M. Banks, Liverpool; Dr. A. M. Buchanan, Glasgow; Mr. J. W. Palmer, jun., London; Dr. W. Strange, Worcester; Dr. E. Sparks, Crewkerne; Mr. H. Morris, London; The Registrar of the College of Physicians, London; The Secretary of the Statistical Society, London; Mr. J. B. Blackett, London; Professor Humphry, Cambridge; Our Edinburgh Correspondent; The Registrar-General, Edinburgh; Dr. Eustace Smith, London; Mr. W. E. Poole, London; Dr. Lawson, Wakefield, Yorkshire; Dr. Frederick Taylor, London; Dr. George Thomson, Oldham, Lancashire; Mr. T. M. Stone, London; Mr. J. Chatto, London; Dr. Symes Thompson, London; Mr. J. F. Collingwood, London; Mr. J. Millikin, London; Mr. T. P. Pick, London; Dr. A. Inglis, Cheltenham; Dr. H. Letheby, London; The Secretary of the Royal Institution; Dr. Leonard W. Sedgwick, London; Dr. Brinsley Nicholson, Clapham; Dr. F. Taylor, London; Dr. J. W. Moore, Dublin; Dr. S. Drew, Sheffield; Mr. F. W. Lowndes, Liverpool; Mr. H. Pennell, Liverpool; Dr. C. T. Williams, London; Mr. R. Davy, London.

BOOKS AND PAMPHLETS RECEIVED—

Remarks on the Study and Practice of Public Medicine—Smee on Milk in Health and Disease—Storie on the Dietetic Errors of the People—Fourteenth Annual Report from the Registrar-General of Queensland, on Vital Statistics—Note on the Anatomy of the Umbilical Cord, by Lawson Tait, F.R.C.S.—Hill's Report on the Health of the Borough of Birmingham—Darwin on the Movements and Habits of Climbing Plants, second edition—Engleman on the Mucous Membrane of the Uterus.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Indian Medical Gazette—Paris Médical—Hampshire Advertiser—Worcestershire Advertiser—Monthly Microscopical Journal—Science Gossip—L'Archives Générales de Médecine—Journal D'Hygiène—Worcestershire Chronicle—Berrow's Worcester Journal—Medicinal Plants, Part 2—Obstetrical Journal, November—Sanitary Review—The Mid-Weekly Hampshire Independent—Edinburgh Medical Journal—New York Sanitarian—New York Druggist.

APPOINTMENTS FOR THE WEEK.

November 6. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

8. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. Jabez Hogg, "On Spinal Concussion." Messrs. Carr Jackson and Spencer Watson will exhibit a patient on whom Excision of the Astragalus was performed for Complicated Injury of the Foot and Ankle.

9. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Semple, "On Diphtheria and its relations to (so-called) Croup."

10. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Mr. J. E. Adams will exhibit a Case of Plastic Operation on the Face for Rodent Ulcer; and will read notes of a "Case of Iodide of Potassium Poisoning." Dr. Peacock will read a paper "On a Case of Aortic Disease originating in Malformation"; and will exhibit Specimens of Malformation as a Cause of Valvular Disease.

11. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Epidemiological Society, 8 p.m. The President will deliver an Inaugural Address.

12. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Mr. T. Holmes, "On a Case of Ligature of Femoral Artery with Carbolised Catgut." Mr. W. Haward, "On a Case of Lymphadenoma." Dr. Murchison, "On a Case of Acute Cancer of the Liver, with Pyrexia, in a man aged 24;" also, "On Two Fatal Cases of Acute Pyelitis and Nephritis, apparently consequent on Gonorrhœa."

VITAL STATISTICS OF LONDON.

Week ending Saturday, October 30.

BIRTHS.

Births of Boys, 1212; Girls, 1254; Total, 2566.
Average of 10 corresponding years 1865-74, 2195·7.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	758	719	1477
Average of the ten years 1865-74	701·0	674·0	1375·0
Average corrected to increased population ...	...	...	1471
Deaths of people aged 80 and upwards ...	...	...	42

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	2	20	2	5	..	1	2	4
North	751729	...	6	23	4	18	1	2	...	4
Central ...	334369	...	1	11	3	6	...	4	...	5
East	639111	...	5	19	4	6	...	3	2	6
South	967692	1	10	55	4	14	...	4	5	15
Total	3254260	1	24	128	17	49	1	14	9	35

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·617 in.
Mean temperature	43·6°
Highest point of thermometer	55·0°
Lowest point of thermometer	34·5°
Mean dew-point temperature	35·1°
General direction of wind	E.
Whole amount of rain in the week...	0·25 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, October 30, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Oct. 30.	Deaths Registered during the week ending Oct. 30.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2566	1477	55·0	34·5	43·6	6·45	0·25	0·63
Portsmouth ...	122632	27·3	82	40	...	...	...	...	...	...
Norwich	82842	11·1	68	30	51·5	36·0	44·0	6·67	0·30	0·76
Bristol	196186	44·1	139	96	53·0	37·1	43·9	6·61	1·15	2·92
Wolverhampton ...	71718	21·1	52	19	51·0	38·3	42·6	5·90	1·07	2·72
Birmingham ...	366325	43·6	292	160	52·0	35·8	43·1	6·17	0·88	2·24
Leicester	109830	34·3	78	44	53·5	39·0	43·9	6·61	0·38	0·97
Nottingham ...	92251	46·2	51	51	57·7	38·8	44·6	7·01	0·42	1·07
Liverpool	516063	99·1	379	236	52·0	38·0	43·0	6·11	0·38	0·97
Manchester ...	356626	83·1	278	215	54·3	38·8	44·6	7·01	0·21	0·53
Salford	135720	26·3	137	92	54·5	37·0	43·8	6·56	0·32	0·81
Oldham	87437	18·7	70	42	...	...	...	...	...	...
Bradford	168305	23·3	128	104	52·2	36·8	43·4	6·33	0·23	0·58
Leeds	285118	13·2	242	144	54·0	36·0	44·9	7·17	0·17	0·43
Sheffield	267881	13·6	232	110	52·0	35·0	43·7	6·50	0·20	0·51
Hull	133932	36·8	118	62	51·0	37·0	45·0	7·22	0·47	1·19
Sunderland ...	106342	32·2	73	41	65·0	38·0	48·4	9·11	0·45	1·14
Newcastle-on-Tyne	137665	25·6	131	63	49·0	35·0	42·3	5·73	0·71	1·80
Edinburgh	211626	50·5	136	83	...	...	...	...	...	...
Glasgow	534564	88·6	418	240	53·3	37·4	44·4	6·89	0·31	0·78
Dublin	314666	31·3	135	136	56·5	42·6	47·9	8·83	0·04	0·10
Total of 21 Towns in United Kingdm	7742889	37·0	5800	3485	65·0	34·5	44·3	6·84	0·66	1·68

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·82 in. The lowest was 29·53 in. at the beginning of the week and on Wednesday afternoon, and the highest 30·05 in. on Monday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

COMMENTARIES ON DISEASE IN CHILDREN.

By EUSTACE SMITH, M.D. Lond., F.R.C.P.,
Physician to H.M. the King of the Belgians,
Physician to the East London Children's Hospital,
Assistant-Physician to the Victoria-park Hospital for Diseases of the Chest.

LECTURE X.—CHRONIC CATARRHAL PNEUMONIA AND UNABSORBED PNEUMONIC DEPOSITS—PNEUMONIC PHTHISIS.

(*Concluded from page 516.*)

WHENEVER catarrhal pneumonia is suspected, the chest should be examined repeatedly for signs of disease. Such signs, to be trustworthy, must be positive. The degree of expansion in a child's lung is so variable, especially at the apex, that a distinct dulness must be required; and this dulness must be found to persist for several days in succession before we can be sure that we are not deceived by insufficient expansion or temporary collapse.

It is often difficult to distinguish between the beginning of catarrhal pneumonia, when the inflammation spreads gradually from the smaller tubes to the terminal vesicles, and cases of acute tuberculosis. In the latter case the loss of flesh is much greater than in the former, and on careful inquiry the pyrexia and wasting will be found to have preceded the cough, the general symptoms appearing before the local. In catarrhal pneumonia the local symptoms are the first to appear, and, unless the case have been complicated by some other form of wasting disease, there is a history of cough, and perhaps of shortness of breath, for some time before the general nutrition of the body began to suffer. Besides, in acute tuberculosis the course of the disease is rapid, the face at an early period wears a pinched, haggard expression, and the child has the appearance of one seriously ill.

In a more advanced stage of catarrhal pneumonia, when the signs of consolidation are pronounced, the diagnosis is easy. Dulness, bronchial breathing, and crepitating râles confined to the upper part of the lung on one side of the chest; the other lung being perfectly free from disease;—these signs found in a child the subject of a chronic cough, and in whom general nutrition, although impaired, is still fairly performed, may be safely attributed to chronic caseous consolidation. If, instead of the apex, the consolidation be seated at the base of the lung, the case has to be distinguished from empyema. It is rare for a chronic consolidation to be mistaken for empyema, but empyema, when accompanied (as it often is) by great emaciation in children, is constantly mistaken for "phthisis." The diagnosis is made by referring to the history of the case—pleurisy almost invariably beginning with sudden and severe pain in the side, followed after some hours by cough,—and by noting the character of the physical signs. If the dulness be due to fluid, it is found at the front of the chest as well as at the back. The percussion-note is generally tubular under the clavicle of the affected side, and the respiration is either very weak, or is bronchial, blowing, or cavernous, without rhonchus. In addition, the outline of the diseased half of the chest, as taken by the cyrtometer, is found to have become more or less square-shaped, and the heart is displaced. If there be any vocal vibration on the healthy side, it is lost over the seat of disease. For a fuller discussion of the diagnostic characters of pleurisy, the reader is referred to a previous paper (see *Medical Times and Gazette*, August 23, 1873).

When the case has advanced to the stage of ulceration, and cavities have formed in the lung, we have still to satisfy ourselves that the cavities are really the result of destruction of tissue, and are not mere dilatations of bronchi. The means by which this distinction is arrived at have been already pointed out.

The probabilities of absorption in a case of a pulmonary cheesy mass are not easy to estimate. Much will depend upon the mode of formation of the deposit, upon the constitutional condition of the patient, and upon the general influences which can be brought to bear upon the complaint. As a rule, the more rapidly a deposit has formed, the greater is the probability of its safe removal, and therefore, in cases where the consolidation has resulted from an acute attack, the prognosis is more favourable than in cases where the disease has run a slow course from the first. The longer, however, the deposit remains unabsorbed, the fainter becomes the prospect of its disappearance; and although, in children, absorption no doubt may occur at a later period than is common in the adult, yet if months pass by without any alteration in the physical signs, it is unlikely that the affected lung will ever return to a completely healthy condition. The influence of the so-called scrofulous diathesis is no doubt to favour the occurrence of catarrhal processes, and also to determine an early caseation of pulmonary deposits. Therefore, in children who present the characteristic marks of this type of constitution, any delay in the resolution of a pneumonic consolidation should be regarded with especial anxiety. So, also, in children with narrow, contracted chests and feeble resisting power, the liability to pulmonary catarrh and the tendency of such catarrhs to become obstinate should not be lost sight of.

When softening has begun in the deposit, the case assumes a very grave aspect, and as at this time the opposite lung is apt to become affected, recovery now can hardly be looked for. Still, under favourable conditions, the further progress of the disease may be greatly delayed. Persistent elevation of temperature (other causes of pyrexia being excluded) is a very unfavourable sign, especially if combined with steady loss of flesh; but even these cases do not always run an uninterrupted downward course, and there are often intervals of improvement, or, at any rate, periods during which the disease seems to be stationary. The occurrence of acute attacks of catarrhal pneumonia is necessarily dangerous, but the immediate effects are not always so serious as might be supposed, although the inflammatory attack seldom subsides without leaving behind it some addition to the original disease.

The occurrence of fibroid induration is to be welcomed as one of the favourable modes of ending of a cheesy deposit, for this change, if not always equivalent to a cure, is yet one which, with proper care, will greatly prolong the patient's life.

In cases of bronchial catarrh, when we have reason to believe that the inflammation is extending from the smaller tubes to the air-cells, treatment should be prompt and active. The child must be at once confined to bed, hot linseed-meal poultices should be kept applied to the chest, talking must be forbidden, and saline remedies should be ordered, with small doses of antimonial wine to promote free secretion from the bronchial tubes. By this means the disease is often at once arrested, and after a few days, the pyrexia having subsided, the patient is able to return to his usual habits.

If the child be first seen after the formation of a pulmonary deposit, we may hope that the cheesy mass, so long as it remains inactive, may yet be absorbed. To favour its removal we should endeavour as much as possible to alter the conditions of existence under which nature had failed to restore the lung to a healthy state. If it can be done, we should send the patient into the country, choosing some elevated spot where the soil is porous and the air dry and bracing. Dryness of the air is a very important point, and, therefore, an inland district is more to be recommended than the seaside. The spot selected should, if possible, be sheltered from the north and east. The child should be warmly dressed, and should pass as much time as possible out of doors. In the house every care should be taken to keep the air sweet and pure; in fact, a liberal supply of pure, dry air is one of the most important curative agents we have at our command.

The diet of the child should be regulated with great care; he should take plenty of meat and milk, but starchy food, sugar, and all such fermentable articles of diet, are to be allowed sparingly. It is of extreme importance in these cases to keep the digestive organs in the highest state of efficiency, and, therefore, the tendency to acid fermentation of food, which is one of the peculiarities of early life, must not be encouraged by overloading the stomach with farinaceous food and saccharine matters. For the same reason, summer fruits are to be given with caution, and should not be allowed late in the day. It is important that the child take plenty of liquid, so as to favour local absorption; and in order that the digestion of food may not be disturbed, it is wise to accustom the child to drink freely of some harmless fluid at an interval between the meals.

A careful watch should be kept over the bowels, and the earliest appearance of looseness should be met by suitable treatment. The best medicines are the alkalies, and they may be usefully combined with iron and arsenic. Thus, the bicarbonate of potash or soda may be given with the citrate

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of iron and ammonia, or of iron and quinine, and a few drops of Fowler's solution of arsenic may be added. Arsenic, it must be remembered, agrees well with children, and between the ages of five or six and twelve it may be given to them in larger doses than are readily borne by the adult. Cod-liver oil —especially Dr. De Jongh's—can also be given. In cases where the appetite is bad, and great difficulty is found in persuading the child to take food, alkalies are again of service. Ten grains of bicarbonate of soda given three times a day with two drops of dilute hydrocyanic acid (P. B.) in a dessert-spoonful of some bitter infusion, such as chiretta, will often quickly restore the appetite after dilute nitric acid and quinine have been tried without any improvement. As a local application much benefit results from painting the chest over the seat of disease with linimentum iodi, and this should on no account be omitted.

When the occurrence of pyrexia announces that irritation is set up in the system by the presence of the pulmonary deposit, the child should be put to bed, or at any rate confined to one room; his chest should be well poulticed, and at the same time efforts should be made to reduce the temperature by suitable medicines. Arsenic, alone or in combination with quinine, is very valuable for this purpose, and a mixture containing quinine, digitalis, and opium, on the principle of the pill recommended by Niemeyer, can often be given with very striking results. While the pyrexia continues, the child should be kept as quiet as possible. He need not be confined to bed after the first few days, but every care should be taken to avoid chills, and to keep him as much as possible in an equable temperature. The hypophosphites, especially the hypophosphite of lime, are often very useful in these cases, while the pyrexia is high; and when softening has begun in the deposit the influence of these remedies is often very remarkable. It is at this time, too, that cod-liver oil is of especial value, and should always be given if it can be borne.

If the cough is troublesome, special medicines must be used to control it, but care should be taken not to derange the digestion by opiates, or to irritate the bronchial mucous membrane by the untimely use of stimulating expectorants. The principles which govern the treatment of an ordinary bronchial catarrh, apply equally to cases of chronic pulmonary disease. A hard cough is only made harder by ammonia and squill, and opium, although it may for a time deaden the desire to cough, will not relieve the irritation of a congested and swollen mucous membrane. In such cases, alkalies, with small doses of antimonial and ipecacuanha wines, should be prescribed to relieve the loaded vessels; and it is only when the cough has become perfectly loose, and all oppression of chest has passed away, that bronchial stimulants and small doses of morphia can be permitted.

In the later stages of the disease, when our only object is to relieve painful symptoms, we must watch carefully over the digestive organs and the state of the bowels. The distressing sickness, which often occurs at the end of a paroxysmal cough, is best controlled by solution of arsenic in one-drop doses; combined with pernitrate of iron, and small quantities of morphia, or, failing that, by the application of a very small blister under the clavicle of the side principally affected. If hæmoptysis occurs, the liquid extract of ergot should be given at once, with (if the bowels are not ulcerated) laxative doses of Epsom salts, and perfect quiet should be enforced. In all cases of hæmoptysis the quantity of fluid taken at one time should be considerably restricted, so that the vessels may not be exposed to any sudden strain from the rapid absorption of large quantities of liquid. Night-sweats are best subdued by belladonna given at bedtime, and in prescribing this medicine the remarkable tolerance of children for this drug must not be forgotten. For a child of four years old the night draught should not contain less than twenty drops of the tincture.

Intercurrent attacks of acute catarrhal pneumonia should be treated by confining the child to bed, enveloping the chest in hot poultices, and keeping up the strength by the judicious administration of stimulants. For a child the best stimulant is the brandy-and-egg mixture of the Pharmacopœia.

TESTIMONIAL TO A HOUSE-SURGEON.—On resigning the post of House-Surgeon to the Chester General Infirmary, Mr. W. J. Fleetwood was, on the 14th ult., presented with a handsome case of operating instruments by the visiting-surgeon, matron, disponser, nurses, and servants of the institution.

ORIGINAL COMMUNICATIONS.

ON THE

TRUE COMPOSITION AND THERAPEUTIC VALUE OF WARBURG'S TINCTURE.

By PROFESSOR MACLEAN, C.B.

DR. CARL WARBURG—late of Vienna, now of London,—acting on the advice of friends well acquainted with the anti-pyretic properties of his Tincture, has communicated to me for publication the formula for its preparation, which I accordingly give below. Thirty ounces of the Tincture, according to the formula, were prepared in my presence in the laboratory here.

It is well known that up to this time this has been a secret remedy. It is no business of mine to defend its author from the charge of vending a secret medicine, which he shares in common with some other members of the profession not unknown. The simple truth is that Dr. Warburg knew he had hit on a remedy of great therapeutic value, and, under the pressure of *res angusta domi*, hoped by its sale to maintain his family.

The feeling in the profession against secret remedies was so strong that his expectations, after many years of trial and many disappointments, have not been fulfilled; and, as I have said, he has at last—wisely, as I think—resolved to make his secret known. Before passing from this part of my subject, I may quote, as pretty nearly expressing my own opinion on the subject of secret remedies, the following passage by the late Dr. James Johnson:—"No one will accuse us of favouring secret nostrums, but if the inventors of remedies will not publish their composition, this is no reason why we should not test their efficacy when they come from practical and scientific men. Would any man in his senses, or who has any regard for the welfare of his patients, refuse to administer James's powder, Battley's sedative liquor, or Ruspini's styptic, because the inventors refuse to make known the composition of these medicines? Dr. Warburg has supplied gratuitously immense quantities of his febrifuge to the profession, and continues to do so, in order that his statements respecting its properties may be fairly put to the test. This is, perhaps, as much as could be expected." Dr. Johnson concluded his notice of the tincture by inviting "the attention of our brethren in this country to this remarkable preparation."

I first became acquainted with the remarkable properties of Warburg's Tincture in the following manner:—Many years ago, when attached to the Residency of Hyderabad, in the Deccan, word was brought to the Resident, the late General James Stewart Fraser, that his son-in-law, the late Dr. Thomas Lancaster Bell, then employed as Statistical Surveyor of the Deccan, had been brought into the station of Wurrunghal, about eighty miles from Hyderabad, in an almost comatose state from remittent fever, caught in a neighbouring jungle where he was carrying on some scientific investigations, and that but slender hopes were entertained of his recovery. I hastened to his assistance. On arriving at the station, I approached the house where the patient was from the rear, and seeing many sheets and other articles of bedding hanging out to dry, I naturally interpreted this into a mournful signal that all was over; that, in fact, I had arrived in time to bury, but not to save my friend. Entering the house I was joyfully surprised to see Dr. Bell seated in an arm-chair in a state of complete convalescence.

I then learned that he had been brought by his servants to the station just as an exacerbation of his fever had set in, being the third or fourth of his attack. Dr. Bell had taken quinine freely when first attacked, but was quickly reduced to such a condition of mental confusion as to be incapable of directing the treatment of his case. When seen by the medical officer of the station he was in a most alarming condition, and it was too evident that another exacerbation would prove fatal. It so happened that an officer belonging to the Mysore Commission was visiting a friend in the cantonment, who was not only well acquainted with the efficacy of the Tincture in malarial fevers, but had a supply of it with him. In the desperate circumstances of the case, the station-surgeon administered the remedy; it was followed by a profuse, but not exhausting action of the skin (hence the drying process that had alarmed me); the fever did not return, and the patient made a rapid recovery. After such an experience as

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this, I did not fail to use it in similar cases as opportunities offered, and by its means rescued many who were in as great peril as in the case related above.

My experience in the treatment of malarial fevers by Warburg's Tincture has not been confined to India. My friend and colleague Surgeon-Major Madden will remember the case of a young officer of the Royal Engineers, who had the misfortune to be quartered in a building much below the level of the surrounding ground, on which stand Brompton Barracks, Chatham, where he was nightly exposed to the poisonous emanations conveyed by the wind from the unwholesome marshes of the Medway. He contracted a sharp remittent fever, which resisted quinine given in free doses. The case became alarming, and I was asked to see him. I at once administered Warburg's Tincture in the manner to be presently described, and this young man never had another exacerbation.

A supply of the Tincture was sent to the Gold Coast, for use in the late Expedition, but from all I can learn it was not much used by the medical officers of the force. After the war, the *Victor Emanuel*, that model hospital-ship (now, unfortunately, dismantled), was anchored off Netley. From the medical stores of this ship I obtained all the "Warburg" remaining, and used every bottle of it in the treatment of the formidable fevers disembarked from the Gold Coast at Netley, in every case with success when not complicated with hepatic abscess.

I have only to add, in concluding this account of my personal experience of the remedy, that in the article on malarial fevers contributed by me to Dr. Russell Reynolds' "System of Medicine," I spoke highly of this febrifuge, for which I was taken to task by a writer in the *Indian Annals of Medicine;* and for the last fifteen years, in my lectures on tropical medicine here, I have made known its value to the gentlemen belonging to the public services going through the course of special instruction in the Army Medical School.

To the best of my knowledge, Warburg's Tincture was first introduced into Southern India for use on a large scale by the late Lieutenant-General Sir Mark Cubbon, K.C.B., Commissioner of the Mysore Province, who will long be remembered in India as one of the most successful administrators of his time, and of a service prolific in splendid examples of a governing race. Having himself used the remedy with success, he placed at first 500 and subsequently 1000 bottles of it at the disposal of the late Dr. C. J. Smith, long well known as Surgeon to the Mysore Commission. Ere long its reputation was established in Mysore among the officers of the Commission (much exposed to malaria in the discharge of their duties); and I believe I am right when I say that none of them ever ventured into a malarious locality without being armed with "a little bottle of Warburg."

I have not space at my command to say more of its use in Southern India, where it was always better known and more used than either in the Bengal or Bombay Presidencies. Many great engineering works in Southern India, carried on in "deadly jungles," were brought to a successful issue mainly by the protection afforded to the workmen by this medicine. Some remarkable evidence on this point was placed before the Royal Commission that inquired into the health of the army of India, by my friend Major-General Cotton, R.E.

I have only to add that many very eminent members of the profession in this country—among whom I may instance Sir Andrew Halliday, the late Sir James Gibson (Director-General of the Medical Department of the Army), the late Dr. Babington, Mr. Skey, and many others—were led to use this febrifuge, and have left on record strong evidence of its value as a therapeutic agent. The same is true of many distinguished physicians and teachers on the Continent.

It will be seen that quinine is the most important ingredient in the formula, each ounce bottle containing nine grains and a half of the alkaloid. Its presence has been detected by every chemist who has attempted its analysis, and never doubted by any medical man of experience who has used the Tincture. Many will say—"After all, this vaunted remedy is only quinine concealed in a farrago of inert substances for purposes of mystification." To this objection my answer is—I have treated remittent fevers of every degree of severity, contracted in the jungles of the Deccan and Mysore, at the base of mountain ranges in India, on the Coromandel coast, in the pestilential highlands of the Northern Division of the Madras Presidency, on the malarial rivers of China, and in men brought to Netley Hospital from the swamps of the Gold Coast, and I affirm that I have never seen quinine, when given alone, act in the manner characteristic of this Tincture. And, although I yield to no one in my high opinion of the inestimable value of quinine, I have never seen a single dose of it given alone, to the extent of nine grains and a half, suffice to arrest an exacerbation of remittent fever, much less prevent its recurrence; while nothing is more common than to see the same quantity of the alkaloid in Warburg's Tincture bring about both results.

I am prepared also to hear that I am giving undue importance to this remedy. But I cannot forget that in India, taking one year with another, fevers destroy twice as many people as small-pox, cholera, and all other epidemic causes put together.(a) Therefore it is that a therapeutic agent, vouched, on testimony which I submit is trustworthy, to be more efficacious in a certain class of diseases than any other known remedy, is a matter of supreme importance to our native fellow-subjects, and to the well-being of the sixty and odd thousand British soldiers who hold this great possession for the Crown and people of India.

In conclusion, I venture to express a hope that, the reproach of secrecy being now removed, a more extensive and fair trial may be given to this remedy, particularly in the public services, than it has yet had; and that, if it be found to be such as I have described in this notice, its author will not be left to find his only reward in the consciousness of having deserved well of his kind.

The Tincture is administered in the following manner:—One half-ounce (half a bottle) is given alone, without dilution, after the bowels have been evacuated by any convenient purgative, all drink being withheld. In three hours the other half of the bottle is administered in the same way. Soon afterwards, particularly in hot climates, profuse, but seldom exhausting, perspiration is produced. This has a strong aromatic odour, which I have often detected about the patient and his room on the following day. With this there is a rapid decline of temperature, immediate abatement of frontal headache—in a word, complete defervescence,—and it seldom happens that a second bottle is required; if so, the dose must be repeated as above. In very adynamic cases, if the sweating threatens to prove exhausting, nourishment in the shape of beef-tea, with the addition of Liebig's extract, and some wine or brandy of good quality, may be required.

In the terrible remittent fevers described by Livingstone and his followers, the form of purgative prescribed by the great traveller, and known to his people as "Livingstone's Rousers," may be premised. By no authors is the necessity for careful nutrition and due stimulation so much insisted on as by the companions of this immortal explorer, notably by the Rev. Mr. Waller, who, I believe, is a physician as well as a missionary.

Dr. Warburg's Tincture.

℞ Aloes (Socotr.) libram;
Rad. Rhei (East India);
Sem. Angelicæ;
(b) Confect. Damocratis; ana uncias quatuor.
Rad. Helenii (s. Enulæ);
Croci Sativi;
Sem. Fœnicul.
(c) Cret. Præparat.; ana uncias duas.
Rad. Gentianæ;
Rad. Zedoariæ;
Pip. Cubeb.;
Myrrh. elect.;
Camphor;
(d) Bolet. Laricis; ana unciam.

The above ingredients are to be digested with 500 oz. proof spirit in a water-bath for twelve hours; then expressed, and added ten ounces of disulphate of quinine; the mixture to be replaced into the water-bath till all quinine be dissolved. The liquor, when cool, is to be filtered, and is then fit for use.

(a) Dr. Cornish, Sanitary Commissioner, Madras.

(b) This confection, which consists of an immense variety of aromatic substances, was once officinal, and is to be found in the London Pharmacopœia, 1746.

(c) Dr. Warburg informs me that this ingredient was added to correct the otherwise extremely acrid taste of the Tincture. Many other substances were tried, but none answered so well as prepared chalk.

(d) This is the Polyporus Laricis (P. officinalis, Boletus purgans or Larch Agaric), "formerly," says Pereira, "used as a drastic purgative, and still kept by the herbalist."

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OBSERVATIONS ON LYMPH-SCROTUM AND ALLIED DISEASES.

By Dr. PATRICK MANSON, Amoy.

[The cases on which this paper is founded, and which were contributed partly by the author and an equally distinguished brother, originally appeared in what appears to be a somewhat miscellaneous publication, the *Shanghai Customs Gazette*.—Ed.]

In previous numbers of the *Customs Gazette* we published short notes of cases of a disease which, for want of a better name, we designated "Lymph-Scrotum." At the time these cases were seen, I was not aware that anything of the kind had been noticed by medical writers, and indeed none of the usual text-books on surgery or pathology, or monograms on skin diseases or diseases of the scrotum, contain any allusion to this particular pathological condition. Recently, however, I have had an opportunity of consulting the different Indian medical periodicals and other works relating to elephantiasis, and have found that this peculiar disease has been observed by others, and that since the discovery by Dr. Lewis of the *filaria sanguinis hominis* it is beginning to occupy the attention of the profession, especially in India. As it seems likely to form the link required to associate such apparently dissimilar diseases as chyluria and elephantiasis, a short *résumé* of what I have been able to glean, and my conclusions, may prove interesting and instructive.

Though many cases of lymphorrhagia from different parts of the body, especially the legs and groins, have been published, and although, in descriptions by various authors of cases of elephantiasis, lymphous discharges from the parts affected have been alluded to, yet the first description of lymph-scrotum as a distinct pathological condition dates so recently as 1854: it was reported by Mr. Ardaseer Jamsetjee in the *Transactions of the Medical and Physical Society of Bombay* (vol. ii., new series, page 341), as follows:—"Patient, a stout Parsee merchant, aged fifty; duration of the disease, seventeen years and a half, preceded by an injury. There are vesicles of a minute size at the front and upper part of the scrotum, where the integument is rough and thick; from them exudes a white milky fluid, sometimes to a large amount; this coagulates, and afterwards separates into two parts; there are no corpuscles in it. The discharge is irregular in its appearance, and subsequently the vesicles subside. The general health is good. The author supposes the occurrence of this discharge prevents increase of the hypertrophy of the scrotum, which otherwise might take place." This is the case as condensed by Dr. Carter; he adds that the character of the "milky" discharge was not detected.

A second and a third case were published in the *Edinburgh Medical Journal* for January, 1860, under the title of "Milky Exudation from the Scrotum," as an extract from the "Report of the Missionary Hospital at Kumleefow, in the Western Suburbs of Canton," for the year 1858-59, by Wongfun, M.D. The description of the first of these is accurate and careful, and corresponds with our own cases in every particular.

The next and most important notices are by Dr. Vandyke Carter, in the *Medical and Physical Society of Bombay Transactions* (1861 and 1862) and in the *Medico-Chirurgical Transactions* (vol. xlv., 1862). In these publications will be found several well-marked cases very fully and carefully described, along with an elaborate discussion on the pathology of the disease and its connexion with the ordinary form of elephantiasis. One of the cases is of unusual interest, and resembles some of our own in its affording an illustration of the significant combination of a varicose condition of the scrotal lymphatics and chyluria. The history of this case I will give:—"Four months since, the scrotum began to enlarge; native applications were made, and it was only after a time that the peculiar corrugation of the skin appeared. The milky discharge regularly occurs spontaneously, and it intermits; at present it has been going on for two days, and he reckons to have lost about one pound of fluid daily. It does not issue from any one spot, but from several; it may be according to the number and position of the tubercles that have burst. When it ceases, and sometimes also when the discharge is going on, the urine becomes chylous, and frequently coagulates. Such is his own account. Health indifferent; no appetite. He was afterwards admitted into hospital, and I found that the tumefaction of the inguinal glands seemed to alternate with the appearance of chyle in the urine. This circumstance was sufficiently established. The parts also became tumefied a short time (two or three hours) after a full meal, and then again subsided. There did not appear to be any regularity in the appearance or disappearance of chyle in the urine." These are some of the facts of the case which supplied Dr. Carter with the key to the pathology of what hitherto had been a most obscure disease—tropical chyluria; and to him undoubtedly belongs the great merit of making the first step towards a rational explanation of a most important point.

In his work on Clinical Surgery in India (published in 1866), Dr. Fayrer describes a case of this disease on which he operated. He calls it "nævoid elephantiasis." After the tumour was removed, it "weighed a little more than a pound, and shrank and curled itself up remarkably—so much so as almost to obliterate the appearance of cellulo-erectile tissue which was very well seen just after it was removed. On examination it was found to be a modified form of the ordinary elephantiasis. The tissue subjacent to the epidermis was dilated into numerous interlacing and intercommunicating sinuses and cells. These, owing to the contractility of the dartoid tissue, had shrunk almost to obliteration, but they could be followed by a probe and traced to their extremities, the probe in each case appearing near the surface and covered only by a thin layer of tissue. As to the microscopic appearances of the remainder of the growth, it was precisely that of the ordinary examples of elephantiasis, the chief distinction between the two forms being the cellular arrangement I have attempted to describe." Dr. Fayrer again alludes to the disease in his "Clinical and Pathological Observations in India," published in 1873, and lately in the *Practitioner* of August, 1875.

A paper by Surgeon K. McLeod in the *Indian Medical Gazette* for August, 1874, contains an interesting analysis of the literature of this subject, and describes a well-marked case observed by himself. He calls the disease "varix lymphaticus," and remarks that it is of not infrequent occurrence in India.

These notices, along with brief allusions to it by Dr. Druitt in the *Medical Times and Gazette*, by Dr. Lewis in papers in the "Reports of the Sanitary Commissioner with the Government of India," by Rindfleisch, and the cases published by ourselves in the *Customs Gazette*, include all that has been written on this matter, as far as, after a diligent search, I have been able to learn.

The interest of the subject, however does not stop here; for, taken in connexion with Dr. Lewis's discovery of the *filaria sanguinis hominis*, it is likely to supply a link in the hitherto obscure pathology of elephantiasis and chyluria, and to bring these apparently very different diseases under the same etiological heading.

In the following remarks I will endeavour, if possible, to establish—first, the generic identity of lymph-scrotum and the ordinary form of elephantiasis; second, the generic identity of elephantiasis and tropical chyluria; third, I will bring forward evidence to support the inference that these three diseases acknowledge the same etiological cause; and, lastly, this cause I hope to show is the filaria of Lewis.

1. First, with regard to the connexion existing between lymph-scrotum and elephantiasis, I think there can be very little room for doubt that they are not only similar diseases, but that they are the same disease, in slightly different forms, or at different stages, and for the following reasons:—They both attack the same part—the scrotum; they are both accompanied by the same kind of fever and inflammation; they both involve primarily the lymphatics; their geographical distribution, as far as known, is identical—at least, lymph-scrotum has been found only in countries where elephantiasis is endemic; the course of both diseases is similar; and, lastly, they both sometimes occur in the same individual together, or one after the other. If these points can be established, no room for doubt can exist: with the exception of one—viz., the lymphatic nature of elephantiasis,—they are all conceded, or can be easily proved.

Lymph-scrotum depends on a varicose condition of the lymphatics; this in fact, is the pathology of the disease. The nature of the discharge; the appearance of the vessels containing it before evacuation; the peculiar feeling, so suggestive of dilated vessels, conveyed to the finger in examining the universally enlarged inguinal glands,—sufficiently establish

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this. Opinion, however, is not unanimous about the lymphatic nature of the commoner form of elephantiasis. Some have ascribed it to inflammation of the skin and cellular tissue, to erysipelas, phlebitis, and other causes; and, if these views are correct, we could only look on the diseases under consideration as, though similar to some extent in appearance and history, entirely different in nature. Dr. Allan Webb, in a paper on Elephantiasis Orientalis in the *Indian Annals of Medical Science* (No. iv., April, 1855), says:—"Indeed, the disease neither originates in lymphitis nor in phlebitis, but is formed exterior to the vessels by nuclei, which develope themselves into mixed fibro-cellular and elastic tissue, enclosing albuminous fluid. In fact, we shall see that the disease is essentially *fibrous outgrowth* from albuminous blastema." This must not be read as meaning that the lymphatics have nothing to do with the existence of the "albuminous blastema" from which the "fibrous outgrowth" is formed. He even gives a case which in itself alone is almost sufficient to prove that the lymphatics are first affected, and that in them or from them the "albuminous blastema" is obtained. The case is interesting. The patient detailed the usual history of fever and inflammation, and said "that after each attack of fever during a period of four years the scrotum would *transude a quantity of white ropy-looking matter*, which very much reduced its bulk. . . . But about ten months ago this suddenly ceased, and the tumour rapidly doubled in size. . . . The manner of transudation, he says, is, that during the paroxysm of the fever, minute vesicles about the size of a pin's head appear. They are scattered all over the surface of the tumefied scrotum. They become more prominent and distended with serum (?) after the fever subsides, and break rapidly and discharge their contents." The description of the discharge is not very full, but sufficient is said to recognise it as the discharge characteristic of lymph-scrotum—in fact, lymph, which, after ceasing to find an escape by the skin, accumulated in the scrotum, and undoubtedly became the "albuminous blastema" from which the "fibrous outgrowth" was formed; for not till after this fluid ceased to flow did the tumour grow and acquire the appearances of elephantiasis.

Brett ("A Practical Essay on some of the Principal Surgical Diseases of India"), Wise (*Transactions of the Medical and Physical Society of Calcutta*, vol. viii.), Bouillaud, Rayer, and some others, maintain that the disease is dependent on a venous cause. Nevertheless, the balance of opinion, as well as the evidence of facts, is very decidedly in favour of its lymphatic nature; Alard, Virchow, Mohammed Ali Bey, Fayrer, Carter, and most modern writers who have seen much of the disease, are of this opinion. Paget ("Lectures on Surgical Pathology," third edition) recognises the presence of lymphatic disease. He says—"Sometimes elephantiasis may co-exist with an obstructed and dilated condition of the lymphatics situated in the connective tissue of the part. The dilated lymph-vessels in some of these cases have contained a quantity of milky, chyle-like fluid." The testimony of Dr. James Hendy, who wrote in 1784 "A Treatise on the Glandular Disease of Barbadoes, proving it to be seated in the Lymphatic System," is almost in itself conclusive. He mentions that in the examination of a leg amputated for elephantiasis, the lymphatic "on the top of the foot" admitted a large quill with ease. Other lymphatics were similarly affected, their walls being so thinned and weakened that they could not bear quicksilver injection. Such a state of lymphatics I have seen in the living body during the progress of an operation for elephantiasis, and so large was the stream of lymph from the cardiac end of one of these vessels, which I divided, that a ligature had to be used.

Such evidence for the lymphatic nature of elephantiasis is in itself of great weight, and if we find that disease in combination with well-marked lymph-scrotum, there can be little doubt as to the nature of elephantiasis, or of the identity of the two diseases. Good illustrations of such a combination (not to pass from our own experience) are to be found in several of the cases we have recorded. No. 10 of our series was a well-marked case of lymph-scrotum; on account of its size the scrotum was removed, and on section the diseased mass had the "usual appearance of elephantiasis—a strong outer rind of about half an inch in thickness, and the interior filled with a gelatinous mass. The vesicles on the surface communicated with the central part; a wire could be passed from the one to the other." Again, in Case 15, "the skin of the upper part of the scrotum was covered with numerous vesicles, which on puncture discharged ten ounces of straw-coloured fluid; the skin covering the penis was very much thickened and elongated, so that the glans was invisible—elephantiasis." The combination of the diseases, or, rather, the gradual passing of the one into the other, is still better illustrated in Case 20. In this case the scrotum, for upwards of ten years, discharged regularly, about once a month, from ten to fifty ounces of white fluid; this stopped, and the parts then gradually enlarged, assuming the usual appearances of elephantiasis, for which he was operated upon seven years after all discharge had ceased, and a characteristic tumour removed.

Enough, I think, has been advanced to prove the close relationship, if not the identity, of these two diseases. The cause of the slight difference is, I believe, not difficult to find. Assuming, for the time being, what I afterwards hope to prove—that in "both there is obstruction to the circulation of lymph,"—I would suggest that in the case of lymph-scrotum the obstruction is not complete; that the upward progress of the lymph, though retarded, is not thoroughly arrested, and that it is kept fluid by thus being allowed to circulate, just as the blood is in veins made varicose by obstruction; or perhaps the obstruction above may be complete, but yet a movement of the lymph is allowed by the rupture of a vessel on the surface of the scrotum, and it is thus prevented from stagnation and coagulation. On the other hand, in ordinary elephantiasis, I conjecture that the obstruction is complete or nearly so, and that there is no rupture of vessel on the surface. In consequence of this there is complete stagnation of lymph; it coagulates, and eventually becomes organised into degraded forms of the tissues in which it has accumulated. A somewhat analogous thing occurs in the contents of an aneurism when the vessel, as in one operation, is tied on the distal side of the swelling.

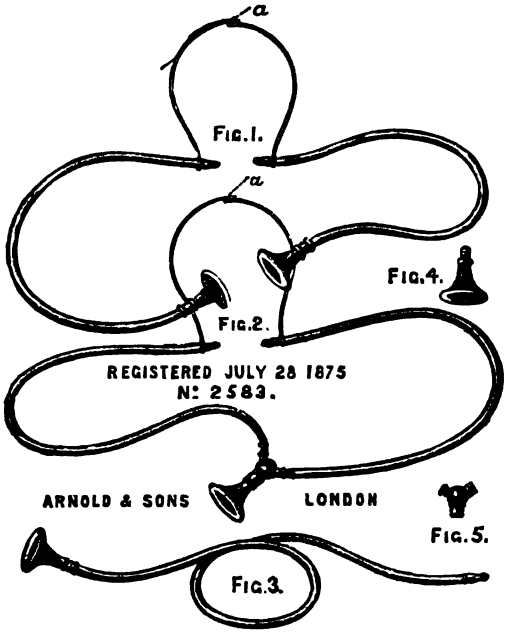
(To be continued.)

ON A NEW DOUBLE STETHOSCOPE.

By R. HARVEY HILLIARD, M.D.

"THE HEAD-SPRING STETHOSCOPE."

THE object of this design is to produce a flexible double stethoscope which is free from the objections that apply to other instruments of this class. The advantages of a double



flexible stethoscope are apparent on a moment's consideration. The ease to the auscultator, who may be seated at his patient's bedside, and may thus with comfort to himself and his patients apply the instrument to all parts of the body—without painful pressure or other inconvenience to the patient, on the one hand, or unnecessary straining to himself, on the other—is very plain. Moreover, if this can be done without loss of conduction of sound, and with an instrument as conveniently carried in the

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pocket as the ordinary wooden stethoscope, the superiority of the double instrument would be granted by most medical practitioners, and it would probably be welcomed as a boon long sought for. Objections, however, have been raised that instruments of this class are too bulky for ordinary practice, and that the acoustic results have been less perfect than those obtainable with the simple wooden stethoscope in almost universal use. These objections I claim to have overcome by the instrument I now present to the profession.

The "Head-Spring Stethoscope" consists of two simple tubes of finest indiarubber very smooth, and equal in calibre from their attachment to the chest-piece (or pieces) to the well-adapted ear-nipples, which are held in the ears by means of a bow spring, hinged in the middle for greater convenience of carriage in the pocket, which, by its elasticity, retains its position when carried over the head or under the chin.

When it is desired to use the instrument as a differential stethoscope (Fig. 1), the ends of the tubes, which bear suitable mounts, are screwed into separate collectors or cups; but when a bi-aural stethoscope (Fig. 2) with single chest-piece is required, which for most purposes is the preferable combination, one of the cups alone is used, to which are attached the tubes by means of a branched body-piece which bears corresponding screw adjustments. Changes can be made at pleasure, and almost immediately. Fig. 3 shows one of the tubes fitted with cups and "ear-nipples," for use as a single flexible stethoscope.

I have used the instrument for two years with increasing satisfaction, and I believe that experience will prove that I have not overrated its merits. Messrs. Arnold and Sons, of West Smithfield, are the manufacturers, and they have bestowed great pains in executing my instructions.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES UNDER THE CARE OF MR. MARSHALL.

For notes of the following cases we are indebted to Mr. A. Pearce Gould, B.S., the Surgical Registrar.

Case 1.—*Compound Depressed Fracture of Skull—Elevation of Fragments—Meningitis—Death.*

Annie W., aged eleven, was brought into the Hospital on April 21, 1875. at 4 p.m. She had been found under the window of a house in Market-street, Fitzroy-square, bleeding profusely from the head. She had been engaged in hanging out some clothes from the window of a first floor, and was supposed to have fallen when leaning out. She was immediately carried to the Hospital, about a quarter of an hour elapsing between the occurrence of the accident and her admission. Upon admission the patient was found to have a scalp wound, two inches long, of semicircular shape, which extended from before backwards over the right side of the occipital region. If a finger were inserted into the wound and passed downwards under the scalp, an edge of fractured bone could be felt, which was also horizontal in direction, and towards which sloped a piece of depressed bone. The edge and the depressed part were each about half an inch in length from before backwards, the depressed part sloping downwards also for half an inch. The patient was in an unconscious state, occasionally groaning slightly, and moving the left arm towards the head. A great deal of hæmorrhage seemed to have occurred. Soon after the patient was admitted, her hair was cut off and an operation performed for relieving the pressure caused by the depressed bone upon the brain. First a triangular piece of bone was sawn off from the overhanging ridge to allow of the introduction of the elevator. This was then applied, and a large piece of the outer table of the depressed portion was removed (cut off with necrosis forceps), the inner table being elevated, and both tables of a small piece of bone at the lower part of the wound, so as to leave exposed the dura mater. The wound was syringed with carbolic acid (1 in 40), a pad of gauze placed over it, the whole covered over with a large gauze dressing, and the head bandaged with gauze bandages. The whole operation was performed antiseptically. 6.30 p.m.: Pulse 96; pupils of eyes equal and dilated; she has vomited. 9.30 p.m.: Dressed; the patient is quite unconscious; she moves away, however, when a light is held close to her face. The respiration is stertorous; the pulse fairly strong and full; the pupils are of normal size, act readily to light, and are equal in size. There is no strabismus. She moves left arm and leg when irritated. Temperature 100·8°; pulse 90; respirations 33.

April 22.—11.30 a.m.: The patient is in the same unconscious state; she moves slightly upon irritation, especially on the left side; the breathing is quiet, but occasionally stertorous. Temperature 101·6°; pulse 100; respirations 36. 2 p.m.: The right pupil is now the larger, the left contracted; they both respond to light.

23rd.—10.30 a.m.: Temperature 98·5°; pulse 98; respirations 26. The right eyelid is œdematous and rigid; the left also rigid to a less extent. Upon elevating the right eyelid rather forcibly, she moved the left arm over her head. The wound dressed; there was a slight serous discharge.

24th.—10.20 a.m.: Temperature 103°; pulse 124; respirations 32. She lies in the same unconscious condition. Pupils act readily to light, the right being larger of the two; the œdema of the right eyelid has almost disappeared. The cheeks are flushed. There is rigidity in the right arm. At intervals all the limbs undergo convulsive movements. She has been taking half-grain doses of calomel every four hours. The wound was dressed this morning; there was a discharge of a sero-purulent nature; not sweet.

25th.—The respiration is more laboured and impeded. The pupils are both large; the left slightly the larger of the two; they both act slightly to light. She has not taken anything during the night, and swallowing is now impossible. The patient died in the afternoon, the breathing having become more and more laboured until it became impossible.

Post-mortem Examination.—April 26.—Upon removal of the scalp a small piece of loose bone was found lying in the wound. Upon removal of the upper part of the cranium, the bone was found to be depressed for an area of one inch, the displacement of bone being greater on the inner than on the outer side. Over the dura mater, corresponding to the depressed bone, was an effusion of healthy lymph. When the dura mater was removed, the brain was seen to have been compressed all over by the enclosing hard parts, and to bulge out when they were removed. Over the pia mater were several patches of a light-red colour. The part corresponding to the depressed bone was congested superficially, and of a dark livid appearance; an incision being made at this point, the brain was found to be bruised, and to contain pus-like matter. Throughout the brain (hemispheres) there were seen to be numerous little red spots indicating its congested condition. There was also a dark contused spot deeply in the left Sylvian fissure, and another small contusion on the left amygdaloid lobe of the cerebellum; between the two amygdaloid lobes was a bridge of lymph, and under the pia mater was an effusion of turgid matter. The central parts appeared to be uninjured. The thorax being opened, and the heart withdrawn, the right side of this was found to be glutted with blood, which was clotted at the lower part, indicating the formation of the clots *after* death. The semilunar valves were healthy, but slightly curled up at their edges. The lungs were found to be collapsed for the most part—the left particularly so. This appeared of a dark, dull reddish colour, with here and there little patches of healthy lung, the patches being *elevated above* the surface of the collapsed part. The collapsed lung was tough and callous to the touch—not brittle. The other viscera were healthy.

Case 2.—*Fracture of Sternum, Fourth and Fifth Cervical Vertebræ—Paralysis of Legs and Arms—Priapism—Death—Bruising of Cord.*

Wm. S., aged sixty-six, cabdriver, was admitted at 5.30 p.m. on Monday, July 19. About half an hour before admission he was driving a four-wheeled cab, and was turning the corner into a side street to avoid another vehicle, when the wheel of this caught the hind wheel of the cab, and upset it, patient falling headforemost to the ground.

Present State.—Is quite conscious, but has complete paralysis of motion in both legs and arms; also of sensation below the level of the deltoid in the upper limbs, and on the trunk below a line about two inches above the nipple. Chest-walls paralysed, and breathing is entirely diaphragmatic. Distinctly marked priapism is present. Patient complains of pain at the back of the neck and between the scapulæ; also of tenderness on pressure along the whole of the back of the neck. No displacement can be discovered, and there is no subcutaneous

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ecchymosis. Pulse 90; respirations 18; temperature in urethra 98·1°. A No. 10 elastic catheter was passed into the bladder, and about three ounces of urine drawn off. Passage of catheter caused priapism to disappear. During the night patient took iced milk at intervals. Breathing became gradually more difficult, and there was occasional slight muttering delirium. About 5.30 next morning patient had some warm beef-tea, which caused vomiting. At 6.45 nurse states respiration became much more difficult, was accompanied by moaning noise, and lips and face became more blue. Death occurred at 8.30.

Post-mortem, six hours after Death.—Rigor mortis well marked; considerable post-mortem congestion of dependent parts of body; superficial veins distended with fluid blood. Heart healthy, contained scarcely any coagula; right side slightly distended with fluid blood. Lungs somewhat congested, but not to a very great extent; liver healthy, somewhat congested; kidneys congested, otherwise apparently healthy. Brain apparently healthy; hemispheres a little shrunken, and a considerable amount of clear fluid beneath pia mater. The sternum was fractured below the junction of the manubrium with the body of the bone. The line of fracture was transverse, and was marked by slight extravasation both on the external and internal surfaces. On removal of the larynx and œsophagus, it was found that the body of the fourth cervical vertebra projected slightly in front of that of the fifth, and that the two were approximated by the squeezing of the intervertebral cartilage. Slight extravasation surrounded the line of injury. On making an incision behind, extensive extravasation was seen to exist amongst the muscles at the back of the neck; and on exposing the spinal column it was found that, owing to the fracture of the neural arch of the fourth, the dura mater of the cord was freely exposed for about an inch. The cervical vertebræ, except the atlas, were removed together, when the following condition was discovered. The fourth cervical vertebra moved freely forwards over the fifth; the anterior common ligament, however, remained untorn, while the interspinous and intertransverse ligaments were more or less completely torn through. The intervertebral cartilage was ground up into small particles, so as to be scarcely distinguishable, and the contiguous surfaces of the fourth and fifth vertebræ were also to some extent ground away. The dura mater was completely intact, and on opening it no hæmorrhage outside the spinal cord was seen. Immediately opposite the seat of injury, and most intensely opposite the space between the fourth and fifth vertebræ, the spinal cord was much softened, and, on cutting into it, it was found to be bruised from a distance of about an inch from above down. The bruising formed a dark purplish diffused discoloration, corresponding tolerably closely to the grey matter, and extending more deeply in the anterior than in the posterior direction. In the part bruised the substance of the cord was very much pulpified; above and below it was of normal consistence.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF INTESTINAL OBSTRUCTION DUE TO MALIGNANT DISEASE—DEATH—AUTOPSY.

(Under the care of Dr. SOUTHEY.)

For the report of the following interesting case we are indebted to Dr. George Hastings, House-Physician.

T. D., aged forty-five, a plasterer, was admitted into Radcliffe ward, under the care of Dr. Southey, on October 15, with the following history:—Six weeks ago he commenced to vomit occasionally after food, and noticed that he daily got thinner. The sickness became more frequent, and the character of the vomit more and more offensive. For last three weeks it has been like a loose motion. There has been no action of the bowels for twenty-one days. Noticed nothing about the size or character of motions previously, and has never had pain on going to stool. Complains now of cutting pain in epigastric region; this has been present for six weeks. Previous health good. Family history good.

On examination he was found to be extremely emaciated, most remarkably so about the face and thorax. The abdomen was distended and tympanitic; visible peristaltic action of the intestines in an oblique downward direction occurred on the slightest external irritation. No appreciable swelling nor any tenderness to be detected in any part of abdomen; and resonance was tympanitic even in the lumbar regions. The rectum was capacious and empty, and no tumour could be felt. No evidence of foreign growth in any organ. The tongue was caked with a thick dry brown fur, the lips and teeth covered with sordes, and the breath of a fæculent odour. Pulse 90, of fair volume; and it may here be said that the temperature whilst in hospital varied from 98·6° to 97° Fahr., more frequently below normal in the mornings, and not higher than 98·6° at nights. The urine was of high specific gravity, but contained no abnormal deposits. Was sick twice during the night after admission, and also twice during the following day. The vomited matter was dark brown, thick, uniform in character, and emitted a stinking fæcal odour. The quantity brought up in the twenty-four hours was about three pints.

Up to the 22nd inst. the patient went on very well. The pain in epigastrium had been relieved by frequent small doses of morphia, and nutrition kept up by small draughts of milk. Nutrient enemata of beef-tea and brandy were also administered three times a day. No vomiting since the 16th, and the bowels had not been moved until to-day, when he had a small worm-like motion. This was the first action of the bowels for thirty days.

On the 25th he vomited once, the vomit being of same character as before. Bowels were open again; the motion was this time more liquid, but still contained small formed portions. His general condition was lower, but he complained of scarcely any pain, and seemed fairly cheerful.

On the 26th and 28th he again passed a small motion with a large quantity of flatus.

Gradually sank on the 30th, and died insensible at 10 p.m.

At the post-mortem examination, two obstructions were found, one consisting of a large cancerous mass at the pyloric end of the stomach, involving and almost entirely occluding the duodenum; the other was also a cancerous mass surrounding and obliterating the ileo-cæcal valve. Both were attached by adhesions deep down in the abdominal cavity, hidden and smothered by the distended small intestines. No cancerous deposits were discovered in any other organs, but abundant small new growths varying from the size of a pin's head to a pea were found in almost every part of the peritoneum. The whole alimentary tract from the stomach to the anus was lined with liquid fæces.

Remarks.—It is curious that such extensive disease should not have given rise to some previous symptoms, earlier than the date fixed upon both by the patient and his friends—viz., six weeks before admission. Including the fortnight in hospital, this makes the whole duration only about two months. Their statement is that he was in perfect health up to the commencement of his fatal illness; and although never a stout man, was in fair condition up to that time; yet on admission he was a mere skeleton covered with skin. The remarkable rapidity of his emaciation is explained by the presence of two obstructions—one at the pyloric end of the stomach, involving the duodenum; and the other at the ileo-cæcal valve,—so that the digestive and absorptive functions of the small intestines were almost completely arrested. An action of the bowels occurring after thirty days' complete obstruction from a malignant growth is rather puzzling. From the shape of the motion, it could only have been formed in one of two ways—either the cancerous mass ulcerated through in the centre and allowed fæces to pass, or the *débris* of the numerous enemata accumulated in the lower bowel, caused irritation, were expelled, and formed into worm-like masses by the tight and very strong sphincter ani. (The patient seemed to have obtained considerable control over his sphincter, as only once did an enema return during the whole time of his stay in the hospital.) The post-mortem examination seems rather to point to the latter explanation. A powerful stream of water was forced into the intestines above the ileo-cæcal valve, but none passed through, showing that the passage was completely obliterated. Taking into consideration that he had an action of the bowels only two days before death, it is hardly probable that the patency would have closed up so quickly. Therefore the shape of the motion was most likely caused by the sphincter. The total cessation of vomiting and pain for six days is interesting to note, and surely may be placed to the credit of the small doses of morphia frequently administered.

Last year there were held in England and Wales 27,184 inquests, the cost of which, including coroners' salaries and allowances, was £82,533 15s. 1d.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 13, 1875.

ANTI-VACCINATION.

"Now there arose a new king in Egypt, which knew not Joseph." And there has arisen a new generation in England which has not known the small-pox—a worse tyrant than any Pharaoh. And so Dr. George Gregory's prophecy is fulfilled, that in proportion as small-pox subsided, and its terrors became less known, so vaccination would be less regarded as necessary, or, perhaps, might fall into disrepute.(a)

The case for vaccination rests on one broad fact. Compare the description of disease and mortality in the seventeenth and eighteenth centuries with the nineteenth. You will then find the older physicians describing epidemics of small-pox in which the grievous mortality was scarcely so terrible as the noisomeness of the disease. Sydenham, describing the worst cases of the irregular and confluent small-pox in the years 1674-75, says, "I could scarce come near those that had them much, by reason of the stink." No disease ever was so offensive as small-pox was, and will be again if severe epidemics rage amongst an unvaccinated population. But it is not the physicians only who noticed small-pox. From the time when it passed through Egypt, a thousand years ago, historians had to chronicle its ravages, especially amongst royal families, and anyone who reads the literature of the last century will see how frequently the novelist introduces it into his plot as a destroyer of female beauty and hinderer of marriage. But small-pox, badly as it threatens us from time to time, is never now a cause of public panic; nor could any novelist, with the least regard to probability, now bring it in for the purpose of his plot. Why? Because during the last seventy-five years vaccination has rendered a great part of the population incapable of receiving or transmitting the disease.

But, as our readers know, there is a sect who oppose vaccination—a few transcendental philanthropists,—persons so fond of peering at minute specks and accidental blemishes, that they are unable to take a broad and comprehensive view of any matter. They have their literature, their meetings, their agitation, and their followers, and they oppose vaccination on one or both of these grounds: First, that it has had no effect in checking small-pox; and that it does not render persons insusceptible. Secondly, that it does positive harm, and is against the order of nature.

For instance: on the question whether vaccination has really had the effect of checking the small-pox, we may quote from a pamphlet which bears the respected name of F. W. Newman, Emeritus Professor. It is there asserted that small-pox began to decrease before vaccination was introduced; and that "vaccination *happened* to be introduced just when the small-pox was on its decrease, and rapidly approaching its lowest point. People jumped to the conclusion that vaccination was the *cause* of the decrease. . . . . We do not, and cannot, trace the causes of epidemics, nor the causes of their cessation. They generally die out without any such checking influence as vaccination is supposed to have exerted."(b) The idea that vaccination has checked small-pox is called as great a delusion as the belief in witchcraft.

The whole question hangs on this point. For, if vaccination have really no influence in checking small-pox, why should we vaccinate? Now, all parties are agreed that small-pox in the nineteenth century is not the terrible epidemic that it was 100 or 200 years ago. It is asserted by some that vaccination simply *happened* to be introduced whilst the small-pox was declining, and has unjustly got the credit of being the cause of the decline. We affirm, on the contrary, that it is the real cause, and would commend the following arguments to the opposite party:—

When, of two occurrences, one is alleged to be the cause of the other, and not a mere coincidence, it is requisite to consider whether they have any connexion in nature. Tenterden steeple was once alleged to be the cause of the Goodwin Sands. But there is no obvious reason why building a steeple should cause the sea to convert part of a fertile country into a desolate sandbank, and before we believe it we must ask for repeated instances. Has observation of the common people shown that steeple-building is apt to be followed by inroads of the sea? Or have philosophers made deliberate experiments to prove or disprove it? Till this is done we refuse to believe.

But with regard to vaccination and the small-pox. They are not things alien in their nature. They are closely related members of the family of diseases. Either of the two, if taken, renders the patient incapable of taking either disease for some long time, or for life. Popular observation had long been directed to the fact that dairy people who were infected with the cow-pox were safe from small-pox. This, after more than twenty years' consideration, was made the subject of deliberate experiment by Jenner, on May 14, 1796, when James Phipps was "vaccinated" with matter taken from the hands of Sarah Nelmes, and six weeks afterwards was "inoculated" with small-pox, which did not take. The fact that a well-vaccinated person is rendered, for a time, insusceptible of either vaccination or small-pox, has been demonstrated by thousands of experiments. To say, therefore, that popular vaccination and the decline of small-pox are things which merely *happened* to come together, is scarcely consistent with that candour or *verecundia* which marks every reasonable argument.

As for the failure of vaccination to protect people for the whole term of life, and the occasional lamentable instances of well-vaccinated people who have died of small-pox, we can only point to general results. We have in vaccination a preservative against one particular pestilence. We cannot help

(a) We quote from Dr. G. Gregory's article "Vaccination" in the *Cyclopædia of Practical Medicine*, 1835.

(b) "On the Policy of Vaccination." By P. A. Siljestrom. Page 92.

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it if it be not a perfect preservative, or if its advocates sometimes use hyperbolical and exaggerated expressions of confidence in it. Nothing earthly is perfect; and if vaccination admits of small-pox after it, so does small-pox itself. In December, 1859, there died of small-pox at the Clarendon Hotel, an Italian nobleman, aged fifty-four, said to have been the first child vaccinated in Florence in 1810. Here was a case of failure of vaccination to insure lifelong protection. But the undertaker who coffined him had had small-pox, and yet took it again, and narrowly escaped with his life, and with the loss of one eye; and a nurse, in taking off some rings, infected one eye, and nearly lost it through suppurative ophthalmia.

One argument there is—viz., that the sum of sickness and mortality from zymotic causes is constant, although the details may vary. Thus, scarlet fever prevails at one time, measles at another; they are but different manifestations of one condition, and it is of no use to extinguish one, because if people do not die of small-pox, they will of typhoid or some other. This is as if a man should complain of his expenditure, and be told by his wife that it is useless to lessen the milliner's and confectioner's bills, because the butcher's and baker's will be greater in proportion. A prudent man attacks details.

Well, we have gone so far, showing that vaccination, whatever its defects, has lessened the greater evil—small-pox. We hope to deal with the other part of the argument next week.

THE LATE HOSPITAL SUNDAY FUND DISTRIBUTION.

We last week expressed our intention of reverting to the subject of the distribution of this year's Hospital Sunday Fund. The meeting, which took place at the Mansion House on the 1st inst., for the purpose of receiving the report of the Committee of Distribution, included most of the names identified with this movement, under the presidency of Sir Sydney Waterlow as chairman, in the place of the Lord Mayor, who was prevented by illness from being present. The reading of the report of the Distribution Committee elicited little more than the fact that, whereas in 1874 the sum of £28,348 10s. 7d. was awarded to the different institutions, upon the present occasion only £25,476 13s. 1d. was available for a similar purpose. It will thus be seen that in the third year of its establishment, with improved co-operation and organisation, the total amount realised is nearly £3000 less than upon the previous occasion. Should another year's results tend in the same direction, it will become an imperative duty on the part of the Council to consider whether the movement, as regards the metropolis, should not be at once abandoned as a serious failure. The sub-committee recommended that, in order to make a much earlier distribucion of the Fund in future years, all hospitals and institutions seeking to participate be asked to render their usual statements not later than the end of March in each year. At the conclusion of the reading of the report, the Chairman requested that the instructions by which the Distribution Committee had been guided might also be read; and, in the course of the discussion which ensued, Sir Sydney Waterlow pointed out that the difference between the principles under which the Committee worked last year, and this, lay in the fact that this year they were not empowered to give to any institution less than its arithmetical basis without previously having a conference with the managing body with regard to the points which were open to criticism. Twenty-seven such conferences were held, and in the majority of them the basis was reduced. The Rev. J. F. Kitto and the Rev. Dr. Kennedy considered that the hospitals and dispensaries would have had a right of appeal to the Council against the decision and awards of the Distribution Committee had they felt aggrieved, but, that apparently not being the understanding, an approval of the report was simply an act of faith in the discretion and justice of the Committee. The Rev. Professor Marks, on the other hand, contended that if it had been suggested for a moment that the institutions could have appealed, then the reports ought to have been circulated among them; and the result would probably have been endless bickering and great danger to the Fund. At this point the Rev. Canon Miller propounded the theory that there could be no middle course between accepting the report as it stood, and allowing the institutions to appeal against it. He hoped that there would be no appeal, and that the Distribution Committee would have absolute power and responsibility in the matter. We imagine that almost all friends of the movement will cordially endorse this opinion. The whole sum collected is entrusted to men of recognised position, high character, and large experience, to divide; and the fact of their having this year held twenty-seven conferences with institutions concerned, shows what great care and pains are taken in making the awards. We are inclined to go with Mr. Brudenell Carter so far as this—that it may be well that the report of the sub-committee should be issued to each member of the Council before the general meeting is summoned; but even then, if discussions with the view of altering awards are to be allowed, much delay might arise. On the whole, it seems to us that either the decisions of the selected Distribution Committee should be considered as final for the year, or the duty of apportioning the awards should be undertaken by the whole body of the Council—which is impracticable.

The following comparative table will show the amounts awarded to some of the leading institutions last year, and upon the present occasion:—

Institution.	1874.	1875.
Charing-cross Hospital	£1,016 0 7	£797 10 0
French Hospital	109 8 4	108 15 0
German Hospital	468 18 9	601 1 6
Great Northern Hospital	234 9 4	286 19 8
King's College Hospital	1,172 6 11	1,266 13 0
London Hospital	3,907 16 3	2,404 13 4
Metropolitan Free Hospital	78 3 1	280 6 8
Poplar Hospital	429 17 2	314 3 4
Royal Free Hospital	625 5 0	531 13 4
St. George's Hospital	3,126 5 9	2,175 0 0
S.S. John & Elizabeth Hospital	187 11 6	151 0 10
St. Mary's Hospital	1,172 6 11	954 11 8
Seamen's Hospital	625 5 0	845 16 8
Middlesex Hospital	2,344 13 9	1,741 1 8
University College Hospital	1,250 10 0	930 8 4
West London Hospital	390 15 8	338 6 8
Westminster Hospital	1,172 6 11	725 0 0
Hospital for Sick Children	703 8 1	543 15 0
Queen Charlotte's Hospital	156 6 3	157 1 8
Royal London Ophthalmic Hospital	117 4 8	190 18 4

Already signs of discontent are visible amongst one portion of the institutions sought to be benefited by Hospital Sunday; and, as we last week pointed out, some dispensaries had prevailed upon the local preachers to divert a portion of the money collected upon the appointed day into their coffers direct, instead of paying the whole sum over to the Mansion House Fund. The movement, before another year, must be roused into fresh strength and activity—and we must confess we cannot at present see how this is to be done,—or Hospital Sunday, which in comparatively small and compact provincial towns is without doubt an excellent institution, must be abandoned as entirely unfitted to the requirements of this huge metropolis, where singleness of purpose or idea is an impossibility.

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THE ELECTION OF MR. MACNAMARA AT WESTMINSTER HOSPITAL.

We took occasion last week to refer to certain features of the recent domestic history of Westminster Hospital which did not appear to us to be very creditable, but we did not then go into the particulars of Mr. Macnamara's candidature and election to the post of Surgeon. As regards Mr. Macnamara himself we have nothing but good to say. He has been a distinguished Indian surgeon, is a man of ripe experience, and in every way suited to the post to which he has been elected. Nevertheless, we should have been glad to have seen him take a more dignified position in the recent election. In the face of Mr. Cooke's address to the governors, it would have been better for Mr. Macnamara not to have come forward as opposing Mr. Cooke on Mr. Cooke's terms, but in a very different manner. Probably Mr. Macnamara was altogether independent, and declined to make any personal show; but we think he would have done better had he insisted on his supporters coming forward boldly and openly, and that they should publicly assign the grounds on which they desired his success. These grounds were not far to seek: the surgical staff of Westminster Hospital had, from various reasons, become too young and inexperienced to rightly maintain the dignity and position of the Hospital. It urgently needed new blood, and certainly they could not have selected a better man than Mr. Macnamara; but why did they not say so, instead of appearing to attack Mr. Cooke? Perhaps, after all, the same arguments which applied to his appointment as Surgeon would have sufficed to secure his appointment as Senior Surgeon at once.

It must be confessed, however, that such appointments as this to the Westminster Hospital are exceedingly undesirable, and, whatever may have been the rule in former days, are now very rarely had recourse to. In truth, we remember nothing at all equivalent to it for many, many years. That which comes nearest it was the transference of Dr. Garrod from University College Hospital to King's College Hospital, with the rank of full physician and the chair of Materia Medica. But in this case there was no injustice or injury done to the assistant-physicians, who at that time were elected for four years only. Neither, again, was there any injustice done to anyone in renewing the staff of St. Thomas's Hospital, when a third physician, Dr. Murchison, and a third surgeon, Mr. Mac Cormac, were elected, for these additional posts had been long in abeyance. In all other instances which we have in mind, when a man joined another school, he invariably entered as junior of the staff, and took rank accordingly. Such a necessary departure from the ordinary system as the election of Mr. Macnamara is to be most sincerely regretted.

Had such appointments reference to the Hospital alone, we could have nothing to say. Everywhere around us we see hospitals most admirably and efficiently conducted by old Queen's or Indian officers; but here in London it is different. Every hospital of any consequence has connected with it a school of greater or lesser importance; and it has been abundantly proved that the two react on each other with the greatest advantage. But to make a school successful there must be incessant labour, and to this worry and trouble are necessary adjuncts. Who, then, have to bear this save the juniors? On them fall the burden and heat of the day, just as these fell on their seniors before them. No wonder, then, that these men should resent the transplantation of a man to a post far above their heads. Not only are they sent away without their due reward, but any certainty of ever reaching it is taken away from them. Is it likely, then, that men with such prospects should care to continue to teach, say at threepence a lecture, and to demonstrate for nothing at all? Men choose their career, and it is highly necessary to do so; but it is never a good plan to interpolate one into another, or that retired Indian officers should man our hospitals.

But again, as regards Westminster Hospital especially, it has been said that Mr. Cooke's position as Senior Assistant-Surgeon is an exceedingly good one. With this we quite agree; and, were it not for the mere act of supersession, we should think it much better for him to remain as he is for a time, than to seek the higher post. But what security has he that he will ever be anything more—nay, that if the proposed law be carried, and he come forward at the next election, he will not be completely got rid of? The recent history of Westminster Hospital seems to suggest that this might be done; and for this, if for no other reason, we should have been glad had Mr. Macnamara insisted on taking the more manly course. He should have made it clear on what grounds he came forward.

THE CAMBRIDGE CERTIFICATE IN SANITARY SCIENCE.

We published in our number of October 23 the first list of the candidates who had passed the examination for the degree of Public Health at Cambridge; but the matter is worthy of some further notice, and it is so important that every means should be afforded of forming an estimate of the value and weight to be attached to any of the new degrees or diplomas in State Medicine, that we now publish the Cambridge examination papers. It must be granted that they cover the ground very fully. The examination was divided into two parts, and it will be noted that Part I. comprised physics and chemistry, and their applications to sanitary matters; while Part II. comprised the causes and prevention of epidemic and infectious diseases, the circumstances and conditions of life which are injurious to health, and the laws of the kingdom which relate to public health. In each part two papers of questions were set, to which written answers were required; the candidates were also questioned orally in each part "by two of the examiners sitting together," and in each part the candidates were tested by practical work. Twenty-six candidates presented themselves for examination, of whom twenty-two were examined in both parts, and nineteen were approved; while four offered themselves in Part I. only, of whom one passed. A report on the examinations has been made to the Senate by the Syndicate appointed to superintend them, and from it we learn that—"The examiners report that the answering was generally good, some of it excellent, more especially in questions relating immediately to the actual duties of officers of health. This remark applies emphatically to the reports on the sanitary condition of some of the small courts and other places in Cambridge, which the candidates were directed to visit for the purpose of inspection, each candidate having a different locality assigned to him." The examiners say further that they are of opinion "that the number and character of the candidates are evidence that the examination supplies a public want, and may be of real service in the advancement of sanitary improvements. Such a knowledge of sanitary science as has been shown by the successful candidates proves them to be entitled to some trustworthy voucher for their acquirements." We agree in the opinion expressed that "the University certificate, granted after a careful and thorough examination, will be such, and may serve to assist the judgment of those public bodies in which the choice of officers of health has been invested by the law," and we congratulate the Senate on the success that has attended the first examination. The report states further that "the Syndicate considers it convenient that the holders of the certificate should be designated in a uniform manner, and recommends that their designation be 'Holders of the Certificate in Sanitary Science,' or abbreviated 'S.Sc. Cert. Camb.

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The Syndicate has arranged that the next examination shall begin on June 13, 1876, and considers it desirable to hold a second examination next year at the beginning of October. These times seem as convenient as any for the University, and are likely to suit medical men engaged in the practice of their profession. Whether it will be advisable to hold two examinations in any future year must be decided by the experience gained as to the probable number of candidates, and by other considerations." The Senate of Cambridge University have acted in this matter with liberality as well as energy, for it will be remembered that anyone whose name is on the Medical Register may present himself for their examination, provided he is twenty-four years of age.

THE WEEK.

TOPICS OF THE DAY.

The Richmond Select Vestry has held a special meeting, to take into consideration the sanction which they have obtained from the Local Government Board for borrowing £28,000 to enable them to obtain a local water-supply. It was proposed and carried that an application be immediately made to the Public Works Loan Commissioners for the required sum, at 3½ per cent., payable in thirty years; and it was further resolved to request Messrs. Russ and Minns, engineers, to attend a special meeting of the Vestry with all the necessary plans and specifications. It is intended to sink a deep well into the chalk, and to have a large covered reservoir in Richmond-park. The Crown authorities have already sanctioned the construction of the reservoir, and Mr. Hawkesley, C.E., Mr. Prestwich, the geologist, and other scientific gentlemen have given it as their opinion that an abundant supply of water will be obtained from the chalk basis underlying Richmond.

A lady named Umfreville, the wife of Mr. C. Umfreville, a magistrate for the county of Kent, has expired at her residence at Greenhithe. Some few evenings back, the deceased lady, who had been out driving with a friend, had just alighted from her carriage when she was struck on the head by a stone, supposed to have been discharged from a catapult, causing a severe wound. Mrs. Umfreville was assisted indoors, and subsequently complained of great pain in her head. Sir William Gull was summoned by telegraph, but death resulted from the injury she had received. It is stated that the boy who discharged the missile has been apprehended, and is in custody.

Mr. Leach, the active Medical Officer of Health for the Port of London, has addressed a letter to the *Times* on the subject of the recent outbreak of typhoid fever on board the schoolship *Cornwall*. In his opinion, great care is necessary in all the internal arrangements of vessels intended for training-schools, so that the entire hold, from the keelson upwards, shall, with the exception of the water-tanks, be perfectly clear of stores fore and aft; also that bilge-water shall, as far as possible, be non-existent even in the well. The space between the skins of the ships should not be ventilated into the inhabited decks, and the ventilation of the latter should be secured by special appliances. The water-supply should be ascertained to be good at the source, unpolluted in transit to the vessel, and properly stored; and the latrines and lavatories should be well constructed and kept in perfect order. The sick bay must be properly situated, and all bulkheads, as far as practicable, removed; whilst the ordinary routine as to bedding, clothing, and rations should be enforced with superlative exactitude. But above all, Mr. Leach thinks the committees of all the schoolships moored in the river should combine to establish another hulk, which should be moored as near the centre of all as possible, to be utilised as a receiving or hospital-ship immediately on the breaking out of any epidemic. His experience during the past eighteen months as Port Sanitary Authority shows that such a vessel is urgently needed in the Thames, in addition to a small hospital for the treatment of cases of acute disease. They are, indeed, positively necessary, in order to limit properly and effectually the spread of contagious and infectious maladies in the limited cubic space afforded in these ships.

From the Registrar-General's return to the 30th ult., it appears that 1477 deaths were registered in London during that period, including 1 from small-pox, 24 from measles, 128 from scarlet fever, 17 from diphtheria, 49 from whooping-cough, 24 from different forms of fever, and 35 from diarrhœa; so that to the seven principal diseases of the zymotic class 278 deaths were referred, against 299 and 286 in the two preceding weeks. These 278 deaths were twenty-two above the corrected average number from the same diseases in the corresponding week of the last ten years, and were equal to an annual rate of 4·2 per 1000. The fatal cases of scarlet fever, which in the seven preceding weeks had steadily increased from 71 to 127, were 128 last week, and exceeded the corrected average for the corresponding week in the last ten years by 38. The disease showed the greatest fatality during the week in question in Westminster, Islington, Mile-end Old Town, Bermondsey, Rotherhithe, Lambeth, Battersea, Peckham, Camberwell, and Deptford. During the first nine months of this year, 792 cases of scarlet fever were admitted into the two Metropolitan Asylum District Fever Hospitals; the number of recoveries in the two hospitals was 581, and of the deaths 109. If it were safe to assume that the mortality in scarlet fever cases is the same, whether treated at home or in hospital, it might be estimated that there have been 18,469 cases in London since the beginning of the year, as we know that 2716 deaths have been recorded, and the above figures give 6·8 cases to each death. The actual number of cases has probably been considerably in excess of this estimate.

By a Parliamentary paper just printed, it is shown that in the year ended March 31 last, the net receipts from tobacco in the United Kingdom amounted to £7,421,315, of which £5,798,445 was realised in England, £648,286 in Scotland, and £974,584 in Ireland. Such a return shows that smoking must somewhat have increased since the days when the "Counterblast against Tobacco" was written.

We have been favoured with a copy of the designs prepared by Messrs. A. and C. Harston, the architects who have been selected by the Metropolitan Asylums District Board to superintend the building of the new school at Darenth, near Dartford, for imbecile children. This school is intended to be a separate establishment from the adult asylums situated at Leavesden, Caterham, and Hampstead. The children are at present under the care of Dr. Beach, M.B., and temporarily occupy the London Orphan Asylum buildings at Lower Clapton. The managers have recently purchased about 150 acres of land at Darenth, for the purpose of erecting the new schools; and as the Messrs. Harston have been selected to carry out the work on account of their experience in the construction of hospitals, it may be fairly assumed that all modern requirements will be introduced into the buildings about to be erected.

We are almost tempted to say "Dr. Hardwicke again" when we record the thoughtless manner in which he acted at an inquest held last week at University College Hospital. The house-surgeon of the Hospital, upon being called upon to give evidence, did not appear; the coroner's satellite, being appealed to, unblushingly declared that the due twenty-four hours' notice had been given, and rather ingeniously (to cover his own shortcomings) insinuated that the hospital staff were not anxious to attend inquests, as they were paid no fees. Hereupon Dr. Hardwicke became stern, not to say severe, and

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hinted what he would do if it could be proved that contempt for his court had been exhibited; whereas, had he sensibly taken the proper view, that some mistake had arisen, he would have shown that he thoroughly understood the feelings of gentlemen of his own profession, and would have escaped adding another stone to that terrible column of blunders which he has been so indefatigably erecting since his appointment to the post of coroner.

The 31st ult. was celebrated in Birmingham as Hospital Sunday for that town, and up to the end of last week the amount received from the various churches for the local Queen's Hospital exceeded the sum of £5500. This is stated to be the largest total received from these collections since their establishment in 1859, and some of the returns from outlying districts have yet to be paid in. When this handsome amount, for a town like Birmingham, is considered, what shall we say of Hospital Sunday in the metropolis, with its paltry twenty-six, twenty-seven, or twenty-eight thousand pounds?

The recent outbreak of typhoid fever at Uppingham School is reported to be clearly traceable to the pollution of the drinking-water by sewage; and Mr. Alfred Haviland, the medical officer of health for the district, after eight days' investigation, has given his opinion that the mischief originated in the house of the lower school. This house is quite isolated, and has no connexion with the general drainage of Uppingham, all the sewage being received into cess-pits, which are close to the water-supply. The cisterns supplying the water-closets in nearly all the infected houses are furnished with taps, from which the dormitories are supplied with water. Sinks, both above and below, empty themselves direct into the drains; and, in fact, it would be impossible to find arrangements more directly fitted to foster and spread the special disease which has shown itself at Uppingham School. We are surprised to hear it distinctly stated that until Mr. Haviland called upon the head master to prohibit the practice, boys from the still healthy houses were allowed to go freely into the infected houses. The school has now broken up, by order of the trustees, the boys being dismissed to their respective homes; and it is to be hopedthat all the defective sewage arrangements will be perfected before study is resumed at Uppingham.

A serious epidemic of fever has broken out among the recruits of the Royal Marine Artillery stationed at Fort Cumberland, Portsmouth. A wall to keep out the encroachments of the sea is being erected by men belonging to the corps, and it has long been observed that the veterans employed on the work were subject to mild attacks of fever. A thorough examination was made of the men's quarters, the boards being taken up and the spaces below filled in with asphalte and concrete, to prevent the lodgment of water or noxious material. The sickness, however, continuing, attention was called to the pumping-engine close by, which pumps the whole of the sewage of Portsmouth into Langston Harbour at certain states of the tide. According to regulation, the sewage ought only to be discharged during the ebb, allowing a sufficient interval to elapse before the return of the flood tide. It is asserted by the military authorities that they have ascertained that this rule is not strictly complied with, and that offensive matter is repeatedly pumped into the harbour after the tide has turned, so that instead of the sewage being carried out to sea, it is conveyed inland, and deposited upon the mud-banks. It is, therefore, most positively stated that the origin of the epidemic at Fort Cumberland has been distinctly traced to sewage pollution, more especially as similar cases of fever have shown themselves in the Artillery Barracks at Hilsea, further up the Harbour. There have been sixteen pronounced cases of the disease, resulting fatally in four instances, and forty cases of indisposition from the same cause. The statements as to this outbreak are at present not authenticated, but we understand a full inquiry has been ordered by the authorities.

The Jeaffreson Entrance Scholarship at St. Bartholomew's Hospital has been awarded to Mr. J. Kirsopp. We believe that the tutor of the successful candidate was the Rev. Dr. Holden, brother of the well-known and highly estimable senior surgeon of the Hospital.

THE ARTISANS' DWELLINGS IMPROVEMENT ACT AND THE BOARD OF WORKS.

It is one of the traditional facts of our country that Parliament never yet passed any measure but that it was immediately found to be faulty. We had flattered ourselves that the Artisans' Dwellings Improvement Act was intended to bring about a great deal of good in the metropolis, and some few weeks back we gladly reported that the Metropolitan Board of Works were about to inaugurate the new state of things by possessing themselves of ten acres and a half of ground near the Gray's-inn-road, by which means many foul courts and dens which at present exist in this locality would eventually be converted into comfortable and sanitary dwellings for the poorer classes. Last week's meeting of the Board, however, has dissipated the pleasing vision, and the scheme has now dwindled down to the proposed improvement of an area of four acres only, one and a half of which—if this recommendation be adopted—will be devoted to new or widened thoroughfares. The breaking down of the first, and most effectual, scheme for improving this neighbourhood is placed to the credit of the Legislature, who in passing the Bill had excluded the City from the operation of the Act. This, if an oversight, can surely be remedied at the opening of the next session.

We trust, nevertheless, that the scheme for improving the neighbourhood near Gray's-inn-road, if curtailed, will not be totally abandoned. That there are in these civilised times, in a great and wealthy city like London, such foul spots as at present exist, is a shame and disgrace to our ruling powers. If a foreigner could read and understand the following case, published in all the newspapers, what would he think of our boasted wealth, our highly praised civilisation? An inquest was recently held on the body of a child, aged seven months, the son of a costermonger living at 18, Lincoln-court, Great Wild-street, Drury-lane. The father said his wife assisted him in his occupation; they had had nine children, four of whom were dead. When the mother was out with the barrows, deceased was left to the care of the eldest girl, and the latter came to the stall on Saturday and said he was dead. The mother of the deceased deposed that the child was born in the workhouse; it was a fine child, but afterwards wasted to a shadow, and the doctor had said that it would not grow up. Last Saturday she went with her husband to market, and got wet through; she went home, and whilst drying her clothes at the fire she suckled the deceased, who had the whooping-cough. She did not think her damp clothes hurt it, but after getting to her barrows the girl came and said it was dead. Mr. Stripling, one of the High-Constables of the County of Middlesex, said he heard of the death on Sunday, and went to the house early on Monday morning. The whole of the premises were in the worst condition possible. He, in a long course of years, had had great experience in scenes of life in all grades of society; but, in the lowest of the low, he never witnessed such a sight as he did on that occasion. Filth was lying about in all parts, and he had great difficulty in picking his way through it. When he got to the room he saw the father and mother there, also three children in a semi-nude state, and the dead body lying on a portion of a table; also in a corner a small bundle of something, which he learnt was the covering for the family at night. Otherwise there was not a particle of furniture, not a stool to sit on, or a cup to drink out of, or any sort of utensil for washing, cooking, eating, or drinking purposes. He asked

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the father how they managed to live and sleep, and he replied, "Somehow." Having caused the body to be removed to the mortuary, he informed the sanitary officials of the state of the premises. Dr. J. F. Staines said he heard of the case at 2 a.m. on Sunday. The body was a perfect skeleton. Although seven months old, there was not a trace of food in the stomach, or matter in the bowels. The cause of death was wasting from want of food and attendance. The Sanitary Inspector said he visited the house on Monday, and in the room occupied by the parents of the deceased child he found half a dozen people, all the worse for liquor. The children were running about almost naked. There were twenty-one houses in the court, but he never found any of the tenants at home; his business, however, was with the landlords, not with them. The jury returned a verdict of "Death from disease and want of food." But we sincerely hope the Artisans' Dwellings Improvement Act will eventually render such cases as this impossible; and we must confess to a feeling of disappointment that the first great improvement contemplated by it should have been cut down to its present diminished limits.

SALARIES OF MEDICAL OFFICERS IN THE HAVERFORDWEST UNION.

At a meeting of the Board of this Union, held on September 29, an application for an increase of salary was made by Mr. George Griffith, Medical Officer to the Milford District. The application having been read, it was resolved—"That the consideration of the salaries of the respective medical officers be gone into on Wednesday, October 27, and that the clerk obtain the salaries, with the area and population of districts, in other unions." In consequence of a circular issued by the Clerk containing the above resolution, there was a large attendance of members on October 27. The Clerk having read Mr. Griffith's application, it was proposed by the chairman that no increase be made, and after some further observations he remarked that if the medical officers were not satisfied with their salaries they had better resign. An amendment was proposed that an increase of £20 per annum be divided between the four medical officers. This, however, was negatived, and the proposal was carried—not unanimously, as the chairman wished it to go forth,—several guardians objecting to this summary manner of disposing of the question. By a comparison of the salaries paid in other unions in South Wales with those paid to the medical officers in the Haverfordwest Union, it does certainly appear that the latter are not worse paid than some of their fellows, but in a service that is notoriously ill-paid it seems a disingenuous argument to prove that other unions pay their medical officers badly, consequently there is no necessity for increase. The medical officers of the Haverfordwest Union have all held office for several years—one for more than thirty years, and another, with a slight interregnum, for a considerably longer period. During this period there has been no increase in their salaries (with the exception of a free supply of quinine, cod-liver oil, and iodide of potassium), although all the circumstances of life have so materially altered since forty years ago. Without going over the well-worn arguments of decreased value of money, together with the increased price of labour, one item may be mentioned—viz., that of horse-flesh; horses that some years ago could be bought in that district for from £10 to £20, cannot now be bought under £40 or £50. Only a couple of years ago the relieving officers received (and very properly) an increase in their salaries; while, in the face of a resolution to consider the question of their salaries, the medical officers are most summarily refused an increase.

SANITARY MATTERS AT STAMFORD.

The sanitary condition of Stamford is not particularly satisfactory. From the report of the local medical officer of health (Mr. Heward) for last quarter, it appears that typhoid, diarrhœa, and scarlet fever were unusually prevalent. These diseases, and especially the diarrhœa, prevailed in parts of the town that were badly drained, and where scavengering was neglected. In consequence of bad drainage and accumulations of filth and fæcal matter, foul smells permeated the dwellings, and, he believed, in some cases were the cause of illness. The scarlatina appeared to have been imported. A child from London, convalescent from the disease, went to a house where there were children, and these children had the disease in a mild form, and the mother, not knowing the nature of the disease, sent the children to school before they were well, and in this way others became infected. When Mr. Heward's report was presented to the local Sanitary Committee, at a recent meeting, it met with severe adverse criticism from Mr. Morgan, a local medical practitioner, who occupies a seat on the Committee. Some time ago Mr. Heward reported that the water obtained from the pumps in the town was impure, and the cause of disease; and by order of the Sanitary Committee all the pumps of the town were closed for all purposes whatever. Mr. Morgan now stated that he believed the closing of the pumps was a mistake, as the people were not able to get a sufficient supply of water either to wash their sinks, cleanse the drains, or to wash themselves. Speaking as a medical man, he did not believe the diseases which had prevailed in the town were due to the causes laid down in the report, but to the insufficient supply of water to the poorer inhabitants. He would propose that the pumps be opened immediately, notice being given to the inhabitants that the water was not to be used for drinking purposes, but only for washing and cleaning. The proposition of Mr. Morgan gave rise to a brisk discussion, but the question was postponed until a subsequent meeting. Mr. Morgan is quite right in demanding plenty of water for the use of the inhabitants of Stamford, but care should be taken that it is drawn from pure sources. If the pumps are thrown open, it is absurd to imagine that the publication of a "conscience clause," to the effect that the water is impure, as Mr. Morgan suggests, will prevent its being used for drinking purposes.

THE CONSTRUCTION OF DISSECTING-ROOMS.

Dr. Lennox Hodge, Demonstrator of Anatomy in the University of Pennsylvania, recently published a paper in the *Virginia Medical Monthly*, on the "Construction, Ventilation, and Hygienic Management of Anatomical Rooms," which, although intended in the first instance for those who have the management of dissecting-rooms in the United States, is worthy the attention of those who have the control of similar institutions in this country. As Dr. Hodge observes, very little trouble has been taken in any country to secure proper ventilation for dissecting-rooms; hence the air is vitiated by offensive odours, and is breathed for hours at a time by the students, whose general health and powers of resistance of such malign influences may have been weakened by long-continued study, hasty meals, and loss of sleep. In many of our metropolitan dissecting-rooms scarcely any provision has been made for ventilation, and, as a consequence, the health of the students, and even of the demonstrators, is injuriously affected. This subject has occupied Dr. Hodge's attention for several years, during which time he has introduced many improvements in the dissecting-rooms with which he has been connected. As regards location, he recommends an isolated building, devoted to the single purpose of dissection, thus insuring purity of air in the lecture-rooms, now frequently contaminated by odours from the dissecting-room. When, on account of economical reasons, it is necessary that the dissecting-rooms be connected with the other school-buildings, they should be placed in the *top storey*. Here they are less exposed to the gaze of the curious, can be better ventilated and lighted, and

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any odour which may be in the rooms can be more easily prevented from passing through the rest of the building. When in London, Dr. Hodge visited, among other dissecting-rooms, that at King's College. This he found to be the very reverse of what he would recommend, being placed underground, in the cellar of the building, and extending under an embankment. The part in the building can be lighted only by gas, and that under the embankment by a closed skylight. "The room is," he says, "dark, damp, and foul; no windows, and no means for the free entrance of air are provided." Ventilation in dissecting-rooms should be secured by means of side windows and by skylights. The skylight should be of the form sometimes called the "box skylight," and extend the whole length of the room, should rise above the roof, and have large panes of strong glass on its four sides, each pane being swung at its middle on pivots. Ventilating flues in the wall may be added, but are scarcely necessary if the side windows and skylight are well arranged. In cold weather there should be fire in open fireplaces at both ends of the room. The dimensions of the room should, of course, depend upon the number of students to be accommodated. Each table should be two feet wide and six feet long, and around each table there should be sufficient space for those engaged in dissecting the subject. This would require about four feet at the head and foot of each table, and five feet at the side between the tables. For thirty tables the room should be one hundred and fifteen feet long by thirty feet wide. This would give space for two rows of tables, each two feet wide, with five feet between them, and ten feet between the last table and the row of washstands, and also passage-ways between the ends of the tables and the walls, and between the tables at their ends towards each other, and for rows of "lockers" along the walls. The height of the walls should be fifteen feet. The windows ought to be high and wide, and on all four sides of the room; they should extend to within two feet of the floor and one foot of the ceiling; they should be nine feet apart, so that every table should have a window on one side of it. In this way the freest possible circulation of air is secured. When the windows are open, privacy may be insured by means of outside shutters with blinds. These are the chief characteristics of Dr. Hodge's plan for the construction of a model dissecting-room. For details we must refer to the paper itself, a copy of which the author would doubtless be pleased to forward to anyone particularly interested in the subject.

LEUKÆMIA A PRIMARY BLOOD-DISEASE.

Professor Biesiadecki, of Cracow, has lately advocated a new theory as to the nature of leukæmia, founded on the results of the careful anatomical and microscopical examination of certain cases which have come before him, as well as on other considerations. He believes leukæmia to be a primary disease of the solid elements of the blood (*eine Parenchymerkrankung des Blutes*), in which the white corpuscles are produced normally, but are afterwards prevented from developing into red corpuscles by retrograde changes which they undergo, so that the number of the latter cells appears to be diminished.

Biesiadecki regards the anatomical alterations in the spleen, lymphatic glands, liver, kidneys, etc., as due *secondarily* to the altered proportions of the elements of the blood. His reasons for this opinion are as follows (*Centralblatt*, No. 44, s. 757):—1. Neither the spleen nor the lymphatic glands, although so much increased in size, exhibit such changes as should lead one to conclude that there must be a greater production of white blood-corpuscles in consequence. 2. In leukæmia, not only the parenchyma of the spleen, but also of the enlarged liver, and of the kidneys, is not only not hypertrophied, but, on the contrary, is in a state of atrophy. 3. The colourless blood-corpuscles are not only relatively more numerous in leukæmia, but they are also of greater size, owing to a kind of colloid degeneration of their protoplasm. 4. These degenerated cells are deposited in the same organs and parts of organs as those in which blood-cells containing pigment or vermilion collect. 5. In Biesiadecki's special case, a striking alteration was observed in the blood, before any swelling of the lymphatic glands or any sign of the tumours which afterwards appeared in the skin had been noticed. 6. After extirpation of the spleen in animals, neither the blood nor any organ exhibits important alterations.

While speaking of leukæmia, we may mention that Dr. Ordenstein, of Paris (*Centralblatt*, No. 42, s. 709), suggests the possibility of a connexion between that disease and hereditary syphilis. He discovered that the father of a patient of his with splenic leukæmia had had constitutional syphilis, and this fact led him to try anti-syphilitic remedies on the son. Van Swieten's liquid—a solution of bichloride of mercury—was given for several months with surprising benefit, all other previous treatment having signally failed. The author promises to publish the case *in extenso*.

THE SPHYGMOGRAPHIC RECORD.

According to a paper recently read before the French Academy of Science, M. Marey is not correct in his estimation of the sphygmographic trace. M. Bouillaud, who communicated the memoir (October 4), alleges that in man each revolution of the heart is divisible into four distinct portions—viz., two of movement (*systole* and *diastole*), and two of repose, of which the second, longer than the first, is the last period of the revolution, and constitutes the true repose of the heart. He alleges that M. Marey still considers the normal pulse to be *monocrotous*. But he shows by a trace taken from his own arm that the pulse is in reality dicrotous in the normal state. He states that each of the so-called revolutions of the heart is represented by a line composed of two parts, one ascending or vertical, the other descending. "The first part, which is nearly perpendicular, corresponds to the first elevation of the artery, and constitutes the *first* period of the revolution. The second portion is formed of *three* distinct elements corresponding to the three other periods of this arterial revolution. The first of these elements, continuous with the extremity of the ascending line, and forming with it an angle more or less acute, corresponds to the first or short repose—that is to say, to the *second* period of the arterial revolution. The second [? third] element is the bending or *sinus* corresponding to the systole or arterial contraction—that is to say, to the *third* time of the arterial revolution. Finally, the third [? fourth] and last element of the descent is an oblique line corresponding to the long repose of the arterial revolution; and as this repose is longer than the first one, so is the line which represents it longer also." If the above be correct, it certainly seems simpler than any of the former schemes of the circulation which have been drawn up by M. Marey.

"SACRIFICIAL MEDICINE."

In the *Cornhill Magazine* there was recently published, under the above heading, a very amusing paper on the remedies for disease resorted to by our forefathers. Not at all inaptly, the writer divides the nostrums into two classes, distinguished by one or other of the grand characteristics roughly definable as Costliness or Nastiness. In the former class he includes those prescriptions in which the active ingredient was supposed to be either gold itself, or precious stones; and in the latter he quotes the *Aurora Chymica*, Matthioli (Venice, 1621), and Dr. Bohrest, Physician-in-Ordinary to the King (1672), to show how disgusting were several of the compositions which the faculty of that day inflicted upon their unfortunate patients. Hence he arrives at the title of his paper, from which the following is an extract:—"Beside the 'exhibition' of nauseous and revolting draughts, boluses and pills, the system of sacrificial medicine

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has, at all times, commanded many other injurious resources for the creation of unnecessary pain, trouble, and annoyance to sick persons and their friends. If, for example, a stiff-necked patient was unmanageable in the matter of some particularly disagreeable dose, he might still be induced to go on vexing nature by some out-of-the-way diet, and potions repeated at intervals, till faith or life succumbed in the struggle. One old physician, Œtius, in this way prescribed for the gout a separate dietary for every month of the whole year. Another, the great Alexander of Tralles, ordained 365 potions, so arranged as to furnish out a course for two years; whereupon Dr. Freind, the learned author of the 'History of Physic,' remarks that 'his receipts were as good as any of those which our new pretenders to physic make use of,' but adds the discouraging dictum, 'After all, gout is a distemper with which it were best not to tamper'!"

There is just a bare suspicion, from the tenor of the article, that the writer has been an unwilling victim in the hands of his own medical adviser, for there is a cynical insinuation that the characteristic of costliness has by no means departed from modern practice; and as though to show how welcome any change would be to him, he actually finishes his paper with an eulogium on homœopathy!

THE HASTINGS AND ST. LEONARD'S INFIRMARY.

Those who are acquainted with the East Sussex, Hastings, and St. Leonard's Infirmary will admit that the present building is not worthy to occupy the distinction of being the chief hospital of the town in which it is situated. For some years past the want of increased accommodation for patients has been severely felt, but now the want has become imperative. The governors have recognised the importance of doing something in the matter, but are divided as to the best course to be adopted. Some are in favour of enlarging the present insignificant and cramped building at the expense of the patients' recreation-ground, whilst others are in favour of erecting an entirely new structure on a more eligible site. Captain Galton has prepared a plan for enlarging the present Infirmary, which was submitted to the governors of the institution at a special meeting last week, but we are pleased to observe that it was not received with favour by the majority of those present. There is no doubt that Captain Galton's proposals are the best that could be devised if it were absolutely necessary to retain the present structure, but if carried out it is probable that the accommodation would still be found defective. The present seems a most opportune time for raising a hospital worthy of the size, wealth, and importance of the town, and we trust that unanimity will prevail among the governors, and that by feeling and acting together they will secure a sufficient amount of support from the wealthy inhabitants of the district to erect a large and commodious building on a more desirable and spacious site.

BOGUS DIPLOMAS.

The American Minister in London, General Schenck, last week addressed to the British public, through the *Times*, an authoritative warning against fraudulent American diplomas. Finding that persons had been engaged in this country in selling degrees or diplomas purporting to be conferred by certain American colleges and universities, and being satisfied that these distinctions were spurious, he made inquiries with regard to them, and publishes replies on the subject from the Governors of Pennsylvania and New Jersey to the Secretary of State, Washington. The Governor of the State of Pennsylvania writes that "there is no such institution known as 'The Philadelphia University of Medicine and Surgery,'" and that "the charter of an institution called 'The Philadelphia University, or American College of Medicine,' was revoked by the Legislature of the State in 1872 for the issue and sale of diplomas to persons not qualified to receive the same." The Governor of the State of New Jersey replies:—"There is no act of incorporation in this State of a 'Livingstone University of America' at Haddonfield; nor is there any such institution at that place, nor anywhere else in New Jersey." The public are indebted to the American Minister for this authoritative statement of what the profession knew before.

THE ISLINGTON POOR-LAW MEDICAL DISTRICTS.

As we stated in our issue of October 23 would probably be the case, the Local Government Board have refused to sanction the dismissal of Mr. Gardner, the Medical Officer for the St. Peter's District of the Islington Union. It will be remembered that some time ago Mr. Gardner complained to the guardians that he was doing considerably more work, in proportion to his salary, than the other medical officers of the Union. Instead of lessening his work or increasing his salary, a section of the guardians decided to recommend Mr. Gardner's dismissal, and to divide his district into two parts, to be officered at an increased cost of about £20 per annum. Mr. Gardner, however, appealed against this decision, and the Local Government Board have refused to sanction it, but will reconsider the subject when a new appointment is to be made to the district. The result is a decided victory for Mr. Gardner, for, although he will continue his labours on the same terms as before, he has proved, to everyone's satisfaction, that he is much overworked and very inadequately paid.

UNQUALIFIED PRACTICE IN THE EAST-END AGAIN.

As already reported in our columns, the British Medical Defence Association have recently been paying particular attention to unqualified practice in the East-end of London, and in three instances have recovered £20 penalties from illegal practitioners. One of the parties thus mulcted was a chemist, named Nottingham, who has a large shop in High-street, Shadwell, and it is said has practised as a surgeon for several years. From the report of an inquest in the *East London Observer* of Saturday last we learn that, notwithstanding his recent prosecution, Mr. Nottingham still carries on illegal practice. In the present instance, a servant girl was attended for two days by the assistant of Nottingham, and, shortly after his second visit, was found dead in bed. The jury returned a verdict that death resulted from natural causes, but requested the coroner to communicate with the Society of Apothecaries, informing them of the fact of the deceased having been attended in her illness by an unqualified man.

ISLINGTON AND THE ARTISANS' DWELLINGS ACT.

The Sanitary Committee of the parish of Islington have approved the scheme of their Medical Officer of Health—Dr. Tidy—by which it is proposed to destroy more than 300 houses, which he condemns as unfit for human habitation. Among the condemned property are all the foul and miserable dwellings situated in the courts abutting on the east side of High-street, Islington, and lying between that side of High-street on the west, Duncan-terrace on the east, City-road on the south, and Duncan-street on the north; and most of the houses contained in the area bounded by Essex-road on the west, Popham-road on the east, Britannia-street on the south, and Greenman-street on the north.

OUTBREAK OF SCARLET FEVER ON BOARD THE TRAINING-SHIP "MARS," AT DUNDEE.

For some time back scarlet fever has been prevalent amongst the boys on board the training-ship *Mars*, stationed in the Tay. In spite of every effort to prevent infection, the disease has spread very rapidly, until, out of 300 boys, twenty-two are now lying ill. Under these circumstances it has been thought

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advisable to remove a large portion of the healthy boys, some being placed under the care of friends, others being transferred to the tender *Lightning*. The outbreak being at present attributed to unwholesome water, investigations are being made.

OUTBREAK OF SCARLET FEVER IN ISLINGTON WORKHOUSE.

At last week's meeting of the Islington Board of Guardians it was reported that scarlet fever had broken out among the children in the Workhouse. It is believed that the disease was imported by visitors, and the Workhouse Committee have, in addition to other precautions to prevent the spread of the epidemic, stopped the visitation for a month. For several weeks past, scarlet fever has been very prevalent among the children at the Islington Pauper Schools, but it is now happily on the decline, only one fresh case having occurred for ten days.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.

The second meeting of the session was held at the Royal Kent Dispensary, Greenwich-road, on Friday, November 5; Dr. J. N. Miller, President, in the chair. Dr. J. Braxton Hicks, F.R.S., brought forward some cases illustrating the use of large doses of quinine in some cases of puerperal fever. The next meeting will be held on Friday, December 3, at 8 p.m. precisely. Dr. Tilbury Fox will read a paper.

HEALTH OF GLASGOW.

The death-rate of this city still continues at the comparatively low rate of 21 per 1000 persons. Last week it was 23, but for the four weeks preceding it had remained at 21 per 1000.

EXAMINATION-PAPERS FOR THE DEGREE OF PUBLIC HEALTH AT CAMBRIDGE.

Part I.

October 5, 1875: 9 *a.m.* *to* 12 *m.*

1. State how air is affected by changes of temperature. In what way do such changes give rise to aërial currents, and how may they be utilised for the purpose of ventilation? Mention the objections usually brought against what is called "natural ventilation."

2. Compare the properties of oxygen and ozone. How would you estimate the daily variations in the quantity of ozone present in the atmosphere? A cubic foot of dry air at normal pressure weighs at 32° Fahr. 566·85 grains, and at 80° Fahr. 516·38 grains; what is the amount by weight of oxygen in each case? Will respiration and the other functions of the body be in any way influenced by such atmospheric changes; and, if so, in what way? In the ascent of a height which lowers the barometer from thirty to twenty-five inches, what would be the diminution of oxygen in a cubic foot of air, other conditions remaining the same?

3. What is the difference between a common and an artesian well? What dissolved substances are most commonly found in river- and well-waters respectively? What are the most common ways in which substances foreign to the normal composition of such waters find their way into rivers or wells? When sewage-matter is poured into running streams, what becomes of it?

4. What are the advantages and disadvantages of rain-water as a source of water-supply? How should it be stored? What is its action on leaden pipes? Describe the construction of a common rain-gauge.

5. What do engineers mean by a head of water? What is the weight of a gallon and of a cubic foot of water? What quantity of water is contained in a cistern fourteen feet five inches long and nine feet three inches broad if the water stand at the height of thirteen feet six inches? What is the total pressure of the water on the bottom of the cistern?

6. Give a general account of the variations of mean annual temperature at different parts of the earth's surface. How are isothermal lines obtained? How is the temperature of any place affected by forests, expanse of water, height of the place above the sea-level, and by the existence and configuration of neighbouring mountains? What are meant by diurnal and annual changes of temperature, and what by continental and insular climates?

[In the afternoons of October 5 and 6, oral and practical examinations—the practical being chemical and microscopical analyses of water and air. Different examples for each candidate.]

October 6, 1875: 9 *a.m.* *to* 12 *m.*

1. What is the composition of ammonia? Describe the best methods for its quantitative determination. Why is its determination in water and air considered to be of importance in hygienic analyses.

2. How would you determine the composition of the air in dwelling- and sleeping-rooms in respect to the presence of (1) carbonic acid, (2) watery vapour, (3) organic matters?

3. What are the arguments for and against the so-called "constant supply" of water to houses? State particularly the possible dangers of an ill-arranged supply of this kind, and mention how these are to be avoided.

4. What are the chief precautions to be observed in the construction of pipe and brick-made sewers? What fall is given usually in each case? What are the best arrangements for flushing and ventilation? How would you insure that there should be no reflux of air from the sewers into houses?

5. In modern houses which are plentifully provided with water-pipes and cisterns, and also with foul water and soil pipes communicating with underground drains, what precautions are necessary—(1) To preserve the purity of the drinking-water? (2) To keep the air in the foul-water and soil pipes as free as possible from impurity, and to prevent it from getting into the house?

6. Why is it supposed that pavilion, or separate block, buildings are better adapted for a large hospital than a great single building? In the construction of a hospital ward what are the generally received opinions as to the best materials for floor, walls, and ceiling; the best position for closets; and the best arrangements for warming and ventilation? Mention particularly any ordinary circumstances which are likely to make wards unhealthy.

Part II.

October 7, 1875: 9 *a.m.* *to* 12 *m.*

1. What are the regulations in the Public Health Act, 1875, regarding the occupation of underground rooms (or cellars) as dwellings? What is the definition of a dwelling? Against whom would you take proceedings in case of offence against the statute?

2. Enumerate the various matters defined as nuisances in the Public Health Act, 1875. State shortly the course prescribed by the Act for their abatement.

3. What powers are given to the sanitary authority for securing a supply of pure drinking-water? In what cases can the owner be compelled to supply a house with pure water? What statutory provisions are made against the continuance of an impure supply?

4. What are the regulations in the Public Health Act respecting common lodging-houses? Define "overcrowding." What are supposed to be the consequences to health of "overcrowding"?

5. What is the machinery of vaccination at present in force in the United Kingdom? In the case of a severe outbreak of small-pox in a town, what measures would you adopt in addition to vaccination?

6. In the case of an outbreak of cholera spreading over Europe, what measures would you recommend to the authorities of a seaport town in communication with infected districts? If cases of cholera appeared in the town, what measures would you adopt?

October 7 *and* 8, 1875: 1.30 *p.m.* *to* 5 *p.m.*

Visit —— court, and make such observations and notes as may be required for drawing up a sanitary report. Return to the Senate House before 4 p.m., and draw up the report. In respect to the state of the houses, your examination need not be extended to more than two of them. (A different court, or other place, was assigned to every candidate.)

October 8, 1875: 9 *a.m.* *to* 12 *m.*

1. State the mode of calculating the death-rate of any town or district. What is the advantage of comparing the birth-rate with the death-rate? Discuss the question of age as influencing death-rates.

2. What are the chief causes of mortality among children under five years of age? How might these causes, or some of them, be removed?

3. What are the so-called "zymotic" diseases of which the contagia or exciting causes are supposed to be carried by articles of food or drink? Enter fully into the causation and mode of propagation of enteric (typhoid) fever; and state particularly how you would proceed in investigating a local outbreak of the disease.

4. What are the symptoms of trichinosis? How would you examine the flesh in order to detect the entozoon? What other structures in the flesh of the pig may simulate the encysted trichina?

5. What is the evidence for the connexion of lung-diseases with the inhalation of foreign particles?

6. In the disposal of water-sewage, what are meant by the terms "precipitation," "intermittent filtration," and "irrigation"? How far have the difficulties of disposing of sewer-water been met by any of these plans?

FROM ABROAD.

THE PARIS FACULTÉ DE MÉDECINE.

The election of a new Dean in place of Prof. Wurtz, who seems to have become thoroughly tired of continuing to hold what is represented to be a laborious and thankless office, has proved a somewhat arduous matter. The deliberations of the Faculty were brought almost to a deadlock, Profs. Gavarret and Vulpian having each received the same number of votes. The claims of the former were strong, as he is the senior member of the Faculty, possessed of considerable administrative power and popularity, and, not being engaged in practice or investigation, would be able to devote much time to the affairs of the Faculty. He is, however, a strong advocate for the *concours*, to which many of his colleagues are opposed, and among these M. Vulpian. While these deliberations were going on, a note from M. Wallon, the Minister of Public Instruction (instigated, it is said, by Prof. Wurtz), arrived, recommending, on the ground of the greatly increased number of students (now said to amount to 4800), and the laborious character of the duties to be performed, that not only a Dean should be elected, but also two Vice-Deans or Assessors—one of these having the direction of the studies, and the other devoting himself to the general administration of the Faculty. Prof. Vulpian, the youngest member of the Faculty, was accordingly elected Dean, and Profs. Depaul and Gosselin his

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Assessors. The Minister has also agreed to hand over to the Faculty the regulation of the Free Lectures at the École Pratique, which had hitherto devolved upon himself. The Council of the Paris Municipality is also about to come forward in aid of the Faculty, proposing to contribute 100,000 fr. for its purposes, a similar sum also being expected from the Department of the Seine. Half these sums are also to be voted for the École de Pharmacie and the Faculté de Droit. This new-born zeal on the part of the Municipality is one of the results of the new Free University Act, which the clerical party are now working so vigorously for their own purposes. In view of the great strides which the Church is making in order to establish its new retrograde Faculties, the Municipality observes, it will never do to allow true scientific teaching to remain in its present defective condition for the want of funds that are niggardly refused by the Legislature. Whatever other consequences may ensue from the clerical agitation, a useful stimulus will have been supplied by it to the Faculty, which by its best friends has long been considered to be in a rather somnolent condition. A communication has been received by the Faculty from the Préfet in reference to the clinical teaching of mental disease. More than a year since the clinical lectures delivered in the St. Anne Asylum were suddenly and peremptorily forbidden by the Préfet to be continued, in consequence of some exaggerated reports concerning them that had appeared in one of the daily papers. Since that time the Faculty has remonstrated against this arbitrary decision, and has quite recently received a communication from the Préfet on the subject. He consents to the names of twenty students being furnished him, from among which he will select five, who will be allowed to pursue their studies at St. Anne. The Faculty has not yet returned its answer to this infinitesimal proposal.

The British Association at Bristol.

It is to be hoped that the lamentable blunder committed in the Section for Economic Science, of allowing all kinds of twaddle and crotchets to be brought forward under the auspices of so august a body, will not be repeated next year. It is quite evident that if the lucubrations of ladies and amateur philosophers are to be admitted, they should at least, by some preliminary examination, be shown to have some bearing of a truly scientific character, unless, indeed, it is intended to enter into friendly rivalry with the amiable enthusiasts of the Social Science Association. The impression made upon a foreign visitor, well disposed to look upon matters in a favourable point of view, may be judged of from the following passage in a letter from a correspondent to the *Boston Medical Journal* of September 30:—

"The greatest variety of questions have been discussed. Yesterday alone seventy-four papers and reports were announced to be read. (I have just received a programme of the meeting to take place at Munich, by which I see that six papers are to be read in three days.) When a paper was read on "Vegetarianism as a Cure for Intemperance,' the writer claiming that there is an antagonism between the two, a gentleman from Bath protested that in that case he should suggest intemperance as a cure for vegetarianism. It was quite discouraging to find the time of the Section on Economic Science and Statistics, with Drs. Farr, Beddoe, Mouat, Lord Aberdare, and Sir James Alexander on the platform, occupied by a paper by a lady on 'Domestic Service for Ladies.' However, 'economic science' is broad enough to cover everything from 'Adam's fall to Haldy's bonnet.' . . . Of course there were many papers showing thought and care in their preparation; but the general impression that I got was that most of the members found in 'science' a pretty plaything, or a nice occupation for men and women who had not much else to do—a mistake which has been encouraged, it seems to me, by some of the first names in English science, and by many others who lecture and write on the Elements of Biology for Beginners, and on kindred topics. In fact, I had quite begun to ask myself wherein lay the claim of these people to call themselves an Association for the Advancement of Science until I heard Prof. Rolleston's clear, careful, and searching analysis of the evidence by which he shows that the highly enlightened races are not degenerating; but it was really too hard in him to say that the skull of the human female is smaller and less highly developed than that of the male. One person of few words summed up the experience of one day by saying that she had heard 'a deal of nonsense talked,' and another said he thought there was just enough science in the thing to spoil it. But the Association has done an immense deal of the kind of work that has been done by the South Kensington Museum—excellent work too, no one can doubt. The meeting of this year has at least broadened the channels of thought, but it certainly has not deepened them. There is an advantage in allowing the greatest freedom of thought, and perhaps in allowing all papers to be presented by title; but in the reading, and in the discussions especially, where the digressions from the points at issue were most common, there would have been a decided gain to all if people had followed Virchow's cardinal maxim, and confined themselves in their observations to seeing *was Wirklich da ist*."

Venesection as a Habit.

Under this title the *Boston Medical Journal* (September 23) transcribes the following remarkable case related by Dr. Sawyer in the *Chicago Medical Journal*:—

"The subject of this habit is a retired clergyman, now eighty years of age, his firm step and keen intellect showing an unusual degree of preservation for his advanced years. He is a farmer's son, and during his entire life has been unusually free from sickness. When seventeen years old, according to the custom of the period, and not for ill-health, he was bled for the first time. This habit of spring bleeding was followed for the next six years. He then became a student, and the change from active farm-work to a sedentary life caused a constant feeling of heaviness, to relieve which he resorted oftener to the lancet, and during the next ten years he was bled from four to six times a year, always losing from ten to fifteen ounces of blood. The frequency of the venesections increased, and for the past forty years the patient has suffered the extraordinary loss of eight or ten ounces of blood regularly every three weeks. During this period more than a barrel of blood has been taken from his veins. He declares that he is always much better by bleeding, and that letting a half-bowl of blood acts as a stimulant, and has never been detrimental to his health. Until he retired from the pulpit (ten years ago) he was a hard-working minister, and he is still capable of work. For the past nine months he has been under Dr. Sawyer's care, who has every three weeks bled him to the extent of eight or ten ounces. The demand for blood-letting is shown by a dyspnœa which appears during the last three days and nights of the interlude. So extreme is this, that the patient is usually obliged to spend the night in his chair, just before his day for bleeding. His lips and finger-nails become purple. Bleeding at once relieves the dyspnœa, and the natural colour is restored to the lips and fingers; his spirits become lighter, he grows talkative, his voice is no longer husky, and he seems in every respect better. Repeated auscultation has only discovered slight vesicular dilatation of the lungs.

"The case is interesting physiologically from the fact that the blood-making function has always been unusually active, and that there has never been any demand for a peculiar diet; clinically, in that the frequent and large losses of blood have never seemed to be hurtful or debilitating. As to the question whether the habit once formed could not have been broken off, the history shows that for a time the bleedings were not actually demanded; but for many years past, in the opinion of Dr. Sawyer, it would have been detrimental, and perhaps attended with a fatal result, to have attempted a reformation in the patient's habit."

Combination of Phosphorus with Cod-Liver Oil.—Speaking of the treatment of phthisis, Dr. Mann says: "Cod-liver oil is particularly indicated in patients of a strumous diathesis, and may be given in connexion with iodine and iron. The objectionable taste of the oil may be overcome by the use of the following formula, which has the advantage of combining phosphorus and cod-liver oil in a pleasant emulsion. The use of the phosphoric acid will often overcome the nervous exhaustion and depression under which the patient is labouring, and at the same time assist the appetite and digestion. The writer is in the habit of prescribing it, and invariably with the happiest results, patients taking it readily who could not bear the plain oil at all. ℞. The yelk of three eggs; cod-liver oil, ʒviij.; sherry wine, ʒiv.; phosphoric acid and simple syrup, of each ʒj.; bitter almond water, ʒviij.; spirits of wine, ʒj. Rub the eggs up with the oil spoonful by spoonful, adding the phosphoric acid last of all."—*New York Med. Record*, September 18.

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REVIEWS.

Medical Politics. Being the Essay to which was awarded the First Carmichael Prize of £200, by the Council of the Royal College of Surgeons, Ireland, 1873. By Isaac Ashe, M.D., M.Ch. Trin. Coll. Dub., etc. Dublin, London, and Edinburgh. Pp. 174. 1875.

In the will made by the late Mr. Carmichael, the testator bequeathed a sum of money to be invested in the funds of the College of Surgeons of Ireland, and the interest was to be devoted to the foundation of a prize essay on various subjects connected with the medical profession. These subjects included the state of the profession in its different departments in Great Britain and Ireland at the time of writing the essays, the state of the hospitals and schools of medicine, and the mode of examination adopted at the different licensing bodies; together with such observations or suggestions as might occur to the writers, with a view of improving and elevating the medical profession, and, to use Mr. Carmichael's words, "rendering it a more useful and respectable body than it is at present."

In carrying out these views of the founder of the prize, Dr. Ashe displays great zeal and no little eloquence; and nothing can be more deplorable than the picture he draws of the present state of the medical profession in the Three Kingdoms. According to him, it holds an inferior position to that of the Army, the Navy, the Church, and the Bar, and it is despised and ill-treated by all those sister professions and by the public at large. But this can be no matter of wonder to the reader of Dr. Ashe's essay, for the author shows that, owing to the carelessness or the corruption of the licensing bodies, the status of the profession is at present so miserably low that no other result can be expected; besides which, the conduct of most medical men is so contemptible, by reason of their trading views and their undue competition with one another, that the public can only regard them in the same light in which they exhibit themselves. Every arrangement at present carried out in reference to the medical profession is defective or erroneous, both in principle and practice. The General Medical Council, which some persons foolishly imagined would lead to some improvement of our condition, has shown itself to be useless and inefficient; and although it is paid by the profession at large to look after the general interests, it is zealous only in protecting and maintaining its own.

In all these remarks, and in many others profusely scattered through Dr. Ashe's pages, there is a great amount of truth, although we cannot help thinking that the author has very considerably exaggerated the real state of the case, and, moreover, has drawn his illustrations rather too abundantly from the condition of the profession in some of the country districts of Ireland, where the circumstances are, perhaps, exceptional. It must be recollected, after all, that supply and demand must bear a certain proportion to each other, and that the same social position and the same emoluments cannot be expected by medical men among the wilds of Ireland, the mountains of Wales, or the moors and the highlands of Scotland, as in the great centres of population, wealth, and refinement.

However, Dr. Ashe not only points out the malady, but he indicates the remedial measures to be adopted, and these are as sweeping as the evils are deep-rooted and extensive. Nothing but a radical reform of all the laws, institutions, and corporations at present existing will avail in improving the status of the medical profession. The General Medical Council must be reorganised; the corporations must be placed upon a better basis; the examiners must be strictly watched in the execution of their duties; the examinations must be much more stringent than they are at present; the existing number of medical practitioners must be reduced, and the competition between them must thereby be removed; the loss thus caused to the examining boards must be supplied by a voluntary annual contribution from the profession, etc., etc. It is needless to observe that very many of Dr. Ashe's propositions, although deserving of consideration, are quite Utopian, owing to the variety of individual and general interests to be consulted in a free country like Great Britain, where a diversity of relations necessarily exists in different ocalities between the profession and the public, and between the different members of the profession itself; and it is, moreover, right to state that many of the anomalies and abuses which Dr. Ashe so vigorously denounces have been already removed, or are in course of removal, and that his strictures are, therefore, in several instances no longer applicable.

The essay is remarkably well printed, and there are no faults of grammar to be detected of any importance; but the style and the composition are in general so extraordinary that we should have attributed them to some novice in the literary world, had the work not been announced as coming from the pen of an accomplished physician and scholar, such as Dr. Ashe is known to be. Our advice to him, in reference to its execution, would be that which Hamlet gives to the players, and which the author himself would consider applicable to the medical profession, "Reform it altogether." The sentences are either so short and abrupt as to require the constantly-recurring use of the word *And* at their commencement; or they are so enormously long and so involved, and there is often so little apparent connexion between the nominative cases and the verbs, or between the relatives and the antecedents, or between the demonstratives and the ideas or things demonstrated—that it is sometimes only with difficulty that the meaning can be gathered. The punctuation, too, instead of removing the difficulty, only increases it, and commas and semicolons are scattered about, or left out, almost at random.

Tenth Report of the Quekett Microscopical Club. London. July, 1875.

The object of this club, as everyone knows, is to bring together microscopists and students at stated periods, for the purpose of exhibiting and exchanging specimens, for the discussion of doubtful points, and for comparing progress over those special subjects in which the members are all more or less interested. In addition, occasional field excursions are organised at proper seasons for the collection of living specimens, and it is sought to acquire a library of such books of reference as will prove most useful to inquiring students. The present strength of the Club is 530, and it is under the presidency of Mr. John Matthews, M.D. The meetings take place at University College on the second and fourth Fridays of every month. We cannot do better than close our notice of the report in question by quoting the concluding words of the President's address, delivered in July last:—"Gentlemen, I heartily congratulate you on the prosperous condition of our Club; and do, therefore, in the phrase of some of the pious old navigators, when venturing into an unknown sea, earnestly bid you to 'thank God, and take courage.'"

The Twenty-second Annual Report of the County and City of Worcester Pauper Lunatic Asylum, Worcester. Printed at the *Herald* Office, 72, High-street. 1875.

The report in question calls for little comment at our hands. The committee seem especially fortunate in possessing the services of Dr. Sherlock as their medical superintendent, and they bear willing testimony to his unwearied performance of his varied and responsible duties. It is somewhat significant of the present state of society to note that the committee observe with the greatest regret a steady increase in pauper patients of both sexes; thus, according to the following comparative statement, the numbers in the Asylum were in 1871, 591; in 1872, 606; in 1873, 630; and in 1874, 674. This increase in the number of inmates has necessitated additional accommodation, and the committee have accordingly taken about forty-five acres of additional land from Lord Coventry, at a rental of about thirty shillings an acre.

The Numerical Strength of the German Medical Schools.—The numbers of medical students attending the different German universities in the summer session of 1875 were as follows:—Vienna 859, Würzburg 522, Leipzig 419, Prague 405, Dorpat 333, Munich 297, Berlin 259, Greifswald 247, Graz 210, Strasburg 199, Zürich 184, Breslau 171, Berne 163, Königsberg 150, Tübingen 148, Erlangen 134, Marburg 131, Freiburg 124, Bonn and Halle each 123, Göttingen 122, Giessen 100, Heidelberg and Jena each 92, Innsbrück 77, Basle 73, Kiel 58, and Rostock 34. "Since the summer of 1874," says the *Berliner Klin. Wochenschrift*, "the total number of medical students in the German schools has decreased from 6190 to 5849; but since all the universities are pretty evenly affected, their relative position remains almost unchanged."

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PROVINCIAL CORRESPONDENCE.

IRELAND.

Dublin, November 3.

THE INTRODUCTORIES—MEATH HOSPITAL AND COUNTY DUBLIN INFIRMARY—LEDWICH SCHOOL OF MEDICINE.

You have already noticed the inaugural address at the Royal College of Surgeons, which was delivered on Monday, October 25, by Dr. James Little, the Professor of Practice of Medicine in the School of Surgery in Ireland. Suffice it to say here that this address was eminently practical and calculated to aid the students in their professional studies.

On Tuesday, November 2, the session at the Meath Hospital and County Dublin Infirmary was opened. The ceremonial had been postponed from the previous day, owing to a severe family bereavement which had suddenly befallen one of the most respected and beloved of the medical officers of the institution. Dr. George B. Owens, the Lord Mayor-elect, occupied the chair. The lecturer, Dr. John William Moore, who was appointed a Physician to the Hospital some months ago, chose as the subject of his address "The Medical History of the Meath Hospital"—he might almost say, "The History of Medicine as written in the Chronicles of the Meath Hospital,"—for with pride, and fearlessly, he could assert that as it did seventy years ago, so now this noble institution took its place in the forefront of medical progress, and a history of medicine in the Meath Hospital was a history of medicine throughout the world. I send you a *verbatim* report of the concluding portion of the address:—

"Gentlemen, I have endeavoured to sketch the medical history of the Hospital. The clinical system of instruction introduced by Graves and perfected by Stokes; the study of auscultation and employment of the stethoscope as an aid to diagnosis; the original investigations into the etiology, nature, and treatment of fever, carried on in its wards; the introduction of the facilities for scientific research in connexion with health and disease; and the theoretical and practical recognition of the claims of State medicine—are epochs in the history of the Meath Hospital of which we may well be proud.

"Happily for us, this is the silver lining of the cloud which, within the past few months, has cast its sombre shadow over this institution. Need I say that I refer to the retirement of Dr. Stokes, lately the honoured and beloved Physician to the Meath. Advancing years and failing health were Nature's pleas for rest from toil; and, civic crowned, the 'conqueror of disease' throughout half a century lays down his arms to enjoy (please God) a well-earned repose in a prolonged yet green old age. Far be it from me to indulge in excessive eulogium of our teacher and friend—I would not wound a modest, gentle spirit by doing so. Yet in this place and on an occasion like the present, it would be impossible not to speak of Dr. Stokes. A model and diligent student, he in time became a painstaking and successful teacher—the sympathising friend, the prudent counsellor, and the ardent well-wisher of every one of his 'fellow-students,' for so he called his pupils. But he was more than this. Those of you who have seen Dr. Stokes at the bedside of the sick, know how gentle, how refined, how kindly was his bearing towards the patient. Amid all the ardour of clinical observation and research, he never for one moment forgot the sufferer before him—no thoughtless word from his lips, no rough or unkind action, ever ruffled the calm confidence reposed in him by those who sought his skill and care. In many eloquent lectures delivered in this theatre, he inculcated these Christian lessons of charity and thoughtfulness; and so, by precept and example, he strove to teach the duties of a true and God-fearing physician.

"One word to you, my younger friends, and I shall have done. When we look back and scan the annals of the Meath Hospital for more than half a century, we cannot but say of the years that are past, 'There were giants in those days'—giants in intellect, in experience, and in knowledge,—and this truth is written not only in the medical but in the surgical records of the Hospital. For myself, the last and youngest recruit in the phalanx of our physicians and surgeons, the sense of responsibility is at times almost overwhelming. To be entrusted with the duty of helping to sustain the reputation of this Hospital is indeed a high honour, but it brings with it grave responsibilities. My colleagues have each and all recognised this fact, and, without flattery, I may say right well have they so far fulfilled the trust. But for me—if I am spared, my spurs are yet to be won. As far as punctual attendance and diligence in the wards are concerned, I think I may pledge myself, should health permit.

"But, fellow-students, unless my efforts are seconded by you, they will utterly fail to secure good and lasting results. As you value your success at your final examination, your prosperity in after-life, but, above all, your patients' welfare and happiness, be diligent clinical students of disease. Be punctual in your attendance in the wards, lose no opportunity of making yourselves thoroughly and practically acquainted with sickness in its Protean forms. Every hour, every moment of your undergraduate life—of your hospital course—is more precious than gold. Above all things, *shun*—as you would the yawning precipice or the treacherous quagmire—the perilous delusion of merely '*walking*' the hospital. Let each one of you become a 'practising pupil' in the fullest sense of the term. Once, in Dr. Graves' earlier days as physician to this Hospital, there were only two practising pupils in the class—but one of these was William Stokes. Now, I am happy to say, the majority of the class is composed of practising pupils, many of whom already promise to become well-trained and skilful physicians and surgeons.

"In your relations with the sick, make every allowance for their weak and prostrate condition. Act towards them as you would towards the nearest and dearest of your own loved ones when laid on a bed of sickness. Let no thoughtless levity or want of sympathy on your part repulse the sufferer. Win his confidence by gentleness and lovingkindness. 'Be pitiful; be courteous.'

"And, lastly, let us all remember how great is the privilege of ministering in some degree to the alleviation of the sufferings of our afflicted fellow-creatures; Who it was that said, 'I was sick and ye visited Me;' the question of surprise, 'Lord, when saw we Thee sick, and came unto Thee?' the glorious answer of the King, 'Inasmuch as ye have done it unto one of the least of these My brethren, ye have done it unto Me.'

"Gentlemen, I thank you for the patient and attentive hearing you have accorded me. You will observe that I have spoken only of the medical history of the Hospital. Do not misunderstand me—it possesses a surgical history also of extreme interest. But to treat of it must be left to abler hands, and possibly one of my esteemed surgical colleagues will, on a future occasion like the present, take up this interesting topic. Gentlemen, it only remains that, on the part of my colleagues and myself, I should bid those of you who are now about to enter the wards for the first time a hearty welcome. Your fellow-students, who are already our friends, will likewise greet you and give you many useful hints. Remember that there is no clashing in the attendance on the medical and surgical *cliniques*. Let us all—teachers and pupils—resolve to be punctual and attentive; and the session which is this day inaugurated will, like many that are past, prove a prosperous, an instructive, and a happy one."

At noon on Tuesday, November 2, Dr. Montgomery A. Ward delivered an opening lecture at the Ledwich School of Medicine, Peter-street. He sketched the history of the School—the first undertaking of the kind established in Dublin, and never more flourishing than during its later period. Some contended that there should be only two schools in Dublin, one attached to the University of Dublin, and the other to the Royal College of Surgeons. Such a course would, in his opinion, be a fatal error; for he believed that it was to the wholesome competition between the different schools in Dublin that the acknowledged superiority of the education given in this city was attributable. In support of this he mentioned the facts that Surgeons Adams, Cusack, and the great O'Shaughnessy, of India, had been educated in the School; and many others who rose to the foremost ranks in medicine and surgery were educated and made their names in extra-academical schools. Among these were the Regius Professor of Surgery in the University of Dublin, the King's Professor of Practice of Medicine in the same University, and the Professor of Practice of Medicine in the Royal College of Surgeons, the Professor of Chemistry and Materia Medica in the same College; and Dr. O'Leary, M.P., who ably filled the chair of Physiology in the Ledwich School, was now an examiner in the Royal College of Surgeons. Having addressed the students at length on the dangers which beset their path, Dr. Ward referred to the various paths of life which were open to the medical man. He advised those who might think of

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joining the Army Service to read the pamphlet of Dr. Edward Hamilton on the subject. A few years ago the Army Medical Service was a very popular service, but the authorities had so often broken faith with the army doctors, especially in the last warrant which was issued, that the service had rapidly sunk in the estimation of the profession, and deservedly so. He referred especially to the unification system, under which it appeared from an inquest recently held in England that a lunatic soldier had been under the care of no less than nine different doctors in the short space of one month. God help the poor patients under such a system! The latest artifice of the authorities was that of placing surgeons on half-pay without any pay at all! What was the result of all this? There was now not the same competition for the home as for the sister service in India. Nor was the argument that the Indian man was better paid because he was expatriated a valid one, for the home man was generally obliged to spend more than half his time in India. Dr. Ward then referred to the Naval Service, observing, however, that it should be borne in mind that the Lords of the Admiralty assume the power of retaining the services of a man in the medical service, even in a home station in time of peace, no matter what may be his reasons for wishing to resign. Dr. Ward concluded by referring to the poor-law medical officers, whose grievances were gradually becoming eliminated by their own energetic action. There was, however, one severe grievance—their compulsory acceptance of the appointments of sanitary officers with miserable pay. At the close of his lecture, as well as during its delivery, Dr. Ward was warmly applauded.

This day Dr. S. M. Macswiney is to open the session at the Catholic University School of Medicine, but of his address, and of the others yet to be given, I must hold over some account until another occasion.

GENERAL CORRESPONDENCE.

REVERSED INJECTIONS IN GONORRHŒA.

LETTER FROM MR. J. MILLIKIN.

[To the Editor of the Medical Times and Gazette.]

SIR,—My attention having been drawn to a notice in your issue of the 23rd ult., page 468, headed, "Dr. Prince on the Treatment of Gonorrhœa and other Deep-seated Affections by a Reversed Current," I would ask permission to refer Dr. Prince to the *Guy's Hospital Reports* of 1870, page 470, where he will find a new method of treating gonorrhœa by injections, by Mr. A. E. Durham. On the following page (471) there is given a diagram, showing the reversed-current syringe.

I may add that I have made and do make dozens of these syringes (exactly the same as that mentioned by Dr. Prince) for Mr. Durham's patients and others, with the exception of the curved pipe—which, I presume, is to enter the bladder,—the utility of which I must leave to the profession.

I am, &c., J. MILLIKIN.

3, St. Thomas's-street, Borough.

LIFE IN THE BLACK COUNTRY.

[To the Editor of the Medical Times and Gazette.]

SIR,—Page 425 of the current volume of your journal is full of deep and serious interest, and not to be lightly passed over. There are three subjects touched upon—1. The Female Medical Movement in Birmingham; 2. Poisoning at Rotherham; and 3. Life in the Black Country. The least important of these three questions is No 2. True, one death resulted from the "inadvertency" of sheep's-head broth containing enough arsenic to kill twenty people. I quite agree with the opinion of the jury that the indiscriminate sale of casks which have contained arsenic is dangerous, and I should very much like to know who sells them, and why the individual is not brought up to receive his due reward.

Life in the Black Country. Sad, very sad, but true I fear, are the remarks concerning life in this part of Staffordshire. I will not for one moment deny that morals here are low, that education has been fearfully neglected, that idleness and drunkenness are rampant; and that women, low, ignorant, and immoral though they be, engage in nail-making and even in chain-making, to the everlasting honour of themselves, and to the disgrace of the legitimate bread-winners—men.

Good and noble, though low and ignorant, women of the Black Country! The question presses that Government should interfere to interdict the employment of you in these masculine operations. Poor Clara, however, can be seen beyond the boundaries of the Black Country. In one of my early cases of parturition, I had attended the woman over night, and on calling the next day found that she had been up and washing since six o'clock a.m. I was terribly frightened, and insisted upon her going to bed; but every country doctor knows of such cases, and knows, also, that death does not always immediately follow upon such liberties being taken; yet, in the declining years of life, when the tissues begin to lose their elasticity, may we not expect to meet many cases of prolapsus uteri due to the treacherous sensations of feeling quite well, or to the sad and stern necessity of getting up to look after the children, or after a drunken and idle husband.

Even in the country of the windmills, far from the busy haunts of men, or the parts where the deafening thud of the forge-hammer is heard by night and by day, I remember a female being overtaken by the pains whilst driving in a donkey-cart to market. She returned to her home in the mill, and was able in the evening to introduce to her husband the welcome little stranger, and to his supper, without having recourse to any extraneous help!

The effect upon the future generation of these poor women undertaking heavy manual labour must be difficult, almost impossible, to arrive at; but the statistics of the manufacturing districts point, as one effect, to a very high death-rate in infancy, and the doctors of these districts could no doubt point to many living examples of the offspring of these women who will become a burden to our charities while living, and an early prey to death. Are the children of female country doctors likely to fare much better; and may not their fathers turn out idle and worthless fellows, fond of an easy life?

But if the Government ought to interfere to protect the women of the Black Country and their offspring, ought not equal care be taken of the women who are being, as it were, goaded into the medical profession by the agitable portion of the Birmingham community, which contains, I fear, a few members of our profession who ought to be content with the fame to which they can reach in the broad and legitimate walks of their craft?

Birmingham is in close proximity to the Black Country. Have the thoughts and morals of the latter place had their influence on some few of the inhabitants of the former, in making their attempt to turn it into a central emporium for female labour? On this subject, through the great good sense of the Council and professors of Queen's College, Birmingham has again been left up a siding, to the joy of the vast majority of the medical profession, of Englishmen, and of English women.

October 11. I am, &c., COUNTRY DOCTOR.

EXAMINATIONS for the degree of Bachelor of Medicine will be holden at Oxford in the second and third weeks of December. The second or final examination will commence on the 6th. The first or scientific examination will commence on the 13th. Candidates should forward their names to the Regius Professor of Medicine before the 23rd inst.

THE BOTANICAL GARDENS AT CHELSEA.—At last week's meeting of the Metropolitan Board of Works, it was resolved that the Works Committee should consider the desirability of taking steps for applying to Parliament in the next session for obtaining the fee of the Chelsea Botanical Gardens belonging to the Apothecaries' Company, and that the Solicitor to the Board be instructed to give the necessary notices.

DEATH OF DR. SARVIS, OF BETHNAL-GREEN.—The death of Dr. Sarvis, Medical Officer of Health for the Parish of Bethnal-green, is announced. The event took place suddenly whilst he was washing his hands in his surgery on the evening of November 4. He had been out of health for some time past, but was able to do a portion of his work, and at the moment of his death his carriage was at the door waiting to take him to see a few of his most urgent cases. Dr. Sarvis was in his fifty-fifth year, and leaves a widow, but no family. In addition to holding the appointment of Medical Officer of Health, Dr. Sarvis was medical officer for one of the poor-law districts.

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REPORTS OF SOCIETIES.

PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 2.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

INFANTILE SYPHILIS.

DR. COUPLAND gave an account of the microscopical appearances found in the specimens of syphilitic disease of the heart, liver, and lungs which he had exhibited at the previous meeting (see *Medical Times and Gazette*, October 30, page 506). The heart presented an almost universal infiltration of small round cells among the muscular fibres. The gumma in the lung was formed in the centre of round and oval cells in a fine reticulated tissue, and was very vascular; while at the margin there was seen an infiltration of the alveolar walls with well-nucleated cells, and compression of the alveoli. The large yellow masses in the liver proved to be a gumma in a very early state; even the centre presented no evidence of degeneration. Its characters were much the same as in the lung. On its margins were found atrophied liver-cells, with the infiltration advancing between them. The kidneys had appeared healthy to the naked eye, but microscopically they were proved to be undergoing an interstitial change like that in the heart.

SYPHILITIC HEART.

Mr. PEARCE GOULD showed a specimen of syphilitic(?) disease of the heart. A man of forty died suddenly in a public-house. Post-mortem there was found apoplexy of the left lung, and beyond this no disease of any organ excepting the heart. The anterior wall of the right ventricle presented in its entire thickness a white appearance, which extended also into the auricle, the septum ventriculorum, and the papillary muscles; the pericardium was healthy. An infiltration of small round cells was found between the muscular fibres; the heart was elsewhere healthy. The clinical history of the case was quite deficient; the man was said to have suffered for some time from pain in the cardiac region and dyspnœa. The specimen closely resembled syphilitic disease of the heart, but nothing was known with regard to venereal disease in the patient.

SYPHILITIC PNEUMONIA.

Dr. GREENFIELD exhibited a specimen of what he proposed to call syphilitic pneumonia. An infant, of twelve months, died in the out-patient room of St. Thomas's Hospital. It was reported to have suffered from cough for some time before. There was an indistinct history of syphilis in the mother. On examination it was found that the right lung was completely consolidated, with an appearance not unlike grey hepatisation, but the section proved to be smooth, shining, very dense and tough, traversed by fine fibrous lines, and presenting obvious infiltration around the vessels. The microscopical results corresponded—the alveolar walls were infiltrated with round cells, spindle cells, or fibrous tissue. On the whole, the appearance was so remarkable that the organ was not easily recognisable. Many of the alveoli were peculiarly healthy, although surrounded by infiltrated walls; others contained a considerable exudation, as in catarrhal pneumonia. Dr. Greenfield speculated whether this was to be called a specimen of syphilitic pneumonia; although in a child of twelve months, the process appeared to be chronic, and it resembled the "congenital syphilis of the lung" described by Dr. Wilson Fox. The disease was confined to one lung, the other being simply collapsed in places. There was slight recent pleurisy on the diseased lung. The specimen closely resembled that just described by Dr. Coupland. There was probably some connexion between this condition and so-called cirrhosis of the lung in children. The question was whether, apart from the presence of a gumma, this disease could be distinguished from simple cirrhosis.

Dr. GOODHART referred to a case exhibited by him two years ago, where peculiar tough hepatisation was found occupying the base of a lung after injury. The microscopical characters were much the same as those just given, but there was no evidence of syphilis.

Dr. GREEN said that there was no doubt that this kind of change was occasionally met with in syphilitic children, but how far it was peculiar to syphilis he very much doubted. It appeared to be the same as in chronic pneumonia where no constitutional syphilis was present. In constitutional syphilis, inflammatory diseases of the lung had a tendency to be chronic; in two cases which he had seen in adults, the disease was an acute pneumonia becoming chronic. Histologically, therefore, and independently of other evidence, there would be some difficulty in calling these syphilitic. In reply to Dr. Greenfield, Dr. Green added that in both the cases referred to the disease was general.

DOUBLE CANCER OF THE MALE BREAST.

Mr. WAGSTAFFE brought forward a male patient who had been relieved by operation of cancer of both breasts. In March, 1874, the left breast presented a mass as large as a large walnut, apparently scirrhus, not ulcerated; the right a smaller nodule beneath the nipple; and the left axilla some indication of enlargement of the glands. The double operation of amputation was performed with success. Within twelve months some enlarged glands were removed from the left axilla, one as large as a walnut; there was no return of the disease in the scars; but there was doubtful enlargement in the right axilla. Both mammary and axillary growths were found by Dr. Creighton to be true scirrhus. Mr. Wagstaffe added that altogether he had been able to collect from surgical literature only fifty-one cases of cancer of the male breast, at ages varying from twenty-five to eighty, of duration from less than one to over eight years, and equally common in either gland. In most cases there was constitutional infection, but in the majority operation seemed to have given some relief; probably three of the cases did not end fatally. The present was the only case on record of cancer of both male breasts.

SARCOMA OF(?) THE MALE BREAST.

Mr. CROFT exhibited a tumour which he had removed by operation from the chest of a man of fifty-two. It had grown in a few months, beginning over the right nipple, with little pain. Inferiorly the tumour involved the nipple; it involved also the skin, and presented very different characters to the eye and finger at different parts; it was not tender; the axillary glands were free. The tumour increased under three weeks' observation, and a nodule appeared on the sternal side. It was diagnosed sarcoma by Mr. Croft, who accordingly extirpated it. Microscopically the growth proved to be spindle-celled sarcoma in every part; no gland tissue was visible. The man died on the eighth day from exhaustion. The specimen was interesting chiefly from a diagnostic point of view.

Mr. MAUNDER said that eighteen months ago he removed a male breast for scirrhus; there was no return hitherto.

Dr. COUPLAND asked Mr. Wagstaffe whether special notice had been taken of vacuolation of the cells in his case; and

Mr. WAGSTAFFE replied in the negative.

Mr. MARSH mentioned a case of growth in the male breast diagnosed scirrhus, which proved to be a simple fibrous tumour.

Mr. WAGSTAFFE remarked that some of the cases collected by him might not nowadays be considered scirrhus.

The PRESIDENT had seen three cases of true scirrhus of the breast in the male. One, which was operated on in 1869 by Sir James Paget, was probably still living; a second recovered and disappeared; and the third, which was well-marked three years ago, was now in perfect health.

CYSTIN CALCULI.

Mr. CHRISTOPHER HEATH exhibited specimens of this extremely rare form of calculus. The calculi, which were no fewer than nineteen in number, were removed by median lithotomy, from a patient of twenty-eight, in University College, after retention of urine had occurred more than once. The catheter struck one of the calculi in passage, and Mr. Heath at once operated as described. He found a large number of calculi unquestionably embedded in the prostate, as well as three larger ones lying in the bladder. On careful chemical examination they proved to be pure cystin; at present they were of a brown colour; but Mr. Heath pointed out that, like other specimens of cystin (or, as it is frequently called, cystic-oxide) calculus, they would certainly become green after some time. Mr. Heath added that, although some of these calculi were embedded in the prostate, they were certainly of renal origin. Again, the larger ones were peculiar in having a distinctly laminated structure, the outer layers being still pure cystin. The patient recovered. Only on the third day were there to be found some glistening scales of cystin in the urine, and at no other time.

Mr. HICKS read a report of the chemical, microscopical, and

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spectroscopical characters of the substance of the calculi, which was pure cystin. He added that he had obtained by crystallisation not only the usual six-sided prisms, but four-sided prisms of cystin.

EPITHELIOMA OF THE TONGUE AND JAW.

Mr. HEATH also brought forward a male patient of fifty-two, on whom he had operated with success for extensive epithelioma of the tongue and lower jaw. These parts were deeply involved in the disease and mutually adherent. On September 29 last, Mr. Heath removed three inches of the bone, the tongue, and the whole of the sub-lingual tissues by dissection and the galvanic écraseur. The patient was relieved, and the ends of the bone promised to come into contact. Most of the tongue was unaffected, but the disease was abundant underneath it. There had been little pain, and that chiefly in the occipital region; it disappeared after operation. There was no evidence of intracranial growth.

DISLOCATION OF A SEMILUNAR CARTILAGE.

Mr. HEATH also brought forward a girl, whose knee appeared to be capable of being dislocated at pleasure by bending. Evidently the symptoms were due to displacement of one of the semilunar cartilages. The remarkable fact was that there was no difficulty in restoring the normal condition, as is generally the case.

CANCER OF THE RECTUM—COLOTOMY.

Mr. HEATH showed a fourth specimen, of this nature. Two years and nine months ago, Mr. Heath operated on a woman by lumbar colotomy who had suffered for twelve months from epithelioma of the lower end of the rectum. After recovery, portions of the mass were occasionally removed; but the vagina became involved, and a cloaca existed representing the rectum and vagina; the bladder remained healthy. There was a mass of secondary growth in the liver.

CARCINOMA LIPOMATOSUM.

Dr. HILTON FAGGE showed a specimen of this rare condition taken from the body of a woman of twenty-seven, who died with bronchitis, emphysema, and albuminuria with fatty and granular casts. Post-mortem, one kidney was found to be "granular," weighing four ounces and a half; the other was smooth beneath the capsule, and its hilus was filled with a yellowish nodular mass not unlike fat. The mass grew, however, into the kidney and renal vein, although not at all into the mucous surface of the pelvis. When fresh, the specimen did not seem to differ much microscopically from ordinary fat, but on being hardened its structure proved to be distinctly alveolar, the contained cells being loaded with oil-globules. Dr. Fagge said this disease was very rare. Cornil and Ranvier described only two specimens under the name of *carcinôme lipomateux*. No secondary growth was found; neither did this disease appear to have been the cause of death.

GANGRENOUS CYST OF THE OVARY.

Mr. KNOWSLEY THORNTON showed a fresh specimen of this nature removed by operation from a woman of twenty-eight, four months and a half pregnant, in whom the cyst had been tapped seven days before. Pyrexia and severe pain having supervened, the patient sank, and ovariotomy was performed *in extremis*. The cyst was found to be gangrenous, the pedicle being twisted three times. The patient survived a few hours. The specimen, after being kept for a few days, became quite odourless.

PROCEEDINGS OF THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS.—At a meeting of the Council of this institution on Thursday, the 11th inst., Mr. John Birkett, one of the Vice-President's of the College, was elected a member of the Dental Board in the vacancy occasioned by the retirement of Mr. Henry Hancock, a late President of the College; and the following gentlemen were elected Fellows of the College, viz.:—Messrs. John Beames Burroughs, Clifton, Bristol, diploma of Membership bearing date January 25, 1828; Thomas Bruges Flower, Bath, July 9, 1841; and John Briscoe, Oxford, August 15, 1842. The Council proceeded to the consideration of Mr. Marshall's proposition for the establishment of a preliminary examination in anatomy at the end of the first winter session, when it was resolved—"That a committee be appointed to consider the question of an examination in elementary anatomy and other subjects at some period previous to the time of admission to the first examination for the Fellowship and Membership."

NEW INVENTIONS AND IMPROVEMENTS.

MAGNESILYNE, OR MAGNESIUM CITRATE.

WE some time ago noticed with approval the effervescing fluid citrate of magnesia manufactured by Messrs. Kinmond and Co., of Kenilworth-street, Leamington; and from that enterprising firm we have now received a preparation of magnesium citrate to which they have given the detestable hybrid name of "Magnesilyne." But however detestable the name may be, the preparation is worthy of commendation. It is a white powder, which is said to contain "an amount of carbonate of magnesia and citric acid corresponding to 60 per cent. of citrate of magnesia"; and a well-known analytical chemist affirms that it is what it pretends to be. It is, perhaps, hardly perfect, for it appears to us to be rather disposed to cake in the bottle, and we have observed that there is generally a small quantity of undissolved gritty powder left after effervescence; but, at any rate, it is by much the nearest approach yet made to the production of a genuine effervescing citrate of magnesia. It effervesces briskly and well, and is pleasant to take; and we have no hesitation in saying that it is a useful—and likely, we think, to prove a popular—preparation.

D.D. ENCORE WHISKY (DOUBLE DISTILLED).

MESSRS. BERNARD AND CO., of the well-known Leith Distillery, have sent us a sample of this whisky, as one which, by a process of double distillation, has been "thoroughly cleansed from all impurities." It is certified by the analytical chemists Dr. Benjamin H. Paul and Dr. Stevenson Macadam to be wholly free from fusel oil and other injurious substance; and we think it well deserves the character they have given it. It is a pleasant, soft, very pure spirit, and when for any reason it is desired to give whisky as an alcoholic stimulant rather than Cognac brandy, this may be safely recommended. We are rather inclined to think, indeed, that it has been "purified" almost too much to make it quite acceptable to toddy-drinkers; but we cannot pretend to be experts in that subject, and, indeed, we have not to judge of this whisky from that point of view. As a pure spirit, however, eminently well fitted for medicinal use, we can highly commend the "D.D. Encore Whisky."

RICHARDSON'S PHOSPHORISED COD-LIVER OIL EMULSION, AND COD-LIVER OIL EMULSION WITH QUININE.

WE have much pleasure in recommending these two preparations of cod-liver oil, prepared by Messrs. Richardson, of Leicester, to the notice of the profession. They are, in the first place, true emulsions, and the samples which have been sent us have remained perfectly homogeneous for more than two months; secondly, the taste of the cod's oil is so thoroughly masked, that we doubt whether the majority of people would detect it at all. The phosphorised emulsion has a pleasant, sweetish flavour, and melts away in the mouth like a sort of custard; the emulsion containing quinine has the decided bitterness of that drug. A tablespoonful of the first contains one-fiftieth of a grain of pure phosphorus; and of the second, half a grain of sulphate of quinine. We are quite sure that invalids to whom cod's oil, as such, is intolerable and nauseous to the last degree, could take Messrs. Richardson's emulsions with comfort and benefit, and for children they would be invaluable. There is no reason why a preparation of this kind should not find its way into the British Pharmacopœia.

THE names of Benjamin Barkus, M.D., and Robert Joseph Banning, M.D., have been added to the Commission of the Peace for the borough of Gateshead-on-Tyne.

SCIENCE AND ART.—Mr. Edward Bellamy, F.R.C.S., one of the Surgeons of the Charing-cross Hospital, will commence his annual course of twelve lectures on the Anatomy of the Human Form, at the National Art Training School, South Kensington, on Monday next, the 15th inst. These lectures, which are in connexion with the Science and Art Department of the Committee of Council on Education, are well attended, and amongst Mr. Bellamy's audience last session we observed H.R.H. the Princess Louise, Marchioness of Lorne, and attendants.

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OBITUARY.

JOHN HAMILTON, F.R.C.S. Ire., Surgeon-in-Ordinary to the Queen in Ireland.

As we briefly announced last week, this much-regretted gentleman died in his sixty-seventh year, at his residence, 14, Merrion-square North, Dublin, on Tuesday, November 2. For some months Mr. Hamilton had suffered from an affection which ultimately gave rise to recto-vesical fistula, and caused great distress. To relieve his sufferings, the operation of colotomy was skilfully performed by Mr. Curling, of London, on Sunday, October 10. Mr. Hamilton's late colleagues, Drs. Gordon, William Thomson, and W. Thornley Stoker, assisted at the operation, which was so far successful that the last three weeks of the deceased gentleman's life were passed in comparative comfort. He died of exhaustion, quietly and peacefully passing away amid the regrets of a wide circle of friends and well-wishers.

Mr. Hamilton adopted medicine as his profession at an early age. He was apprenticed to the late Sir Philip Crampton, Bart., who was his uncle by marriage. In 1844 he became a Fellow of the Royal College of Surgeons in Ireland, and about the same time he was elected one of the Visiting Surgeons of the Richmond Hospital. This highly valued appointment he resigned only last April, having endeared himself to every one of his colleagues and patients during the thirty-one years of his untiring service by his urbanity, attention, and skill. On the death of Mr. Robert Adams, at the beginning of this year, Mr. Hamilton was appointed by her Majesty the Queen to the proud position of Surgeon-in-Ordinary in Ireland—a well-merited honour, which was endorsed by his brethren, who a few months later chose him as Vice-President of the Royal College of Surgeons. On resigning the Surgeoncy of the Richmond Hospital last April, he was appointed Consulting Surgeon to, and Governor of, the House of Industry Hospitals. About the same time he was chosen Consulting Surgeon to St. Mark's Ophthalmic Hospital. He had been President of the Dublin Pathological Society.

As an author Mr. Hamilton is best known by the following works—"An Essay on Syphilitic Sarcocele," "The Restoration of a Lost Nose," and "Syphilitic Osteitis and Periostitis." That the estimation in which Mr. Hamilton was held was not confined to his own profession may be gathered from these concluding words of an obituary notice in the Dublin *Daily Express*. Having spoken of his recent appointments, the writer adds:—"Honours such as these, so great and so numerous, coming towards the close of his career, were rewards which caused no envious feelings in others. Everyone who knew him, or who had watched his unsullied life, felt that they were justly earned; and all who had experienced his courtesy, gentleness, or benevolence, rejoiced at any distinctions that could be conferred upon him. As a skilful surgeon he had attained to great eminence, and for many years he had been engaged in one of the largest practices in the city."

Mr. Hamilton's funeral, which took place last Saturday, was attended by the President, Council, and Fellows of the Royal College of Surgeons, in state.

Caterpillar Poison.—The poisonous nature of the caterpillar infesting pine-trees was shown in the case of a man who trod on one with his bare foot. The mere contact caused rapid and severe inflammation over the sole of the foot, which ended in an acute abscess. After it was opened the foot healed readily.—*Dr. Gauld's Report of the Medical Missionary Hospital at Swatow for* 1874.

The Austrian Institute of Operators.—This is peculiar to the Austrian monarchy. Every two years each province enjoys the right of sending two doctors of medicine, who, by a previous theoretical and practical examination, have shown that they possess more than a common knowledge of surgery and aptitude for operating. These being formed into a class, receive private instruction from the Professor of Surgery in operating on the cadaver during the first year; and during the succeeding year of their pupilage they perform operations on the living subject at the Surgical Clinic, before the students of the University.—*New York Med. Record*, October 2.

MEDICAL NEWS.

University of London.—The following is a list of the candidates who have passed the recent M.B. Examination:

First Division.—George Henry Batterbury, King's College; Richard Lee Batterbury, King's College; George Garlick, University College; Henry Hetley, Guy's Hospital; Lewis John Hobson, University College; Jean Arthur Hullard, B.Sc., University College; Leander Starr Jameson, University College; Bennett May, Birmingham General Hospital and Sydenham College; William Rose, King's College; Herbert Alder Smith, St. Bartholomew's Hospital; Joseph Cooke Verco, St. Bartholomew's Hospital; George Henry Voelcker, University College.

Second Division.—Thomas Wemyss Bogg, University College; Arthur Buchanan, Guy's Hospital; Edgar Reginald Legassicke Crespin, Guy's Hospital; Eugène Crétin, St. Bartholomew's Hospital; Thomas Edwin Maclean, University College; George Edward Moore, King's College; Frederick John Morton Palmer, Guy's Hospital.

Royal College of Surgeons of England.—The following gentlemen passed their primary examinations in Anatomy and Physiology at a meeting of the Court of Examiners on the 9th inst., and when eligible will be admitted to the pass examination:—

Beale, E. C., B.A. Cantab., student of the Cambridge School.
Burry, H. B. P., of the London Hospital.
Burnham, G. H., of the Toronto School.
Christian, John, of St. Thomas's Hospital.
Clark, J. R., of the Toronto School.
Davies, W. R., of St. Thomas's Hospital.
Dingle, W. A., of St. Bartholomew's Hospital.
Hopwood, W. F., of University College.
Jefferson, W. D., of King's College.
Jones, Thomas, of Guy's Hospital.
Kilner, C. S., of Edinburgh.
Knox, Charles, of the Liverpool School.
Layton, H. A., of University College.
Lewis, T. H., of St. Bartholomew's Hospital.
Lowdell, C. G. W., of Guy's Hospital.
McLarty, Colin, of the Toronto School.
March, J. H., of St. Thomas's Hospital.
Mayne, W. F., of St. Bartholomew's Hospital.
Millman, Thomas, of the Toronto School.
Poland, J. H., of Guy's Hospital.
Proctor, S. F., of St. Thomas's Hospital.
Rundle, C. S., of Edinburgh.
Saunders, J. C., B.A. Cantab., of the Cambridge School.
Stark, M. D., of the Toronto School.
Thomas, H. W., of the Birmingham School.
Thurston, E. P., B.A. Cantab., of St. Thomas's Hospital.
Walker, G. A., of Edinburgh.
Wilkinson, A. T., of the Manchester School.
Winter, W. H. T., of St. Bartholomew's Hospital.

Twelve candidates having failed to acquit themselves to the satisfaction of the Court, were referred to their studies for three months.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday November 4:—

Betty, Samuel George, Park-street, Regent's-park, N.W.
Heard, Charles Goodridge, Truro, Cornwall.
Jackson, Edwin, Whalley Range, Manchester.
Kay, Alfred, 311, Commercial-road East.
Knight, John Tomlinson, Sandiacre, Derbyshire.
Marsh, Edwin Addison, 5, Arthur-road, Brixton.
Parkinson, Sidney George, Infirmary, Northampton.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

Briggs, H. B., M.R.C.S., L.S.A.—Resident Accoucheur to King's College Hospital.

Footner, J. B., M.R.C.S., House-Surgeon to King's College Hospital.

Fowler, J. K., M.R.C.S.—Assistant House-Physician to King's College Hospital.

Godson, Clement, M.D., M.R.C.P.—Physician-Accoucheur to the St. George's, Hanover-square, Dispensary.

Gould, A. Pearce, M.B., B.S.—Surgical Registrar to University College Hospital, *vice* R. J. Godlee, M.S., resigned.

Ground, E., M.R.C.S.—Assistant House-Surgeon to King's College Hospital.

Hebb, R. G., B.A., M.B. Cantab., M.R.C.S.—House-Physician to King's College Hospital.

Nettleship, Edward, F.R.C.S. Eng., L.S.A.—Assistant-Surgeon to the Hospital for Diseases of the Skin, 52, Stamford-street, Blackfriars, *vice* Mr. F. M. Sims, resigned.

Rayne, C. A., M.B., B.S. Lond.—Assistant-Physician to the Hospital for Sick Children, Pendlebury, Manchester.

Sparrow, George Gordon, L.R.C.P. Edin., M.R.C.S. Eng., L.M.—House-Surgeon and Secretary to the Royal Isle of Wight Infirmary, Ryde, *vice* Mr. Pletts, resigned.

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WARD, WALTER A., M.R.C.S.E., L.S.A., L.M.—Resident House-Surgeon to the Infirmary, Richmond, Surrey.

WARNER, FRANCIS, M.D. Lond., F.R.C.S. Eng., L.S.A.—Extra Acting Physician to the Children's Hospital, Birmingham, *vice* Dr. Burgess Welch, resigned.

WELCH, JOHN BURGESS, M.B., M.R.C.S. Eng., L.S.A.—Acting Physician to the Children's Hospital, Birmingham, *vice* E. Mackey, M.B., L.R.C.P., M.R.C.S. Eng., resigned.

NAVAL APPOINTMENTS.

ADMIRALTY.—Septimus Terry, Staff-Surgeon to the *Duncan*, for temporary service with the Royal Marines at Walmer. Staff-Surgeon Dugald McEwan, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of October 19, 1875.

BIRTHS.

BOLTON.—On October 24, at Kustendjie, the wife of Dr. A. T. Bolton, Medical Officer to the Danube and Black Sea Railway Company and to the Turkish Government, of a daughter.

BRODRIBB.—On November 5, at Watford, the wife of Charles Aikin Brodribb, M.R.C.S. Eng., L.S.A., of a son.

DAVSON.—On November 1, at Campden Villa, 203, Maida-vale, the wife of S. Houston Davson, M.D., of a son.

HATHERLY.—On November 2, at Wellington-street, Park Side, Nottingham, the wife of Henry R. Hatherly, L.R.C.P., M.R.C.S., of a son.

MACKINNON.—On November 1, at South Camp, Aldershot, the wife of Surgeon-Major C. Mackinnon, Army Medical Department, of a son.

MAURICE.—On October 28, at Marlborough, the wife of J. Blake Maurice, M.D., F.R.C.S., of a son.

RANGER.—On November 7, at Meadow Croft, Lower Sydenham, the wife of W. G. Ranger, M.R.C.S. Eng., of a daughter.

SAUNDERS.—On November 6, at 21, Lower Seymour-street, Portman-square, W., the wife of C. E. Saunders, M.D., of a son.

STILWELL.—On November 4, at Springcroft, Beckenham, Kent, the wife of R. R. Stilwell, M.D., of a son.

MARRIAGES.

ALABASTER—MACGOWAN.—On September 15, at the Cathedral, Shanghai, Chaloner Alabaster, H.B.M.'s Consul at Taiwan, to Laura Abbie, daughter of D. J. Macgowan, M.D., of Shanghai and New York.

BARNES—PRIOR.—On November 2, at St. George's, Hanover-square, Fancourt Barnes, M.B., of Weymouth-street, son of Robert Barnes, M.D., of Grosvenor-street, to Jessie, daughter of the late Richard Prior, M.R.C.S., and stepdaughter of Samuel Wilks, M.D., F.R.S., of Grosvenor-street.

BROWN—WYLD.—On November 4, at St. Mary's, Bryanston-square, London, the Rev. Claud Brown, B.A., Curate of Much Wenlock, Shropshire, and son of J. W. Brown, Esq., of Gloucester-square, W., to Marion Janet, eldest daughter of George Wyld, M.D., Great Cumberland-place, London, W.

COCHRANE—RICHARDSON.—On November 9, at St. George's, Hanover-square, Alfred Ormesby Cochrane, of Dairy Knoll, Middlesboro', to Annie, eldest daughter of the late John Richardson, M.R.C.S., of Middlesboro'.

DENHAM—BARCLAY.—On November 2, at St. Paul's Church, Bayswater, John Denham, Esq., of Merrion-square, Dublin, to Louisa, widow of the late Captain Ebenezer Barclay, of Kenilworth-square, Dublin, formerly of Aberdeen.

GODSON—BAZIRE.—On November 4, at St. George-the-Martyr, Queen-square, London, W.C., the Rev. C. St. L. M. Godson, curate of Chilvers Coton, Warwickshire, and youngest son of the late W. Coker Godson, Esq., of the Audit Office, Somerset House, to Marie Jeannette, only daughter of the late Victor Bazire, M.D., of Woburn-square, London.

GREEN—ARTHY.—On November 3, at All Souls', Langham-place, London, Harry Priestley Green, Esq., to Harriett Louisa, only child of E. A. Arthy, L.S.A., of Fincham, Norfolk.

JAMISON—GREEN.—On November 4, at the parish church, Weybridge, Arthur Jamison, M.D., of St. Helen's, Lancashire, to Isabella, youngest daughter of the late Rev. H. Green, M.A., of Heathfield, Knutsford.

LUCE—RYAN.—On November 4, in Winchester Cathedral, James Johnstone Luce, M.D., of Stratford-on-Avon, to Mary, widow of the Rev. John Ryan, curate of Holy Trinity Church, Southampton, eldest daughter of the late Wm. Barry, Esq., Kilbarry, co. Cork.

WILKINS—JERVIS.—On November 4, at St. Stephen's Church, Paddington, Surgeon T. J. Hackett Wilkins, second son of the late T. Wilkins, Esq., of the High Court of Madras, to Alicia Caroline Evelyn, only child of the late Lieut.-Col. Felix Richard Vincent Jervis, of the Bengal Army.

DEATHS.

ANDERSON, JAMES RAINY, retired Staff-Surgeon R.N., at Ajaccio, Corsica, where he had gone for the benefit of his health, on October 31, aged 40.

BEADLES, JOHN NATHANIEL, M.R.C.S. Eng., L.S.A., of Mitcheldean, Gloucestershire, formerly of Broadway, Worcestershire, at Park-house, Forest-hill (the residence of his son, Arthur Beadles, M.R.C.S. Eng., L.S.A.), on November 4, aged 73.

HAMMOND, JOSIAH, F.R.C.S., at Market-street, Cambridge, on November 3, aged 72.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

CHARING-CROSS HOSPITAL.—Assistant-Physician, and Physician or Surgeon for the Skin Department. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 25.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

DOVER HOSPITAL AND DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Mr. Elwin, 13, Castle-street, Dover, before November 30.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 11, Tavern-street, Ipswich, on or before December 8.

GLOUCESTER INFIRMARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Dr. Washbourn, Gloucester, on or before November 25.

HUDDERSFIELD INFIRMARY.—Physician.

INFIRMARY FOR CONSUMPTION, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Physician-in-Ordinary. Candidates must be M.R.C.P. Lond. Applications, with testimonials, to the Secretary, on or before Nov. 18.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Hon. Sec., Mr. J. Calder, Liver Chambers, Tithebarn-street, Liverpool.

MIDDLESEX HOSPITAL.—Resident Physician's Assistant. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, before November 13.

NORTH STAFFORDSHIRE INFIRMARY, HARTSHILL, STOKE-ON-TRENT.—House-Physician. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before Nov. 16.

PROVINCIAL HOSPITAL, PORT ELIZABETH, CAPE OF GOOD HOPE.—House-Surgeon and Dispenser. Candidates must be duly qualified and unmarried. Further particulars may be obtained on application to T. E. Fuller, Cape Emigration Agent, 15, Coleman-street, London, E.C.

PLYMPTON ST. MARY UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, Princess-place Chambers, Plymouth, before November 18.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, 191, MARYLEBONE-ROAD, W.—Physician to the Out-patients. Candidates must be duly qualified, and must attend a meeting of the Committee of Management of the Hospital on Monday, November 22, at two o'clock precisely.

RADCLIFFE INFIRMARY, OXFORD.—House-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 24.

WEST RIDING PRISON, WAKEFIELD.—Resident Surgeon. Candidates must be duly qualified, and registered. Applications, with testimonials, to J. Hamerton, Esq., Clerk of the Peace, Wakefield, on or before November 15.

WORCESTER GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Executive Committee, under cover to the Secretary, Mr. Watkins, 50, Foregate-street, Worcester, on or before November 17.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Andover Union.—Mr. Thelwall Pike has resigned the Fourth District; area 17,224; population 2797; salary £71 per annum.

Hardingstone Union.—Mr. H. Arnold has resigned the Brafield District; area 11,155; population 3030; salary £45 per annum.

Headington Union.—Dr. Perigal has resigned the Wheatley District; area 14,937; population 3979; salary £70 per annum.

Lambeth Parish.—Mr. W. Monday has resigned the Workhouse; salary £50 per annum.

Lincoln Union.—The Twelfth District is vacant; area 12,276; population 1406; salary £15 per annum.

Louth Union.—The Hainton District is vacant; area 3983; population 583; salary £8 per annum.

Malmesbury Union.—Mr. C. W. Pitt has resigned the First District; area 15,190; population 5702; salary £70 per annum.

Ross Union.—Mr. John George has resigned the Third District; area 15,210; population 5490; salary £72 per annum.

Rugby Union.—Mr. Frederick W. Wimberley has resigned the Brinklow District; area 8225; population 1392; salary £25 per annum.

Stoke-upon-Trent Parish.—Mr. John Burn has resigned the Hanley District; area 483; population 18,376; salary £85 per annum.

Welwyn Union.—Mr. H. R. Ring has resigned the District; area 6295; population 2272; salary £38 per annum. Also the Workhouse, salary £12 per annum.

APPOINTMENTS.

Altrincham Union.—Thos. A. Somerville, L.R.C.P. Edin., M.R.C.S. Eng., to the Wilmslow District.

Aston Union.—Charles Barlow, M.R.C.S. Eng., L.S.A. Lond., to the Sutton Coldfield District.

Battle Union.—Josiah Sarjant, M.D. St. And., L.R.C.P. Edin., M.R.C.S. Eng., to the Second District.

Liverpool Parish.—Thos. Clarke, M.D., M.C. Queen's Univ. Ire., as Assistant Medical Officer of the Workhouse.

Settle Union.—Edward F. Seager Green, M.B. and C.M. Glasg., to the Bentham District.

Shifnal Union.—Joseph l'Oste Brown, L.R.C.P. Lond., M.R.C.S. Eng., to the Sheriffhales District.

STATISTICAL SOCIETY.—SESSION 1875-76.—The first ordinary meeting of the present session will be held on Tuesday, the 16th inst., at the Society's rooms, Somerset House-terrace (King's College entrance), Strand, W.C., when the President, James Heywood, Esq., M.A., F.R.S., will deliver his "inaugural address," and present the Howard Medal to the successful candidate—this being the first award. Mr. E. G. Ravenstein, F.R.G.S., will give "Statistics collected at the Geographical Congress in Paris," and Dr. W. A. Guy, F.R.S., will read a paper on "John Howard's True Place in History," a supplement to his paper entitled "John Howard as Statist." The chair will be taken at 7.45 p.m.

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GLASGOW ROYAL INFIRMARY.—At a meeting of the directors of the Royal Infirmary, held recently, it was agreed that the salaries of the physicians and surgeons should be increased from £50 to £100. The salaries of the matron and other officials are also to be increased, the total increase upon salaries amounting to about £600.

TESTIMONIALS.—A testimonial, consisting of a large silver tray, was presented by the Lord Mayor, on behalf of the subscribers, at the Mansion House last week, to Dr. James Middleton, on his retirement from the office of Physician to the City of London Dispensary, as an acknowledgment of his services in that office during thirty years. A testimonial was at the same time presented to Mr. J. A. Kingdon, which consisted of a silver inkstand and despatch-box, for services rendered to the poor of London as Surgeon to the same Dispensary during a quarter of a century.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN OCT., 1875.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	19·63	0·094	0·167	0·002	15·4	3·3
West Middlesex	19·43	0·046	0·131	0·000	15·0	3·3
Southwark & Vauxhall	18·92	0·064	0·166	0·002	14·8	3·3
Chelsea	19·33	0·056	0·131	0·001	15·4	3·4
Lambeth	19·40	0·060	0·125	0·001	15·4	3·3
Other Companies.						
Kent	28·09	0·011	0·359	0·000	21·2	5·6
New River	18·47	0·030	0·166	0·000	14·7	3·0
East London	17·57	0·049	0·181	0·001	14·4	3·7

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in those of the Grand Junction, the Southwark and Vauxhall, the Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 196,235,570 gallons; and the number of houses supplied was 520,057. This is at the rate of 36·6 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 28·2 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

A Correction.—In our last week's number, when speaking of the Carr Exhibitions of the Royal Medical Benevolent College, we inadvertently stated that they are held for *three* years. This was a mistake: they are tenable for *four* years; and in addition each holder gets £50 to start in life with after he has obtained his qualification to practise. The Senate of University College offer on certain conditions a free Medical Scholarship annually, tenable for four years; and the Carr Exhibitions, which owe their origin to the generosity and exertions of Dr. Carr, of Blackheath, are for the purpose of helping each of these scholars. To establish the four exhibitions the sum of £7000 is required, of which £4000 has been already raised.

*** We have received a letter from the Treasurer of the Chelsea Hospital for Women, which we shall deal with next week.

A London Householder shall receive an answer next week.

Nemo.—The first primary examination this session for the diploma of Membership of the Royal College of Surgeons will take place this day (Saturday), and that for the pass next Friday and Saturday.

P. P.—The differences between drunkards addicted to drinking malt liquors and those given to the use of spirit are graphically presented by Hogarth in his "Beer-alley and Gin-lane." The first are plump, rubicund, and bloated; the latter are pale, tottering, emaciated, and miserable. Sir Walter Scott ("Waverley") distinguishes fuddled or half-seas-over (*ebriolus*) from drunken (*ebrius*).

I. N. G.—The Boston "Washingtonian Home for Drunkards" was first organised, under the name of the "Home for the Fallen," November 5, 1857. It was re-organised under an Act of the Legislature, and approved, March 26, 1859.

Gilbert L.—In the "Medical and Surgical History of the War against Russia," in 1854-55-56, published by authority, vol. ii., p. 265, it is remarked, "The shock of the accident frequently witnessed by the military surgeon differs, often in a very material degree, and possibly in kind also, from that witnessed in civil life. When a cannon-shot strikes a limb and carries it away, the immense velocity and momentum of the impinging force can scarcely be supposed to have no physical effect upon the neighbouring or even distant parts, independent of and in addition to the 'shock' in the ordinary acceptation of the term, which would result from the removal of the same part by the knife of the surgeon, or the crushing of it by a heavy stone or the wheel of a railway-waggon. . . . . In the great majority of cases the whole frame is likewise violently shaken and contused, and probably, independent of the physical effects, a further vital influence is exerted, which exists in a very minor degree, if at all, in the last-named injuries, and may possibly depend upon the ganglionic nervous system."

F. C. F.—"There is a kind of physiognomy in the titles of books no less than in the faces of men, by which a skilful observer will as well know what to expect from the one as the other."—*Butler's Remains.*

Andrew W. K.—Dr. Babington's (senior) house was in Aldermanbury. He never would take a fee from a curate, a governess, or a military man on half-pay.

W. O.—"The doctors," says the *Bombay Gazette* of the 4th ult., "in Delhi have expressed an opinion that the remarkable number of deaths among the cats in that city, which have attracted attention for some weeks past, have been caused by a disorder similar to cholera."

Civis.—"Medical Charity: its Extent and Abuses,"—the *Westminster Review*, January, 1874. "Medical Charity: Methods of Administering it,"—the *Westminster Review*, April, 1874.

Z.—"Haller" describes John Ray as the greatest botanist in the memory of man, and whose writings on animals were pronounced by Cuvier to be the foundation of all modern zoology. He was born on November 29, 1628, at Black Notley, near Braintree, in Essex.

Erasmus.—In the current number of the *Quarterly Review*, under the title of "Drink; the Vice and the Disease."

CONFLICT OF TEACHERS.—No. II.: HAYNES WALTON ON MYDRIATICS.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

SIR,—I am tempted to appeal to you again in the conflict of teachers respecting matters of fact. On the last occasion the subject was ergot; on this let me speak of atropine, and its use or uselessness in iritis.

I will again take the statements in Aitken's "Outlines of the Science and Practice of Medicine," p. 383—"In every case, and at any stage, of iritis, dilatation of the pupil must be brought about and maintained by the use of mydriatics, chief of which is belladonna and its alkaloid atropia, so as to prevent irregularity of the pupil and adhesions. . . . In slight cases atropia should be applied from three to ten times daily, and (if there is severe pain) every five minutes for some hours in the evening, and these frequent applications are to be continued for four to five days, or till pain and vascularity have lessened. . . . After all vascularity has subsided, the atropia must still be used at least twice daily, and so continued for from two to three weeks, with the view of providing against any relapse." The learned author proceeds to give formulæ for solutions—one of one grain of sulphate of atropia to the ounce of distilled water, which he says is "most efficient"; but in the next line he goes on to say that "a solution of two to three grains of sulphate of atropia to half an ounce of distilled water" is "most convenient"; but thinks that symptoms of poisoning may follow the use of this solution, and that Calabar bean may be useful to restore contraction of the pupil. I believe this to be the doctrine of the schools.

Now let us turn to the statements of Mr. Haynes Walton, whose "Practical Treatise on Diseases of the Eye" has been before the world in various editions since 1852. I quote from the edition of 1875, p. 607:—

"If the pupil could be kept dilated during iritis, adhesion of the iris to the capsule of the lens might often be prevented; but, unfortunately, in the very form of inflammation in which dilatation would be so beneficial, the iris is too much infiltrated to act. The application of atropine from the very commencement of the inflammation will not stay the inflammatory action in the iris,—a part only, be it remembered, of the disease of iritis. Yet I employ it as soon as I see my patient, because it affords me correct information of the iris returning to health, in dilatation of the pupil, or whatever portion of it may be free. . . . . There can be no inflammation of the iris if the pupil can be artificially dilated. A surgeon who has doubt about the presence of iritis may safely use this test. It is interesting to see how the pupil expands irregularly, even where there is no adhesion, as this or that section of the iris successively gets healthy, till at last the dilatation is quite round. During this mode of return to health, the infiltrated and as yet not acting iris fibres are apt to be mistaken for points of adhesion, which ultimately are detached."

Observe here the discrepancy on a single point, which ought to be determined by the observation which Mr. Haynes Walton challenges. "Dilate an inflamed iris with atropine," say the schools; "An inflamed iris won't dilate," says Walton. "It is a remedy in iritis," say the schools; "It is a test of convalescence," says Walton. Professors and authors, pray give us light on this narrow question! I am, &c., EYES RIGHT.

BOOKS AND PAMPHLETS RECEIVED—

Hermann's Elements of Human Physiology, translated from the fifth edition by Arthur Gamgee, M.D., F.R.S.—Swedenborg's Christian Psychology, translated by T. M. Gorman, M.A.—Black's Lectures on Bright's Disease—Surgical Contributions, by Mr. P. J. Hayes—Dunster's History of Anæsthesia—Woodman's Introductory Lecture, delivered at the London Hospital—Notes on Chinese Toxicology, by D. J. Macgowan, M.D.—A Course of Practical Instruction in Elementary Biology, by T. H. Huxley, LL.D., assisted by H. N. Martin, B.A., M.B.—Des Difformités des Doigts, par le Dr. G. Beauregard—Des Plaies Pénétrantes des Articulations, par le Dr. Dechaux—Physiologie Expérimentale, Travaux du Laboratoire de M. le Professor Marcy.

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PERIODICALS AND NEWSPAPERS RECEIVED—

La ıcet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Practitioner—O Correio Medico de Lisboa—The Mid-Weekly Hampshire Independent—The Croydon Advertiser.

COMMUNICATIONS have been received from—

Dr. Lippincott, Salem, U.S.A.; Mr. W. M. Banks, Liverpool; Mr. Pineo, London; Dr. W. Arnold, Belfast; Mr. J. Layton, London; The Registrar of Apothecaries' Hall, London; The Rev. J. A. Hatchard, St. Leonard's; Mr. G. R. Gilruth, Edinburgh; Dr. Semple, London; Mr. M. Sullivan, London; Mr. J. C. Morrell, Salford; Mr. H. Sewill, London; Mr. E. Chambers, Chester; Dr. Druitt, London; Mr. G. Brown, London; Dr. W. Hunter, Rothesay; Mr. J. Stokes, Cahir; Dr. Wilkins, London; Mr. J. Lewtas, Netley; Mr. W. Odell, Hertford; Mr. J. A. Bond, Polesworth; Mr. G. Carew, Rattery; Dr. Sullivan, Havana; Dr. Wilks, Ryde; Dr. Bisset Hawkins, Dorchester; Mr. C. A. Fox, London; Dr. Henry Lawson, London; London Householder; Messrs. Kinmond and Co., Leamington; Surgeon-General Dr. Maclean, Netley; Mr. H. K. Hitchcock, Lewisham; Dr. R. Lawson, Wakefield; Our Liverpool Correspondent; The Registrar-General, Edinburgh; Mr. A. Pearce Gould, London; Mr. J. Wylie, Belfast; Mr. Steinthal, Manchester; Mr. F. Hodges, London; Mr. G. Rowland, Richmond; The Rev. T. Whitney, Huddersfield; The Secretary of the Society for Promoting Christian Knowledge; The Secretary of the Hospital for Diseases of the Skin, Blackfriars; Dr. Eustace Smith, London; Mr. Frederick W. Lowndes, Liverpool; Mr. Henry Morris, London; Dr. Bruce, London; Mr. J. Chatto, London; Dr. Gavin Milroy, Richmond, Surrey; Mr. G. Cole, Hatton; Mr. W. B. Taylor, London; Mr. J. McInnes, Wakefield; Dr. Acland, Oxford; Mr. J. Millikin, London; The Registrar of the University of London; The Secretary of the Statistical Society; Dr. J. W. Moore, Dublin; Mr. H. Borchert, Netley.

APPOINTMENTS FOR THE WEEK.

November 13. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

Gresham College, 7 p.m. Dr. E. Symes Thompson, "On Digestion and Nutrition."

15. Monday.

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Gresham College, 7 p.m. Dr. E. Symes Thompson, "On Diet in Health."

Medical Society of London, 8½ p.m. Discussion on the Case of Excision of the Astragalus shown by Mr. Watson on Monday last. Dr. Drysdale, "For and Against Animal Vaccination."

16. Tuesday.

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Gresham College, 7 p.m. Dr. E. Symes Thompson, "On Diet in Disease."

Pathological Society, 8½ p.m. Dr. Crisp—1. Fractured Bones of Gorilla; 2. Rickets in Pheasants. Dr. Hilton Fagge—1. Distended Diverticula of Intestine; 2. Pulmonary Embolism. Dr. Barlow—Tubercle of Pancreas. Mr. Marsh—Tumour of Jaw. Mr. Fairlie Clarke—Tubercular Lupus of Tongue. Mr. Maunder—Fatty Tumour of Male Breast. Dr. Goodhart—Hydatid in Heart. Dr. Dowse—Elio-Sarcoma of Brain. Mr. Clement Lucas—Larynx after Tracheotomy. Mr. John Morgan—Dilatation of Bile-Ducts. Dr. Fred Robinson—Aneurism of Aorta. Dr. Habershon—1. Obliteration of Superior Cava; 2. Ulceration of Duodenum. Mr. Marsh (for Dr. Holt)—Congenital Malformation of Œsophagus. Dr. Dowse—Syphilitic Growth of Cerebral Sinuses. Mr. Alex. Morison—Disease of Pulmonary and Tricuspid Valve. Mr. Thomas Smith—Hæmorrhagic Periostitis. Dr. Gowers—1. Elioma of Brain; 2. Fatty Tumour of Spinal Cord. Dr. Wickham Legg—Congenital Deficiency of Common Bile-Duct.

Statistical Society, 7¾ p.m. The President's Inaugural Address.

17. Wednesday.

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

18. Thursday.

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. Dr. S. E. Pollock, "On certain varieties of Heart Disease, with reference to Prognosis and Treatment."

19. Friday.

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1¼ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 6.

BIRTHS.

Births of Boys, 1193; Girls, 1181; Total, 2374.
Average of 10 corresponding years 1865-74, 2274·2.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	811	772	1583
Average of the ten years 1865-74	741·7	706·4	1448·1
Average corrected to increased population ...	...	...	1549
Deaths of people aged 80 and upwards ...	...	...	57

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	13	27	2	6	..	2	1	4
North	751729	...	8	23	2	9	...	3	2	9
Central ...	334369	...	8	8	...	3	...	2	...	...
East	639111	...	4	22	...	14	...	5	1	6
South	967692	...	7	49	8	19	...	6	1	5
Total	3254260	1	40	129	12	51	...	18	5	24

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·581 in.
Mean temperature	48·2°
Highest point of thermometer	58·5°
Lowest point of thermometer	37·7°
Mean dew-point temperature	44·2°
General direction of wind	E., S.E., & S.W.
Whole amount of rain in the week	0·62 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 6, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Nov. 6.	Deaths Registered during the week ending Nov. 6.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2374	1583	58·5	37·7	48·2	9·00	0·62	1·57
Portsmouth ...	122632	27·3	72	39	...	...	...	...	...	...
Norwich	82842	11·1	54	22	57·0	40·0	46·7	8·17	0·62	1·79
Bristol	196186	44·1	159	95	59·9	39·6	48·9	9·39	1·27	3·25
Wolverhampton ...	71718	21·1	64	36	58·8	37·7	46·9	8·28	0·61	2·05
Birmingham ...	366325	43·6	279	148	60·0	35·8	47·7	8·72	0·67	1·70
Leicester	109830	34·3	88	52	57·5	39·5	47·6	8·67	0·72	1·83
Nottingham ...	92251	46·2	53	51	59·0	39·3	46·1	7·84	0·67	1·70
Liverpool	516063	99·1	379	247	58·2	39·2	48·0	8·89	0·78	1·98
Manchester ...	356936	83·1	243	193	...	...	...	...	...	...
Salford	135720	26·3	134	85	57·6	33·4	46·9	8·28	1·19	3·02
Oldham	87437	18·7	62	48	...	...	...	...	...	...
Bradford	166305	23·3	112	94	57·8	39·0	47·2	8·44	0·59	1·50
Leeds	285118	13·2	228	167	59·0	39·0	46·5	8·06	0·51	1·29
Sheffield	267881	13·6	196	105	58·0	39·0	46·8	8·23	1·01	2·57
Hull	133932	36·8	111	59	55·0	40·0	46·3	7·95	1·25	3·12
Sunderland ...	106342	32·2	98	48	61·0	33·0	47·2	8·44	0·68	1·73
Newcastle-on-Tyne	137665	25·6	94	55	...	...	...	...	...	...
Edinburgh	211636	50·5	119	78	61·0	33·0	46·6	9·23	...	...
Glasgow	534564	88·6	377	217	58·3	37·5	45·8	7·67	2·27	5·67
Dublin	314666	31·3	175	171	64·6	36·0	51·5	10·84	0·70	1·78
Total of 21 Towns in United Kingdm	7742889	87·0	5441	3593	61·6	33·4	47·5	8·61	0·90	2·29

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·58 in. The highest was 29·75 in. at the beginning of the week, and also on Tuesday morning, and the lowest 28·90 in. on Saturday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CAN ARSENIC CURE PEMPHIGUS?

A CLINICAL LECTURE DELIVERED AT THE LONDON HOSPITAL.

By JONATHAN HUTCHINSON, F.R.C.S.,

Senior Surgeon to the Hospital, and to the Blackfriars Hospital for Skin Diseases; Surgeon to the Royal London Ophthalmic Hospital.

(*Concluded from page* 514.)

THE cases which I have quoted illustrate, I think, in a manner which is beyond doubt, the proposition that arsenic is sometimes, at least, a most efficient remedy for pemphigus. We have seen it over and over again arrest the eruption immediately on its use; we have seen the disease return when it was suspended, and again cease when it was again given. Of the cases—thirty-three in number—twenty-six are from notes for which I am myself responsible, most of the patients having been under my own observation, but some of the most conclusive as regards their testimony to the specific efficacy of the drug have been published by others. (See Dr. Fagge's, Dr. Hillier's, and Dr. Gee's cases.) The series comprises patients of very various ages, from infancy to old age, most of them being, however, as might have been expected, children a little under the period of puberty. As a general statement, I think it is true that it is about the latter age that the virtues of arsenic are most definitely and quickly shown, and that the older the patient, the more likely it would appear to be that the disease may prove somewhat troublesome. It is in children, however, that relapses may most certainly be expected, whilst in older patients it would seem that if a cure is once effected there is comparatively little risk of relapse. Some of the facts also favour the belief that in adult and almost senile periods of life the disease is somewhat more variable, both in its character and in its behaviour under treatment, than in children. Thus some cases show a tendency to spontaneous recovery (this is rare); others persist long, but in a mild form or in unusual positions only; and some are easily cured by iron or quinine. In reference to cures by the two last-named drugs I would remark that I think they decidedly lend support to the belief in the efficacy of arsenic, since they are remedies of the same class. It was a favourite doctrine of Mr. Startin's that in elderly persons iron should be substituted for arsenic, even in the treatment of such diseases as psoriasis, in which the efficacy of the latter is most undoubted. In several of the cases which I have recorded, advantage seemed to be obtained from combining iron with the arsenical. In children, however, I believe this is not so, and I can speak most positively as to having seen arsenic cure the eruption at once after iron and quinine had wholly failed. Nor do I ever recollect to have seen a well-marked case of pemphigus in a child manifest any tendency to spontaneous recovery; and were it not for my reliance upon arsenic for their cure, I should quite join in the opinions expressed by Hebra and Bazin as to the usual tendency being to a fatal termination.

I may here ask your attention to the noteworthy fact that during the last ten or fifteen years—since the belief that arsenic is a specific has gained ground—we have had no fatal cases of pemphigus recorded. At any rate, I have not, after some search, encountered such; and amongst those of my friends connected with the treatment of skin diseases with whom I have conversed on the subject, there seems a general and strong impression that pemphigus is a far more mild and tractable disease than continental authorities would have us believe. In particular, Dr. Duckworth has avowed this opinion to me, and has authorised me to mention it; and as it is from his pen, almost solely, in English medical literature that I find any record of definite disbelief in arsenic, I regard his experience on this matter as of much importance. Arsenic is now constantly prescribed for pemphigus, and it is as a result of this habit that the disease, even by those who have not found the remedy a specific, is now thought to be a mild one. Thus, in Dr. Duckworth's cases, arsenic had been given. Although in these the disease persisted in spite of the remedy, yet the patient remained in good health, and we are thus, I think, entitled to infer that the malady was much mitigated in severity by its use. The same appears to have been the case in a patient who was under Professor Bazin's care in the Hôpital St. Louis in Paris, and in whom good health was maintained under treatment, although the eruption was not wholly cured.

I must now give you such items of evidence as I have been able to collect which tend to force us to admit that arsenic is not a specific in all cases. As I have already stated, by far the most important, because given with most of detail, are those recorded by Dr. Duckworth in the *St. Bartholomew's Hospital Reports*. They are as follows:—

H. M., a woman aged thirty, had had chronic pemphigus for four months before admission, and was treated in the Hospital for fourteen months with only partial benefit. "A prolonged trial was given in this case to arsenic, and it was found to be of no avail in checking the formation of bullæ." In the next volume of the same *Reports* he gives the sequel of H. M.'s case up to May, 1874. She had then had a course of arsenic, but without apparent benefit, and at the end of the case he writes, "The prolonged use of arsenic has signally failed to produce any benefit." Dr. Duckworth has informed me privately that this patient, who is now in the country, still suffers from her eruption, but that she is otherwise in good health.

In the next case it will be seen that the eruption presents, as regards non-symmetry and the exemption of the greater part of the body, some unusual features. The patient was an old man. It is precisely in senile subjects that exceptional features occur, and that arsenic is every now and then found to fail.

T. S., a cook, aged sixty-six, was admitted in July, 1871, with pemphigus upon the right leg and arm of four months' duration; it had affected other parts, but was, throughout, worst on right leg and foot. In speaking of the treatment in this case the writer says:—"Arsenic has proved of no avail, though persisted in for a long time and increasing doses." (*St. Bartholomew's Hosp. Rep.*, vol. viii., page 46, 1872.)

In the next case, a girl of eighteen, no note is made that arsenic was tried. Dr. Duckworth, however, in connexion with the case says:—"In my experience I have witnessed no benefit of any kind in these cases from the employment of arsenic," and observes with regard to the preceding case, "that no improvement was manifested till after iron was added to the arsenic." (*St. Bartholomew's Hosp. Rep.*, vol. ix., page 109, 1873.)

It will be observed that in neither of the two cases in which arsenic failed to cure was the patient a child. The doses prescribed are not mentioned, nor the precise length of the courses of treatment, but we may feel quite sure the remedy was patiently and thoroughly tried. We are therefore obliged to accept Dr. Duckworth's first case as proof that there are exceptions to the statement that arsenic will always cure the eruption of pemphigus. His second case was so exceptional in several respects that I attach less importance to it; and in the third we have no statement that arsenic was tried. It would, however, have been extraordinary if it were true respecting a disease like pemphigus, which shows such wide possibilities of variation, that one and the same remedy should always manifest precisely the same efficiency, and I think you will agree with me in the belief that the amount of positive testimony in support of my proposition very far outweighs the negative.

In conclusion, I wish to mention, in order to complete the picture, a few cases in which pemphigus ended fatally. In the first of these I believe arsenic was never tried, and the same remark applies to the third and fourth cases. The second came under treatment when it was too late to hope for much benefit from any remedy, and when the mucous membranes were already severely affected. In the fourth case, also, there was no time for treatment, for the boy died a few days after Mr. Allen saw him. I introduce these cases here in order to show how severe and how rapidly fatal pemphigus may occasionally prove. It will be seen that they all occurred many years ago, and before the belief in the efficacy of arsenic was generally entertained. Respecting two of them, also, there was some doubt as to the diagnosis. In Mr. Allen's case the fact that the patient had a year before passed through an attack of a somewhat similar eruption seems almost conclusive against the theory of accidental contagion from sheep.

Case 12 in my first report on Pemphigus in the *Medical Times and Gazette* (1864), is an instance of a very severe attack in a girl aged twelve, ending fatally after a duration of several months. She suffered from profuse diarrhœa, which resisted every remedy. There is no mention that arsenic was tried. At the autopsy the intestinal mucous membrane was found very pale, but otherwise healthy.

Another case in which death occurred in the course of pemphigus is mentioned in my clinical lecture on the disease in the *London Hospital Reports*. The patient, a boy of fourteen, under Dr. Hughlings-Jackson's care, came under care for "a

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very peculiar form of inflammation of the mucous membrane of the mouth, and, whilst under treatment for this, was attacked by pemphigus." Arsenic disagreed with him, and no treatment was of any use, and he died exhausted after a long illness.

Two other cases, in which death occurred in the course of a severe bullous eruption resembling pemphigus, have been published by Dr. (now Sir) George Burrows(a) and Mr. Joseph Allen.(b) In both these cases it was supposed that the disease had been acquired by inoculation from sheep, but the facts in support of this scarcely appear to be conclusive. The first patient was a young man, a butcher, who was first admitted under Mr. Startin at the Skin Hospital covered with scattered, small, pellucid vesicles, which had come out only the day before. I saw him then, and also a week later in St. Bartholomew's Hospital. The case was at first thought to be an instance of very severe varicella, but when I saw it the second time it exactly resembled pemphigus. Treatment was unavailing, and he died in a few weeks. Mr. Allen's patient was a boy, aged eleven, who died after a short illness (fourteen days) covered all over by very large bullæ and vesicles; he had a year before had a similar but less severe eruption. The evidence of ovine contagion was only that, before the second and fatal attack, he had been driving some sheep barefoot, having at the time a sore on one of his feet.

Probably it was a case of ordinary relapsing pemphigus of unusual severity. A peculiar feature, however, is that the conjunctivæ were much inflamed. There is no evidence in any of these cases that arsenic was tried.

There are several cases given in my list in which the state of the patient at the time the arsenic was commenced was so bad that there could be little doubt that death would soon have ensued but for its use. In Case 20, that of a middle-aged man under my own care in the London Hospital, I felt for some time doubts as to the diagnosis of the case, and thus delayed the use of arsenic. The man rapidly sank so low that death appeared to be probable.

As a last word, let me urge the importance of a very careful study of those cases of pemphigus in which arsenic does not immediately cure. Let them be recorded in the fullest detail, with the doses, length of course, and all particulars. The importance of the inquiry demands this. I would suggest, further, that if one preparation of arsenic fails, another should be tried. As I said at the beginning of my lecture, it is not solely with the treatment of a rare skin disease that we are concerned, but with the demonstration of a fact in therapeutics, which may prove to be of very wide application in practice.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON LYMPH-SCROTUM AND ALLIED DISEASES.

By Dr. PATRICK MANSON, Amoy.

(*Concluded from page* 543.)

2. The second point I propose to consider—viz., the generic identity of tropical chyluria and elephantiasis—is more difficult to establish; but still, I think, sufficient evidence can be brought together to warrant such a conclusion.

That the urine in chyluria derives its peculiar characteristics from an admixture of chyle or lymph is now pretty generally admitted; the chemical and physical qualities of the secretion, and the exact counterfeit of it produced by an artificial admixture of chyle and urine, prove this. But the way in which the chyle gets access to the urinary passages is not by any means so clear. Lately, however, and especially since the publication of Dr. Carter's papers above referred to, the opinion is gaining ground that this is effected by rupture of lymphatics in the kidney, ureter, or bladder. This ingenious theory, as it is compatible with all the phenomena of the disease, and can be supported by facts, may be accepted. Dr. Lionel Beale and Dr. Roberts strongly favour such a view. They look upon the state of the urine as dependent on a condition of the lymphatics of some part of the urinary passages similar to what obtained in the many cases of lymphorrhagia from different parts of the body now on record. One case given by Dr. Roberts is almost conclusive. It is that of a man, the skin of the lower part of whose abdomen was studded with numerous vesicles filled with a milk-white fluid; in fact, the appearance of the part and the nature of the fluid seemed to be identical with that of lymph-scrotum. There was, with the exception of short intervals, a discharge of lymphous fluid constantly distilling from the part. The condition of the urine was carefully noted during the progress of the case, and on three occasions it presented all the characters of chylous urine; while the chyluria lasted, the eruption was dry. The man died, and although nothing peculiar was remarked in the lymphatic system of the interior of the abdomen at the post-mortem examination, yet who cannot agree with Dr. Roberts in believing that the case throws light on the pathology of chylous urine; and that at one time, when the urine was chylous, there existed a state of the lymphatics of some part of the urinary system similar to that on the skin of the abdomen, and that from this the chyle was derived? We have already described a similar case occurring in Dr. Carter's practice. From the facts of this and two other cases (one of lymphorrhagia from the groin, uncomplicated with chyluria; and one of chyluria, uncomplicated with external lymphorrhagia), Dr. Carter argues—and, I think, conclusively—that the lymph in the urine of chyluria is derived directly from ruptured lymphatics. Two cases of our own—No. 10 and No. 16—completely bear out this view. In the first, a large discharge of fluid, at first clear, but becoming as it flowed milky, and, finally, bloody, was obtained by pricking some vesicles on the back of the scrotum; the patient's urine had been chylous for some weeks, but after the escape of fluid from the scrotum it became natural. Whether or not it remained so after his discharge from hospital, I cannot say. The other case, No. 16, had suffered from well-marked lymph-scrotum for three years, and his scrotum on admission to hospital yielded a very large supply of the characteristic fluid—fifty-four ounces at one time, and twelve at another. "A week afterwards the patient called attention to his urine, which, he said, he had been unable to pass for eight or ten hours. The urine was in large quantity, of a reddish-white colour, and coagulated rapidly. He complained of pain in the passage. After a few days the urine again became natural. The diseased part of the scrotum was removed by the knife, and the parts healed up rapidly; but, on the day following the operation, the urine became white like milk, and in quantity about twenty ounces. After three weeks he went home. Two months afterwards he returned to hospital. He stated that his urine still continued white; sometimes it was almost natural. A small patch, about one inch square, of the skin of the scrotum was seen to be covered with vesicles: it was excised. Since then he has been passing large quantities of chylous urine—on an average, seventy to eighty ounces in twenty-four hours."

For further and more detailed evidence on this point I would refer the reader to the writings of Roberts, Beale, and Carter; but sufficient, I think, has been advanced to show that the urine in tropical chyluria derives its lymph from ruptured lymphatics. That the lymphatics in such cases are in a similar state to those in lymph-scrotum, may be inferred from the fact that the two diseases have been frequently found together in the same patient, as in the cases we have quoted. Seeing, then, that we have proved lymph-scrotum and elephantiasis to be closely allied, the inference that the latter and tropical chyluria are similarly connected may be drawn. To confirm this, Case No. 10 shows the three diseases—lymph-scrotum, elephantiasis, and chyluria—all combined in a single individual.

3. That these diseases acknowledge the same etiological cause is to be presumed from many facts which their histories have in common. They are endemic in the same countries. Sporadic instances of chyluria, lymph-scrotum, and elephantoid disease, it is true, are found elsewhere than in the countries where they may be said to be endemic; but this can be held to prove no more than that causes other than that which produces these diseases may bring about similar pathological states. They are all distinguished by intermissions and remissions of their more acute symptoms. I have endeavoured to show that, pathologically, they are almost identical. As will be seen further on, all have been found associated with a peculiar condition of the blood; and, as I have just said, all have been found at the same time in the same individual.

4. This brings us to the last point: the etiological cause of

(a) See *Medical Times and Gazette*, June 14, 1856, for an excellent clinical lecture on the case by Sir George Burrows.

(b) See *Medical Times and Gazette*, August 1, 1857.

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these diseases. It can be gathered from the above remarks and the cases I have given that in these diseases there exists an abnormal condition of the lymphatics, that they are dilated. What, then, is the cause of this condition? Dr. Roberts suggests that in chyluria the lymphatic network of some part of the urinary apparatus "becomes immensely hypertrophied; that its channels become varicose, as it were; that the contained cells assume by degrees the property and functions of the cells lining the lacteal ducts and lacteal glands," and that from these the secretion of lymph is derived. This glandular hypothesis of Dr. Roberts, however, will not explain all the phenomena of elephantiasis nor of lymph-scrotum. If such is the explanation, how is it that in pricking one of the vesicles in the latter diseases the fluid that escapes, in some cases, first runs clear, then milky, and perhaps finally bloody? If a glandular structure such as he describes is the source of the fluid, how could different specimens taken from the same body at the same time have different qualities; or how is it that for days or months chyle may be altogether absent from the urine, and then suddenly appear, and as suddenly vanish? A glandular structure could not be thus suddenly called into existence and operation, nor thus suddenly cease secreting. The cause is more likely a mechanical one, and operates by occluding the lymphatic passages. This is Carter's view, and Beale's too. It is difficult, in the absence of post-mortem evidence, to say where it is applied; but one condition of its application we know—it is intermittent; else how account for the intermittence of the acuter symptoms? Further light as to its nature has been supplied, I think, by the discoveries of Dr. Lewis.

As the details of these interesting and important discoveries have not appeared at any length in the English medical journals, nor obtained the publicity their importance should command, and as they are only to be found fully reported in the *Indian Medical Gazette*, the *Indian Annals*, or in Blue-books (works not generally accessible to practitioners in China), I will take the liberty of giving a condensed account of the principal results of Dr. Lewis's labours, in as far as they bear on the subject under consideration.

In March, 1870, Dr. Lewis first discovered, in the urine of an East Indian, a patient in the General Hospital, Calcutta, suffering from chyluria, the parasite now known as the *filaria sanguinis hominis*. Since then he has given a great deal of attention to the subject, examining the urine in many cases of chyluria. In such cases he has, on every occasion, found the filaria present. Towards the end of July, 1872, whilst examining the *blood* of an East Indian suffering from diarrhœa, he observed nine minute nematoid worms in a state of great activity on a single slide of his microscope. These, on comparison, were found to be exactly similar to the filaria he had already observed in chylous urine. A few days afterwards an opportunity presented to examine the blood and urine of a chyluria patient, and in both fluids filariæ were found to be present. This patient, a woman, remained under observation for upwards of two months, and though the urine slightly improved in appearance and the filariæ diminished in numbers, yet both in it and in the blood they could generally be detected. A third case presented itself; and in this also chyluria was associated with filariæ in blood and urine. In this case the blood was loaded with parasites, as many as twelve having been observed on a single slide. Dr. Lewis sets down 140,000 as a very reasonable estimate of the number in this patient's body. Some time after this—two years after the appearance of the chyluria—this man's scrotum became the subject of elephantoid enlargement, and when last examined filariæ could still be detected in his system. A fourth case, in which hæmatozoa and chyluria were associated, had a fatal termination, the immediate cause of death being diarrhœa. A post-mortem examination threw no light on the source of the filariæ. A second post-mortem examination of a person whose blood contained the parasite was obtained, but, as in the other, the results were negative.

Towards the end of 1873, Dr. Lewis had the opportunity of examining a case in which chyluria was combined with an elephantoid state of the scrotum. The urine, in addition to the chylous matter, contained a little coagulated blood, and filariæ were detected in this. "The patient was a Jew, and was suffering from acute pain produced by an inflamed condition of a moderately large scrotal tumour. This tumour had been coming on for many years, and increased and diminished in bulk at irregular intervals. It was studded by tubercular prominences, soft and yielding to the touch, and, when a trocar was introduced, several ounces of a sanguineous fluid were withdrawn. . . . The chyluria had only been observed about a fortnight previously." In a second case of scrotal tumour, but in which no chyluria was present, the patient had been affected for nine months. "When the disease commenced, it was looked upon as a hydrocele, and the tumour was repeatedly tapped, and a milky, pus-like fluid withdrawn. The swelling, however, continued to increase, became very painful, and eventually attained the size of a man's head. The patient was admitted into the Presidency General Hospital for 'thickening and enlargement of the scrotum.' The tumour was twice tapped in hospital, and the fluid removed sent to me for examination. It presented a somewhat purulent appearance, but the odour was not offensive. Under the microscope it was seen to consist of broken-down granular matter, and every slide of it contained some half a dozen specimens of the filaria." A third example of a similar kind, in which an elephantoid condition of scrotum and foot co-existed with chyluria, supplied specimens of the hæmatozoon. It was found in the blood obtained by pricking the fingers and toes. In a fourth case, in which the existence of chyluria was not determined, they were found in the chyle-like fluid obtained from an elephantoid scrotum.

It may be useful to some to know how to obtain the hæmatozoon. The following is Dr. Lewis's description of the plan he adopts:—"A piece of narrow tape is coiled tightly round the end of one of the fingers or toes, so as to produce a little temporary congestion of the part, but not to such an extent as to cause the slightest pain; and with a clean, finely-pointed needle the finger is gently pricked. Half a dozen slides and covering-glasses having been previously prepared, the drop of blood thus obtained will suffice for several slides; but I find it a good plan to squeeze out only a very small drop and transfer it altogether to one slide by drawing the edge of the covering-glass along the tip of the finger, so as to *scrape* off the droplet. The glass is then carefully pressed on to the slide by a gliding motion, in order to produce as thin a layer as possible and to insure that all the fluid removed is retained beneath the cover, because there is a tendency on the part of the fluid to carry the hæmatozoa towards the edge of the slide, just as is observed to take place in the examinations of the urine for 'casts' of the kidney tubules." The slides must be very carefully examined, a quarter of an hour at least being devoted to each. If the first specimens have been found to contain no filariæ, *fresh* punctures must be made and the blood transferred as before to the covering-glass and slide. A two-thirds of an inch objective answers the purpose of a searcher. Should anything unusual be observed, the low power must be replaced by a one-quarter of an inch, or, better, a one-eighth of an inch objective. Though sometimes easily found, occasionally slide after slide must be examined with the utmost care. Dr. Lewis particularly insists on this: he says, "any one who imagines that they can be detected with the same ease as a white blood-corpuscle had better not make the attempt"; and that "no great amount of foresight is required to be able to predict, that owing to want of proper appliances, want of time, or other circumstances, such remarks as, 'Filariæ were searched for, but not found,' will not infrequently be recorded in connexion with reports of chyluria cases."

Dr. Lewis has given a very careful and complete description of the filaria as thus obtained. It is sufficient for purposes of recognition to say that, as seen in the blood, it is a long, snake-like animal, very active in its movements, having a diameter about equal to that of a blood corpuscle, and a length about forty-six times its width. It looks as if it is provided with a sort of lash; but this is not the case, this appearance being produced by the extremities of the thin transparent envelope in which the body of the parasite is rapidly retracted and extended. Traces of an alimentary canal have been seen, but very indistinctly.

Helminthologists know that these filariæ are the young of some mature nematode which, though it has hitherto escaped discovery, must exist in the body bearing its progeny. In two post-mortem examinations of bodies in which filariæ were present, a prolonged and careful search failed to bring to light the parent parasite. Something, however, of its nature and habits may be inferred from further investigations by Dr. Lewis on an analogous parasitic affection common among the Pariah dogs of Calcutta.

This canine disease appears to be extremely prevalent, for it was detected in ten out of twenty-seven animals examined

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with the special object of finding it. In these ten cases the blood was infected with filariæ resembling, though different from, the *filaria sanguinis hominis*; and associated with this condition of blood were found the following pathological conditions:—

"1. Fibrous-looking tumours, varying from the size of a pea to that of a filbert or walnut, along the walls of the thoracic aorta and œsophagus, both tubes being affected, or only one.

"2. Minute nodules in the substance of the walls of the thoracic aorta, from the size of duck-shot to that of small peas. They can be felt as tubercles, and usually project somewhat on the outer surface of the vessel; a depression or slight extravasation of blood, corresponding to the nodule, being visible on the inner side of the aorta, and frequently a slight abrasion of the lining membrane.

"3. A pitted or sacculated appearance of various portions of the interior of the thoracic aorta, with thinning of its walls at some parts; the lining membrane roughened at the spots affected. The roughening, however, is not of an atheromatous character, but due to the membrane being thrown into delicate rugæ, as if from contraction of the middle and outer coats.

"4. Enlargement and softening of some glandular body adjoining the vessels at the base of the heart."

When the above-mentioned tumours were cut into, they were "found to contain one to six or more mature nematode worms of a pinkish sanguinolent tint, and varying in size from one inch to three inches and a half in length": these proved to be male and female of the same parasite, producing young similar to those found free in the blood. The smaller tumours contained younger and only partially matured parasites, and the pitting and sacculation of the aorta is to be attributed to the death, softening, and absorption of the parasites and their envelopes. The larger tumours containing the mature parasites, the smaller tumours containing the immature animal, and the pitting and sacculation, are all to be found in the same aorta. The fourth condition described was found once only. A gland near the origin of the left carotid artery was enlarged and softened, and contained five mature specimens of the nematode. With regard to the parasites in the tumours of the aorta, Dr. Lewis remarks—"Sometimes they may be seen to have crept outside the tumour, lying between it and the serous covering investing the artery, or a parasite may be seen emerging through a minute orifice communicating between the tumour and the interior of the aorta, and swinging itself across the lumen of the artery. I have observed the channel of the aorta almost entirely blocked up, after death, by a clot which had formed around a worm in this position." And again—"With reference to these embryos it may be further remarked that the thickish yellowish fluid in which the mature worms are embedded may be squeezed through the orifice in the tumour (usually found without difficulty) communicating either with the aorta or œsophagus, according to its anatomical relations. In this way innumerable ova may be made to pass into either channel, as the fluid is well charged with eggs in all stages of development." This explains the manner in which the immature filariæ obtain entrance to the circulation, in which they are found in such prodigious numbers.

Applying these facts in the history of the canine hæmatozoon to that of man, we are justified in assuming that in some similar manner the *filaria sanguinis hominis* is lodged and obtains access to the blood; that the matured nematode is lodged in the walls or neighbourhood of an artery, vein, or lymphatic, and that through a rupture in the lining of such vessel it pours its brood of ova or immature filariæ into the blood, where they may afterwards be found when searched for.

Thus, it would appear that, at one time at any rate, there is connected with the circulation a large parent nematode, probably fixed and enclosed in a fibrous tumour; and a whole crowd of minute immature filariæ floating about in the blood. Can we refuse to see in either the one or the other the cause of the diseases with which we have found them associated? I think not. Their association is too frequent to be accidental. One or the other must be considered the etiological cause of these diseases. Which of these, parent or progeny, is the cause? The latter are so small that they can easily pass through the capillaries; they are unprovided with any boring apparatus, so that they are not likely to pierce lymphatics and allow the contents to escape; any disease they could produce by their mechanical presence would be of a hæmorrhagic and not of a lymphous nature; they have been found in blood after all symptoms of chyle in the urine had disappeared, and in cases where there was no lymphatic disease; their congeners in the dog seemed to be associated with no particular disease, the "host" being often in the enjoyment of good health. Such facts, I think, militate strongly against the supposition that the immature filariæ are the cause. As regards the parent nematode, I think otherwise. We have seen that in the dog a great amount of local mischief is done by its presence in the thoracic aorta: tumours project into the circulation, even the animal itself; and the walls of the vessel are eroded and sacculated. If such and so great damage is done by the canine nematode to its favourite nidus, we may infer that something similar happens in the case of the human subject. We do not as yet know the seat of the parent parasite, but I suppose it to be on or in the lymphatics, the receptaculum chyli, or thoracic duct, or some bloodvessel in the neighbourhood of these. I conjecture that as the animal is developed it becomes surrounded by an increasing tumour, as in the dog; that this tumour, though perhaps a very small one, and easily overlooked in a post-mortem examination, by pressure on the outside, or by bulging into the wall of a lymphatic vessel, causes an obstruction to, or perhaps a complete stoppage of, the flow of lymph. The calibre of the lymphatics, and even of the thoracic duct, is very small, and could easily be obstructed by a minute body. In consequence of this interference to the progress upwards of the lymph, there is accumulation on the distal side of stoppage, dilatation of lymphatics, perhaps rupture in parts where their walls are very delicate or superficial, as in the scrotum (lymph-scrotum) or bladder (chyluria), or perhaps only stasis and accumulation of lymph materials, which undergo a certain amount of organisation (elephantiasis). At the same time, the young filariæ escape into the channel of the lymphatic—some on the cardiac side of the obstruction, which appear in due course in the blood; some on the distal side, which, finding their way down the dilated vessels, or carried by the regurgitating lymph, appear in the urine or discharge from scrotum. After a time the parent nematode dies or escapes, the tumour that enclosed it is absorbed or disintegrated, the lymph-channel again becomes patent, its circulation is renewed, and the chyle disappears from the urine, or the scrotum no longer discharges, or elephantiasis ceases to increase. Other nematodes progress in their development (in the thoracic aorta of the same dog they may be found at all stages of growth); the lymph-channel is again obstructed (perhaps in a different place, producing the appearance of metastasis—a thing well known to happen in elephantoid disease), and there is a fresh attack of chyluria, lymph-scrotum, or elephantiasis.

Such is a short statement of some of the facts I have collected on this subject, and if they do not admit of the interpretation I have put upon them, yet their association must be regarded as most significant. Post-mortem evidence is still wanting, and it is a matter for regret that the prejudices of the Chinese deny us the chance of obtaining it here. However, from India, where the natives are not so averse to their dead being dissected, we hope ere long to have the difficulties and obscurities still surrounding it cleared up.

The only fact in the history of these diseases which the hypothesis I have expressed does not satisfactorily explain is the occurrence of inflammation and fever in elephantoid affections. Perhaps the distension of the lymphatics is sufficient to account for this; the fever we may look on as secondary. Everything else, as far as I know, tallies with such an hypothesis. For example, a peculiarity of elephantoid disease is that it has a great preference for certain parts—the lower extremities and scrotum and (including chyluria) the urinary organs. Dr. Waring, in some very valuable statistics, has shown that only about 5 per cent. of cases presented the disease in any other part, and his statistics apply to nearly 1000 individuals. His observations are confirmed by Dr. Day. This fact supports the hypothesis I have given, inasmuch as it shows that this nematode, like other parasites, has a favourite habitat, though occasionally to be found elsewhere. I think that it also points to the road travelled by the animal seeking its nest in the nearest suitable lymphatic; that, like the Guinea-worm, it penetrates the skin from without, such parts being most frequently attacked as are most exposed to substances containing the animal.

The geographical distribution of the disease accords entirely with what we know of some other allied diseases, well known to be produced by parasites. Certain localities alone produce them. Elephantoid disease thus resembles, in its distribution

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at least, two well-known parasitic diseases—the hæmaturia of the Cape, Mauritius, Egypt, and the Brazils, so well described by Griesinger, Dr. John Harley, and Bilharz, as depending on the *Bilharzia hematobia;* and the Guinea-worm disease.

There is some evidence, too, that elephantiasis has been imported to a country where it did not previously exist—I refer to the Barbadoes. On this subject Dr. Hendy says, in 1784:—"The glandular disorder was unnoticed in this island till about eighty years ago. The first white person in whom it was very conspicuous, as I have been informed by credible persons of advanced age, was named Francis Briggs, though better known as Christopher Columbus. It was, indeed, with difficulty I could find out his real name. It was so uncommon a thing at that time to see a person with these large legs, that this poor man's name was used as a bugbear to frighten children with. It is not improbable that the negroes might have been affected with this disease, and their complaints not sufficiently attended to. I have made very strict inquiry, and have not been able to discover with any degree of certainty that it ever did appear in the neighbouring islands, except only in one instance, which I shall mention." He conjectures that the negroes brought it with them from Africa. If this is really a fact, what can better explain it than the supposition of its parasitic origin?

The bearing of the parasitic theory of these diseases on prophylaxis and treatment is too obvious to require more than its mention.

PROSTITUTION AND SYPHILIS IN LIVERPOOL.

THE WORKING OF THE CONTAGIOUS DISEASES ACTS AT ALDERSHOT, CHATHAM, PLYMOUTH, AND DEVONPORT.

By FRED. W. LOWNDES, M.R.C.S. Eng.,
Surgeon to the Liverpool Lock Hospital.

As during the late Parliamentary session it was decided for the third time, and by an overwhelming majority, that the much-abused Contagious Diseases Acts should not be repealed, the present time seems favourable for reconsidering a question which has been asked before—"Should these Acts be extended to the civil population?" Logically there would appear to be no difficulty in answering this question in the affirmative, for surely if legislative measures are found beneficial, they cannot be extended too widely. And that these Acts have been beneficial, no one who has read dispassionately the reports of the recent debate can doubt. As, however, all real progress in this country has hitherto been gradual, the suggestion contained in the last report of the Association for Promoting the Extension of the Contagious Diseases Acts seems judicious:—"Under present circumstances, we do not aim at so wide and immediate an extension of the Acts as before, but the case of certain seaport towns not subject to the Acts, which are known to be hot-beds of disease introduced by sailors of the merchant service of our own and of foreign countries, is so glaring, and is attended with such disastrous consequences, that we feel it our duty to call for the special interference of Parliament to repress the evil."

Leaving other seaport towns to be dealt with by those who are in a better position to describe them, I will give briefly some facts and figures respecting prostitution and syphilis, etc., in this large town, and then give a short account of what I saw recently at Aldershot, Chatham, Plymouth, and Devonport of the Contagious Diseases Acts and their results.

The borough of Liverpool, as seen on a map, is of oblong shape, its length being 4·7 miles, its breadth 2·3 miles. Within this space is a population estimated in the middle of 1874 at 510,640, and daily increasing. There is a very large floating and ever-changing population and 50,000 may be reckoned on as the number of seafaring men present at any time; but this number is subject to great variations, as a fair wind may bring in as many as 150 vessels in one day. Foreign seamen of every country are to be met with here, and to be found as patients in our different hospitals.

Extent of Prostitution.—The following very elaborate tables are extracted from the last annual report of Major Greig, C.B., the Head Constable of this borough:—

TABLE XI. *gives the Number of Brothels and Prostitutes known to the Police, in the Month of September,* 1874; *also the Number of Houses of Accommodation, Houses where Prostitutes lodge; also a Comparative Statement of Brothels and Prostitutes for Ten Years.*

Divisions.	Brothels known to the police, kept by		Houses of accommodation.	Houses where prostitutes lodge, not brothels.	Number of prostitutes.	Men residing in brothels.	Return of Brothels for Ten Years.										Return of Prostitutes for Ten Years.									
	Males.	Females.					1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1865.	1866.	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.
North Town.....	21	220	20	11	619	50	322	302	392	416	421	423	363	242	298	241	1004	1248	1059	1158	1172	1268	990	584	857	619
South Town.....	17	200	3	21	637	19	401	425	453	373	399	407	305	223	218	217	1247	974	1417	1061	1077	1184	732	646	524	637
Total.....	38	420	23	32	1256	69	723	727	845	789	820	830	668	465	516	458	2251	2222	2476	2219	2249	2450	1722	1230	1381	1256

Commenting on the above, Major Greig remarks:—"Table No. 11 gives the number of brothels and prostitutes known to the police, also a comparative statement for ten years. Formerly the census was taken, in accordance with instructions from the Home Office, on the first Tuesday in April; but as these classes of houses and persons are now struck out of the Government return, this return was not made until September 29, and only relates to the prostitutes known to the police (exclusive of those in gaol) to be within the borough on that night. Brothels, 458; prostitutes, 1256—a decrease in the former of 58, and in the latter of 125. This decrease may be accounted for by the removal of many persons keeping houses of this class from streets in the vicinity of West Derby-road. The memorandum of instructions, issued in 1871, respecting this class of houses, has continued to be strictly carried out, proceedings having been taken in most cases 'where young girls were kept or robberies were committed, where they were of notoriously bad character and had become a public nuisance, where they were opened in a respectable street or leading thoroughfare, and where they were complained of by two or more of the inhabitants of the street, who were prepared to substantiate their complaints in court.' Many of the keepers of these houses have been removed by the police, and others on complaint by the inhabitants, without the necessity of proceedings being taken in the police-court."

Table No. XII. (see next page) gives some idea of the behaviour of prostitutes in the streets, and of the proportionate amount of juvenile prostitution.

Major Greig makes the following comments on this last-named table:—"Table No. 12 gives the number of prostitutes taken into custody and summarily convicted; 2379 persons, 6033 arrests; 1776 persons convicted, and 4345 convictions. A large proportion of these were taken into custody under the Vagrant Act, and charged with being idle and disorderly. This has conduced to better order in our great thoroughfares."

These figures must, of course, not be considered as representing the whole number of prostitutes, but only those well known to the police on a certain day, and, as will be seen, the great majority are in brothels. In so large a community every variety of prostitute is to be seen, from those who live in good houses and in a luxurious style, to the wretched creatures who are to be found in the very lowest brothels, which constitute a considerable proportion of the above. During the years 1870 to 1872 I had charge of a parochial district in the northern part of the town, in which are a large number of these dens of infamy. Three streets of considerable length were then and are now almost entirely composed of what are regularly termed the "black men's brothels," the male frequenters being the numerous negroes who act as stewards, cooks, or seamen on board ships. The unhappy girls

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TABLE XII.—*Showing the Number of Prostitutes taken into Custody, and Summarily Convicted, for being Disorderly in the Streets, during the year ending September* 29, 1874; *showing also the Number of Times for each during that period.*

Number of times.	Taken into Custody.										Summarily Convicted.									
	Number not known to have been in custody prior to Sept. 30, 1873.				Number known to have been in custody prior to Sept. 30, 1873.				Total persons.	Total arrests.	Number not known to have been in custody prior to Sept. 30, 1873.				Number known to have been in custody prior to Sept. 30, 1873.				Total persons.	Total convictions.
	13 to 15.	16 to 18.	Above 19.	Total.	13 to 15.	16 to 18.	Above 19.	Total.			13 to 15.	16 to 18.	Above 19.	Total.	13 to 15.	16 to 18.	Above 19.	Total.		
Once	2	38	260	300	...	25	644	669	969	969	1	10	22	133	...	18	607	625	758	758
Twice	...	11	89	100	...	12	405	417	517	1034	...	5	83	88	...	8	314	322	360	720
Thrice	...	...	31	31	...	9	285	294	325	975	...	...	11	11	...	4	245	249	260	780
Four	...	5	15	20	...	7	217	224	244	976	...	1	6	7	...	5	164	169	176	704
Five	...	2	3	5	...	6	124	130	135	675	...	...	6	6	...	2	90	92	98	490
Six	...	...	6	6	...	1	65	66	72	432	...	...	5	5	...	...	53	53	58	348
Seven	...	1	4	5	...	4	45	49	54	378	...	...	...	...	...	...	23	23	23	161
Eight	...	2	1	3	...	...	22	22	25	200	...	...	1	1	...	...	22	22	23	184
Nine	...	...	2	2	...	...	15	15	17	153	...	...	1	1	...	1	7	8	9	81
Ten	...	...	...	...	...	...	4	4	4	40	...	...	...	...	...	...	7	7	7	70
Eleven	...	...	...	...	...	...	8	8	8	88	...	...	...	...	...	...	1	1	1	11
Twelve	...	...	...	...	...	...	6	6	6	72	...	...	...	...	...	...	2	2	2	24
Thirteen	...	...	...	...	...	...	1	1	1	13	...	...	..	...	...	...	...	...	...	...
Fourteen	...	...	...	...	...	...	2	2	2	28	...	...	...	...	...	...	1	1	1	14
Fifteen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sixteen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	2	59	411	472	...	64	1843	1907	2379	6083	1	16	185	202	...	38	1536	1574	1776	4366

who minister to the sexual gratification of these brutes are (as a Roman Catholic priest well acquainted with the district informed me) chiefly those who are the most virtuous in their own country—viz., Irish girls. Though under shelter, and comparatively well clad, the social degradation of these women is fearful, and when they become the subject of disease, which under such circumstances is inevitable, this is frightfully aggravated by neglect. I was on several occasions applied to for an order for the parish infirmary for women who were in such a state of disease that they could no longer pursue their calling—could, in fact, scarcely move,—in addition to being destitute. Some find their way to the Lock Hospital, some to the North Dispensary (which is near), but I have reason to believe that many prefer to obtain medicine and local applications from neighbouring chemists. There are also a large number of very low brothels in the southern part of the town, in close proximity to the Sailors' Home, where the male frequenters are of a similar class, and the women in an equally degraded condition. Any description could only convey a very faint idea of the sights to be met with in these localities: the revolting countenances of the men, the shameless demeanour and language of the women, are enough to cause a shudder even to those whose professional duties oblige them to be familiar with such sights.

In this town, as elsewhere, brothels have a tendency to congregate in certain localities. As we advance eastwards, the general appearances of the brothels and their inmates improve, though here and there a street much resembling the "black men's" quarters is to be seen; and in the north-eastern part are many brothels, varying in character from the lower to the better class. Much vigilance is required on the part of the police, as, were it not strictly watched, and disorderly conduct at once checked, the whole line of route would be quite impassable. Still further eastward are the abodes of women who live by themselves or in couples, receiving their male friends at home—or houses of accommodation. These latter do not seem so numerous here as in London and elsewhere.

On careful consideration, I am of opinion that the whole number of prostitutes in Liverpool exceeds two thousand. There is much migration among them between this town, Manchester, and other neighbouring places; still, a considerable number are to be seen year after year continuing their avocation, though changing their residences pretty frequently. But let us take the number actually known to the police in September, 1874, as our starting-point, then ascertain the probable ratio of disease among them, and see what is the hospital accommodation provided. The prostitutes known to the police numbered 1256, and the ratio of disease among the newly registered women under the Acts varied from 35 to 38 per cent., and in some places was as high as 50 per cent. This would give a minimum of 439 cases of disease, and a maximum of 628, excluding altogether cases not known to the police.

From inquiries I have made among professional friends, considering the fearfully diseased state in which women enter the Lock Hospital and the venereal wards of the workhouses, and taking into account also the diseased state of many seamen on their arrival ashore, I am satisfied that the ratio of 40 per cent. is not at all excessive, and that at least that proportion of Liverpool prostitutes are in a state of disease. But we will take the lower figure of 35 per cent., and this would give, for a total of 1256 prostitutes, 439 as diseased. Thus, at the very lowest calculation, there are upwards of 400 prostitutes, more or less diseased, in our midst, plying their trade at the risk of aggravating their own sufferings, and infecting, not only the men, who are truly the victims of their own licentiousness, but, indirectly, innocent women and children, who have done nothing to merit such a fearful scourge.

The only voluntary hospital which receives females suffering from syphilis is the Lock Hospital, which contains fifty beds, half being allotted to each sex. The Royal Infirmary, when first established in 1745, received patients suffering from all kinds of diseases, including venereal, and when the old infirmary was found inadequate, and the present building completed in 1824, two wards were set apart as female, and two as male venereal wards, the whole number of beds in them being about fifty. When, later on, further enlargement became necessary, it was decided to place all venereal patients in a separate building, and under a separate medical staff, and the present Lock Hospital was completed in 1833, with a total of fifty beds, and on a site in close proximity to the Infirmary and School of Medicine. At that time the total number of beds in the Infirmary and Lock Hospital combined was about 270; hence the proportion of beds devoted to venereal patients was a liberal one, and even now that the two institutions contain 320 beds, the proportion (more than a sixth) is larger than in any metropolitan hospital. The committee of the Royal Infirmary deserve the greatest credit for establishing and maintaining this hospital in spite of obstacles which would scarcely be credited. Good, pious men have gravely asserted that the hospital encouraged immorality; and yet now, strange to say, the cry from these very same people is that more voluntary lock hospitals are required, but that Acts for the prevention of disease are not. The number of female patients admitted fluctuates considerably, and in a series of fifteen years, 1860 to 1874, I find that the highest number was in 1864 = 222, and the lowest in 1874 = 144. Every kindness and consideration is shown them, and it is greatly to be regretted that the voluntary system is so unsuccessful. As we have seen, there must be at least twenty more suitable candidates for every empty bed walking the streets; and yet there are, while I write (October 14), half the available beds empty. The patients are mostly prostitutes, their ages varying from eighteen to nineteen; their average stay in hospital is five to six weeks. Their state on admission shows a great want of cleanliness and considerable neglect, the disease evidently being of days', and even weeks' duration; gonorrhœa and simple sores are rarely seen, the majority of the cases being severe forms of syphilis, primary,

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secondary, or tertiary—separately or combined. As it is a voluntary hospital, they can leave when they like, but the majority stay till they are cured; those leaving uncured do not exceed 10 per cent. of the whole number. Besides these, many females suffering from syphilis, gonorrhœa, etc., are admitted into the three workhouse infirmaries of the parishes of Liverpool and West Derby and of the extra-parochial township of Toxteth-park. I have been permitted, by the kindness of the medical officers, to visit the wards and see the patients of each, and can speak in terms of the highest praise of the management of all. The power given to guardians and masters of workhouses, by the late Poor-law Amendment Act, of detaining all persons suffering from contagious diseases until cured, is strictly enforced at these three in all cases of venereal disease, and with great advantage. It would be very interesting to know whether these powers are universally enforced, as is very desirable. But, of course, the majority of females in workhouse venereal wards are admitted, not because they are suffering from venereal diseases, but because they are paupers; and from this fact alone we might expect to find, as we do, that the state of these women on admission is always severe, and often quite appalling. Enormous condylomata and warts, buboes of some weeks' standing in each groin, immense rupial crusts all over the body; these and similar cases are to be seen in our hospital and workhouse wards, and testify very strongly to the benefits which the unhappy women themselves lose from want of periodical inspection and earlier admission.

The medical officers have kindly procured me the numbers of patients admitted in the Liverpool Workhouse during the last two years; in the West Derby and Toxteth Workhouses during the last four years.

The cases of venereal disease treated in the Liverpool Parish Infirmary (venereal wards) during the two years preceding July 15, 1875, were—males, 671; females, 659; total, 1330. Dr. Alexander, the visiting surgeon, in sending me the above says, "These numbers include those only about which there can be no doubt."

During the four years 1871-74, 75 males and 105 females were admitted into the venereal wards of the West Derby Union Infirmary, and, during the four years preceding July last, 16 males and 58 females were admitted into the Toxteth Workhouse Infirmary. Though the numbers of these latter are small, the cases are very severe, and, taken with the Liverpool Workhouse and the Lock Hospital, the number of male patients admitted in all averages about 640 annually; that of females 547. Whether this preponderance of male over female patients is peculiar to Liverpool, I am unable to say, but I think a glance at the above figures will show how completely the voluntary system has failed so far as this town is concerned.

Though much has been done of late years to improve the condition of merchant seamen, both British and foreign, by means of sailors' homes, missions to seamen, savings banks, etc., much more practical good was done, it must be confessed, by means of the river police, lately established, who suppressed boarding-house crimps and other land-sharks. Still, "Jack ashore," as described by Marryat and other authors, remains much *in statu quo*, doing his duty fairly, reckless of danger when on board, but, with enforced sobriety and continence, looking forward to the time when he can have his fling ashore, which he does among the lowest of prostitutes, and in the lowest of public-houses, till, in a few days, the accumulated wages of many months are gone, and he ships again for a foreign country, too often in a state of disease. While attention is being drawn to "our seamen" and unseaworthy ships, it might not be amiss to include in the inquiry "unseaworthy men," of whom there are many taken on board and shipped under the utterly misleading title of "able seamen." "Disabled seamen" would be much nearer the truth, and it is greatly to be hoped, in the interests of humanity, that our merchant seamen may have, before long, a little of the same consideration shown towards their welfare that is now being shown to their more fortunate brethren of the navy. Hundreds of ships leave the Mersey every year which do not carry a surgeon, though the crew may be a large one; hence the paramount importance of having some arrangement by which merchant seamen can be subjected to medical inspection before proceeding on a long voyage. Now that so many foreign ports are protected by Acts similar to those in force at Portsmouth, Plymouth, etc., it is not creditable that such large seaports as Liverpool, Bristol, Hull, etc., should remain as they are, hotbeds of disease, and that our merchant seamen should be the means of re-importing to foreign countries this loathsome disease.

In the Lock Hospital the excess of male over female patients is much more marked than in the Liverpool Workhouse; in the others, females predominate. We have very severe cases of syphilis in all its forms. Cases of gonorrhœa, except when complicated with syphilis or buboes, are comparatively rare. No out-patients are seen at this or any of the hospitals except the Eye and Ear and Children's Infirmary. At both these institutions the results of syphilis are frequently met with. In another paper I propose to describe briefly what I saw of the working of the Contagious Diseases Acts at Aldershot, Chatham, Plymouth, and Devonport; and, later on, some details of the cases treated in our Lock Hospital.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASES UNDER THE CARE OF MR. CHRISTOPHER HEATH.

[From notes by Mr. A. Pearce Gould, B.S.]

Case 1.—*Epithelioma of Lip—Removal.*

M. C., aged sixty-seven, was admitted under Mr. Heath's care May 19, 1875, with a large exuberant ulcerated tumour, occupying the posterior third of the right lower lip and about a quarter of an inch of the upper lip. A hard, rounded nodule of the tumour is felt from the inside of the mouth. Two slightly enlarged, hard, lymphatic glands are felt under the right side of the jaw. The pain is chiefly in the head and neck, and deglutition is painful, so that lately he has eaten less. The patient's general health is good; he has a very distinctly marked "arcus senilis." He stated that three months before admission he cut his lower lip with a razor; some matter formed into a scab, which he picked off; this has been followed by scabs, which have steadily increased in size. He has lost flesh of late. No cancer in his family. Patient has smoked a short clay pipe, but always on the left side.

May 26.—The patient was put under chloroform to-day, and Mr. Heath removed the growth. This he did by two oblique incisions from the lips, meeting below the tumour, enclosing a V-shaped piece. The facial and coronary arteries were cut and ligatured. With the handle of the scalpel the lower lip was stripped off the jaw, and then the flaps were brought together by four harelip-pins, and the wound painted with collodion. There was a small interval between the flaps at the lower end of the wound. A broad strip of plaster was then applied from zygoma to below chin.

June 1.—One pin was removed on May 28, another on May 30, and the other two to-day. For three-quarters of an inch next the mouth the wound has united, but for one inch and a half below it gapes an inch; the discharge is very offensive. The edges of the wound are covered by healthy granulations. Some swelling below the right angle of the jaw, which appeared soon after the operation, has quite subsided. Temperature 99°, pulse 70. The wound is syringed with red wash, and the surface painted with glycer. acid. carbol., and the flaps supported and drawn together by strapping.

7th.—The union between the flaps at angle of mouth is very firm; the opening below is closing up. Suffers a good deal from pain in the head.

15th.—The gap is now half an inch long; the skin and mucous membrane have united over the edge of it. No pain. General health good.

22nd.—Wound about the same; food passes through it when he eats. It is efficiently closed by an obturator of silk plaster. Leaves hospital to-day.

The tumour was examined by Mr. Godlee, who found it to be a typical epithelioma.

In some clinical remarks upon this case Mr. Heath pointed out that the patient's age and debilitated condition prevented his having recourse to a plastic operation for the closure of the gap left in the cheek by the removal of the disease. Perfect union of the angle of the mouth had been secured;

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and so long as this was done, the aperture behind was of small consequence, the patient having been effectually relieved from his ailment.

Case 2.—Epithelioma of Lip—Removal—Recovery.

G. G., aged seventy-nine, was admitted under Mr. Heath's care August 17, 1875, with cancer of the lip. There was an ulcer on the left lower lip one and a quarter inch by three-quarters of an inch, covered with a scab in front. Base hard, extending into lip; surface composed of large thick granulations. One gland under the jaw was rather large, but not hard, and was said by patient to vary in size. The patient said that two years before he had noticed a "roughness" on the lip, which gave him only slight inconvenience, but he consulted a medical man for it, who attributed it to his excessive smoking, and treated it by repeated applications of nitrate of silver; but as the growth had increased rapidly of late, he came to the hospital.

August 18.—To-day Mr. Heath removed the growth by a semicircular incision, made well outside the growth. He then brought the edges of the wound together with two hare-lip-pins and collodion.

26th.—After the operation for three days the patient complained of slight stiffness about the incision. On the 21st the pins were removed, and the wound was found to be completely united by first intention. Since then it has been supported by a strip of plaster. The patient leaves the hospital to-day in good health.

In commenting upon this case Mr. Heath remarked upon the futility of applying nitrate of silver to an epithelial cancer in any part of the body. The necessity for early recognition and complete removal or destruction with efficient caustics was strongly insisted on, since, when the glands are not involved, the disease is perfectly localised, and, in the lip particularly, may be removed with facility, and with good prospect of permanent success.

Case 3.—Epithelioma of Penis—Amputation with Galvanic Écraseur—Recovery.

C. S., aged fifty-one, was admitted into hospital under Mr. Heath's care on August 23, with cancer of the penis. The patient is a thin, anæmic, emaciated man. The whole of the penis is considerably enlarged, with several large ragged ulcers on the sides and under part. The penis is hard, the induration reaching almost to the pubes; the ulcers have hard, everted, undermined edges. There is an enlarged hard gland in right groin above Poupart's ligament, over which the skin is adherent, with a small scab in the centre. He said that about three years ago he noticed bleeding about the frænum after connexion, and then he felt a "pimple" there, which, however, disappeared for a month, then returned, and spread, having to him the appearance of a wart. Three months ago it began to ulcerate, and since then he has been unable to retract the foreskin. Mr. Heath saw him at this time, and advised the removal of all the diseased structure, which at that time could have been pared off the surface of the glans penis with very little loss off substance. This he refused. Since then the growth and the ulceration have both increased. It has occasionally bled, but not much. For two months he has been losing flesh, and has had scalding during micturition. He has noticed the lump in the groin for a month. No history of cancer in the family. His first wife died three years ago of cancer of the breast. Has had two attacks of gonorrhœa, and a soft chancre twenty-five years ago, which was followed by a suppurating bubo in right groin. No syphilis.

August 25.—Mr. Heath amputated the penis at the "root" to-day by the galvanic écraseur, removing more below than above. The écraseur was seven minutes and a half in passing through. There was no hæmorrhage except from the ulcers, which became excessively engorged during the operation. After the amputation a probe was passed into the urethra, the lower margin of which was slit for a quarter of an inch, and sewn to the skin; the hæmorrhage caused by this was stopped by the galvanic wire. A gum-elastic catheter was then passed into the bladder, and secured by tying it to the pubic hair. The surface of the wound measures two inches by one inch and three-fifths. Dressed with dry oakum.

28th.—No pain since operation; has slept well at night. Slough is separating, and the wound measures three inches from above down. Syringed with carbolic lotion, and covered with oakum. Urine to-day contains blood and pus.

30th.—Catheter removed, and another introduced.

September 1.—The slough has almost entirely separated, leaving a healthy granulating surface. The scrotum is red and œdematous. Complains of sense of stiffness about the right groin. The gland is very hard; there is a slight discharge from it from under the scab. Urine still contains a good deal of pus.

7th.—Wound is cicatrising nicely. The ends of the corpora cavernosa are distinctly visible in the middle. During the dressing erection took place, the ends of the corpora projecting up from the surface for quite half an inch, and then subsiding again; this was noticed several times afterwards.

13th.—Catheter removed; micturition quite free. No pain. Feels quite well. Wound cicatrising fast.

24th.—The gland is steadily increasing in size. Ordered to have a paste of zinc chloride with morphia applied, to be followed by poultices.

28th.—The slough has separated. Caustic paste re-applied, and again on October 2 and 4. This caused considerable redness and tenderness round the gland.

October 8.—Wound in penis quite healed (forty-four days after operation). A No. 9 gum catheter passed into urethra. This afternoon Mr. Heath passed a director round the circumference of the gland in the groin.

13th.—Mr. Heath removed the gland with Volkmann's "sharp spoon," and scraped the tissues round it with the same instrument; the cavity was then filled with lint dipped in chloride of zinc solution (gr. xl. to ʒj.). The gland was of the size of a large walnut, very firm, of pale yellowish-white colour.

18th.—No. 7 catheter passed with difficulty; catheter to be passed every day. Wound in groin granulating up. At the inner and lower part a small, pale pink, hard nodule is seen, about the size of a pea—evidently another enlarged gland.

25th.—The enlarged gland has increased in size; the lower limits of it can be distinctly felt. Wound almost healed. Chloride of zinc paste to be applied.

28th.—Left hospital to-day; to return in a few weeks. The growth in the penis and the gland were examined microscopically by Mr. Gould, the Surgical Registrar, who found them to be most typical specimens of lobular epithelioma, the development of the "globes" being remarkable.

In a clinical lecture upon this case Mr. Heath pointed out the evil effects of delay in this and similar cases, for when he first saw the patient a comparatively trifling operation would have effectually relieved him without damage to his virile powers—a matter of some importance, as the patient had recently married for the second time. At this time, too, the lymphatics were quite unaffected, whereas three months later not only were the lymphatics of the penis infiltrated, and in some places ulcerating, but the gland in the groin was much enlarged. Mr. Heath had hoped that this enlargement might be due solely to irritation, and not to deposit, but the latter proved to be the case. In dealing with this at a subsequent operation Mr. Heath employed the "sharp spoons" contrived by Professor Volkmann for the removal of strumous glands, and the scraping of fistulæ and sinuses, and with them the whole of the disease appeared to have been removed. It shortly reappeared, however, and will no doubt shorten the patient's life.

In the amputation of the penis the galvanic écraseur answered admirably, the section being made close to the pubes, and the hæmorrhage being completely arrested without any of the difficulty which is sometimes met with in amputating with the knife owing to the retraction of the vessels with the stump of the organ beneath the arch of the pubes. Mr. Heath adopted the plan, proposed by the late Mr. Teale, of dividing the lower surface of the urethra for a short distance and stitching the mucous membrane to the skin, so as to convert a cylindrical into an inverted U-shaped section—O into ∩,—and by this means to prevent the cicatricial stricture of the urethra which is often so troublesome. The operation completely relieved the excruciating pain from which the patient was suffering, and undoubtedly prolonged his life in comparative comfort.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF PLEURISY—PARACENTESIS—RECOVERY.

(Under the care of Dr. SANSOM.)

[For notes of the following case we are indebted to the House-Surgeon, Mr. Burtonshaw.]

Arthur T., aged two years, was admitted as an in-patient, August 15, 1875, by Mr. George Brown, formerly House-

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Surgeon to the Hospital, who was doing temporary duty for Dr. Sansom. Patient had been ill one week. Illness came on with shivering and sickness. Has had much dyspnœa, feverishness, cough, and loss of appetite. The bowels had been much relaxed.

State on Admission.—The right side of the chest was found to be larger than the left. Circumference of the chest was nineteen inches and a half. Right side measured ten inches, the left nine and a half. Right chest completely dull from apex to base. Intercostal spaces obliterated. Breath-sounds feeble and tubular, but quite lost at the base. Apex of heart beats half an inch external to the nipple line and a little below. Some dyspnœa, but not urgent. Temperature 99°.

Paracentesis was performed in fifth intercostal space, below axilla. Seventeen ounces of greenish-yellow serum were withdrawn. When about eight ounces of fluid were drawn off, the patient began to cough. The cough continued throughout the operation and for several minutes afterwards. After the operation, vesicular breathing could be heard all over the chest.

August 8.—The cough was very troublesome the early part of last night. Slept well after midnight. Seems very comfortable and takes nourishment well. Temperature, morning 99°, evening 100°.

9th.—Going on well. Temperature fell to 98°.

11th.—Breathes quickly, and lies on affected side. Resonance good above nipple line in front of the angle of the scapula behind, below which it is somewhat impaired. Vesicular breathing audible over the whole of right side, but feeble at the base. Friction sound audible over a limited area below axilla, and near the seat of puncture. Apex of heart beats in line with nipple.

14th.—General condition improved; breathes quietly; scarcely any cough. Physical signs remain the same. Friction sound coarser, and heard over a larger area.

18th.—Friction sound heard in axilla only.

25th.—Breath-sounds heard lower down. Resonance good over front of chest, and in axilla.

31st.—Resonance generally good. General health very good; has lately gained flesh.

The patient was discharged quite well on September 3.

THE HUNTERIAN MUSEUM.—At a quarterly meeting of the Board of Trustees of the Hunterian Collection at the Royal College of Surgeons, on Saturday last, the Right Hon. W. E. Gladstone, M.P., was unanimously elected a member of the Board, in the vacancy occasioned by the decease of Sir Charles Lyell, Bart.

PRUSSIAN REGISTRATION RETURNS FOR 1874.—The Berlin Statistical Bureau has just published the following figures:—The total number of births has been 1,051,806, of which number 542,640 were boys. Of these 1,051,806 births, 975,337 were legitimate and 76,469 illegitimate. In Berlin there were 40,061 births, 20,622 being boys. There were in Prussia 12,714 twin births, and only 1 triple birth. The marriages numbered 244,773 (being a diminution of 8099 compared with 1873), of which number 13,106 occurred at Berlin. The deaths amounted to 692,907 in 1874 (being less than in 1873 by 46,343), 364,547 being males. The deaths in Berlin were 29,231, 15,542 being males. There were 1779 cases of railway accidents in Prussia, of which 627 proved fatal. Of 761 mining and similar accidents, 590 proved fatal. The number of suicides amounted to 3075 (in Berlin to 255), of which 2527 were males.—*Union Méd.*, November 9.

THE INSANE IN THE DÉPARTEMENT DE LA SEINE.—In 1801 the number of insane maintained by the Department was only 946; and on December 31, 1874, it amounted to 7072. The insane population has, therefore, increased sixfold during seventy-four years, while the general population of Paris has only increased scarcely threefold—viz., from 600,000 in 1801 to 1,818,000 in 1872. During the last ten years the mean annual increase of the insane has been 200. Until 1860 the female lunatics were in excess, but since then the males have prevailed. At the present time there are 542 males to 458 females per 1000. Of 2177 insane admitted during 1874, 882 were unmarried, 855 married, and 348 widowed. Among the causes of insanity abuse of alcoholic drinks contributes 37·22 per cent. The expense of maintaining lunatics during 1874 has been 4,167,408 fr.—*Union Méd.*, November 9.

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Medical Times and Gazette.

SATURDAY, NOVEMBER 20, 1875.

"REHABILITATION" OF SMALL-POX.

EVERYONE with the least literary culture knows what a common thing the "rehabilitation" of historic characters has become. Philosophical historians take up the cudgels on behalf of men who had been ignorantly considered as tyrants and murderers. Nero, Domitian, Oliver Cromwell, Richard the Third, and the like butchers of their fellow-creatures, are shown to have been really very good fellows at bottom;—rather cheery and frolicsome; heroes of the Carlyle-Froude genus; a little fond of cutting people's throats; but this, though hard on the sufferers, was on the whole a benefit to the rest of mankind; and, after all, were not they "instruments in the hands of Providence"?

Well, the time for small-pox has come at last. People are found who think it was not such a bad thing after all. Fatal epidemics there were, they admit, in the olden time, and loathsome cases, but these were due to poverty and maltreatment. Sometimes the disease was mild enough, and then it exercised a bracing, tonic influence. Since small-pox has been less prevalent, a "change of type" has come upon us: people can't be bled; scrofula is propagated by vaccination, and consumption is more rife; and, after all, small-pox, though not outwardly manifest, is still with us, only "introverted," as Sydenham said,—turned inwards upon the intestines, where it shows itself as typhoid fever.

It is rather difficult to meet the face-both-ways arguments of the anti-vaccinists in a few words; for, as we said last week, some deny to vaccination any influence at all in checking small-pox; others grant this; but both assert that in other ways it has been mischievous.

The chief opponent of vaccination, Mr. P. A. Siljeström, a Swedish M.P., whose work is largely circulated in this country,(a) does in reality furnish the most overwhelming

(a) Translated by Frederica Rowan, published by F. Pitman, 20, Paternoster-row. Last week we quoted from an abridgment by Professor Newman.

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evidence in favour of it. He gives a table of the population, deaths, and deaths from small-pox in Sweden for every year from 1749 to 1872. And very curious it is. It shows the immense total mortality from small-pox from 1749 to 1809. The smallest number of deaths was 671 in 1786, but the ordinary numbers were 2000, 3000, and 4000. Then there were, at intervals of five or six years, epidemic bursts of violence, in which the small-pox deaths rose to 6000, 8000, or 10,000. But after 1809 there is a sudden drop. The small-pox mortality in a greatly increased population is not one-fiftieth of what it was before 1809. It was so small as 2 in the year 1846. There is still the same tendency to a periodic rise every five years or thereabouts, in which the small-pox mortality goes up to 1200 and more; and in the year 1851 it amounted to 2488. Nearly 42,000 deaths from small-pox occurred in the ten years 1779-1788, out of a population of a little more than 2,000,000; and only 8386 in the ten years 1832-1841, out of a population of 3,000,000. Facts and figures like these seem irresistible; they show that something must have happened about the year 1809 which had some effect in diminishing small-pox. What was this? We say, Vaccination,—and we say so because vaccination is proved by experiment to render any individual insusceptible to small-pox, and the diffusion of vaccination cannot help having that effect on a population.

But we must pass on to the alleged mischief of vaccination. Now, we would ask the anti-vaccinists why they ignore their predecessors? Why not quote from the cow-pox controversies of seventy years ago? Why not show the truth of the statement made by Dr. Moseley in 1806, that cow-pox "has brought into the world several new diseases, by which the children of the poor are severely scourged—(1) *Facies bovilla*, or Cow-pox face; (2) *Scabies bovilla*, or Cow-pox itch, or Mange; (3) *Tinea bovilla*, or Cow-pox scald-head; (4) *Elephantiasis bovilla*, or Cow-pox farcy, of which there are several species"? So spake the anti-vaccinist in 1806; but will any of his feeble modern imitators show us a case of *Facies bovilla?* Where are the *ox-faced* children,—the babes that cough like cows, and have patches of red hair growing on their little rumps,—the monsters that our fathers were told would spring up from the "beastly process of cow-pox inoculation"?

The curious thing is, that whilst the suppression of small-pox is held to be a mere coincidence, and no proper effect of vaccination, all the cases of scrofula which may here and there follow it are sure to be set down as palpable consequences of the "beastly process"; as if there were no scrofula, no scald-head, no royal touch in days of yore!

One of the most curious accusations against vaccination is the sanctimonious. When a man's common sense fails to supply him with rational arguments, he falls back on superstition, and declares it wicked and unnatural. Thus the ancient anti-cow-pox agitators brought texts from Leviticus, and declared that it was wrong to interfere with a "providential" disease, which they affirmed small-pox to be. A clergyman of the present day, Vicar of Winston, Suffolk, declares that "our infinitely wise Creator knows best how to make us, and what will tend to promote the health of our bodies, and *through what channel* the same may be applied. Most criminal does it appear to me to question His wisdom by saying that we must open up a fresh channel," through the skin. We wonder whether the author of this *Capucinade* would allow of a subcutaneous injection of morphia, or the stomach-pump to feed a madman?

As for the idea that by vaccination we take part of the substance of a beast into ourselves, we may just point out that we are taking into ourselves organisms that float off with the breath of every animated thing we come near, and that it is better to receive a little vaccine matter than to allow the beastly virus of small-pox to enter and run riot in our veins. There is nothing noxious in the cow; her breath is soothing to the bronchitic, and the cow-pox is a mild and merciful preservative against a pestilence probably derived from the brute creation.

Let every deduction be made from the value of vaccination—limit as you please its protective power; load it with the blame of all the scrofula in all the children who are vaccinated: admit an occasional casualty from irritation, abscess, or erysipelas; make the most of the few cases of post-vaccinal syphilis,—and, spite of all, the worst vaccination is better than the best small-pox, and is a unique and most blessed discovery.

WARBURG'S TINCTURE.

It must be about twenty-five years since Warburg's Tincture was brought into wide repute in England. In the *Medical Times and Gazette* of June 28, 1851, page 702, appears a letter from Dr. Warburg himself, in which he claims to have discovered, "among the abundant vegetation of the tropical lowlands," a febrifuge more potent than quinine, which he had used in the pernicious fevers of Guiana with great success, and which had received the official sanction of the Austrian Government. A large shop in King William-street, Strand, was set up for the sale of the Tincture at a most exorbitant price. It was strongly recommended by the late Dr. Babington, both as a febrifuge in ague and in malarious neuralgia, and as a tonic in common debility. The Tincture received the approbation of many Army and Indian surgeons, and amongst friends of our own we have heard it spoken of for years as a most efficacious remedy in the worst kinds of tropical fever. One surgeon-major avers that it dispelled a severe attack of fever, but caused perspiration so profuse and exhausting that his skin has never acted since. Another Indian friend some time since described it as efficient, but exhausting through perspiration. It is true that (as stated in the *Medical Times and Gazette*, January 24, 1857, page 90) some members of the Army Medical Department saw nothing in it superior to quinine with aromatics and hot spirits-and-water; still, Warburg's Tincture attained a very wide reputation, and the facts detailed by Professor Maclean in our number of last week show that it deserves a respectful trial in the class of cases it is intended for.

Why it has not been more generally tried, and its merits impartially estimated, is obvious enough. In the first place, its composition was kept secret; and there is a well-founded prejudice against the whole class of nostrums. Then the author declared that he had discovered a febrifuge superior to quinine: and whilst some physicians were racking their brains to guess what drug could possess such febrifuge and sudorific powers, others were held back by the fear that there might be some powerful drug of the aconite or veratrum genus, which might be dangerous in full doses. This fear was enhanced by the fact that, as the preparation was secret, so there could be no guarantee for uniformity of composition, as there would be if it were made by Squire or Savory, or at Apothecaries' Hall. That this was no visionary fear is shown by the fact that there are at least three kinds of Warburg's Tincture on sale now in London. Some of it is said to be made by Mrs. Warburg: and some samples contain no quinine, which is the leading ingredient in the genuine article (this, we are told, is procured at Colebrooke-row, Islington). Then it seems that Dr. Warburg is a very religious man, and in great favour with a highly respectable religious party of the so-called "evangelical" order; and it is a fact that clergymen of this school have used all their influence to get the Tincture used in the public services and in private practice. For an example we may turn back to the *Medical Times and Gazette*, January 24, 1857, where it will be seen how Dr. Crawford, the eminent physician to the Winchester Hospital, was bullied by a neighbouring

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parson because he refused to try this drug in typhoid fever. No one accustomed to weigh testimony would give much for the opinion of an enthusiastic clergyman on a secret remedy belonging to a devotee.

Well, time has brought about a revelation of the composition of the Tincture. We will just say in passing that it by no means justifies the author's early assertions, that it is a febrifuge superior to quinine, nor yet the exorbitant price charged for a small bottle, nor yet the mystery which has been kept up for so many years. The composition had been the subject of many an analysis; quinine had been detected as a constant ingredient, aloes, camphor, rhubarb, and zedoary likewise;(a) still it was suspected that there might be beberine, or some vegetable febrifuge and sudorific for which no test was known. But now it is shown that the Tincture does not contain any new febrifuge, as the owner rashly (for a pious man) allowed himself to say in 1851, but that the febrifuge *is* quinine, aided by other remedies. The other ingredients, so far from belonging to the swamps of the tropics, come from the dismal regions of ancient pharmacy.

The thing is a curious specimen of polypharmacy, whether the ingredients be merely a "farrago devised for the purpose of mystification" or be really the result of reflection or experiment. Each bottle contains about nine grains of quinine; three purgative ingredients (viz., about ten or eleven grains of aloes, half that quantity of rhubarb, and one grain of larch agaric); and, thirdly, in each bottle the essence of twenty-five grains of heterogeneous aromatic stimulants—camphor, myrrh, zedoary, cubebs, angelica, saffron, fennel, elacampane, enriched with a good dose of the *Confectio Damocratis*, an old mithridatic farrago containing about fifty gums, balsams, spices, and aromatics.

Such is Warburg's Tincture, which, thanks to Professor Maclean, is now likely to receive a thorough trial; more especially to determine what is the share taken by the chief ingredients in enhancing the febrifuge properties of quinine—a matter of deep importance to fever-stricken persons and fever-treating physicians.

ASEPTIC SURGERY.

The paper communicated to the Clinical Society by Mr. Callender on October 8, entitled "Experiences with Salicylic Acid," together with notes read by Mr. Pick at the same meeting "On a Case of Extensive Wound of the Knee-joint treated Antiseptically," gave rise at the next meeting to a discussion on antiseptic dressings. This was adjourned to the following meeting, at which Mr. Holmes promised a paper "On Ligature of the Femoral Artery in its continuity with Carbolised Catgut." This, as being a kindred subject, was expected to stimulate the debate by adding fresh experience and material. Mr. Holmes's paper, however, was not intended to provoke discussion on antiseptics, but on the best method of tying arteries in their continuity; though it happens that, in consequence of the employment of carbolised catgut, the question has become much connected with that of antiseptics generally. At present, however, we purpose to confine ourselves to the discussion on antiseptic dressings.

The method of dressing with antiseptic agents employed by Mr. Callender is already well known to the profession. His communication related the results of substituting the new antiseptic, salicylic acid, for his old friend carbolic. They are not satisfactory, and he prefers to return to his former agent, for the following reasons. He finds salicylic acid produce more constitutional disturbance, more local irritation, and slowness of healing. These results are in curious contrast to those of Thiersch, who has discarded carbolic acid in favour of salicylic; and to some extent also with those of Lister, who, while he regards salicylic acid as an inferior antiseptic to carbolic, has found it a useful ally used along with the latter, more particularly in those cases where the carbolised dressings are, in consequence of the small discharge, allowed to remain undisturbed for long periods. A troublesome irritation of the skin round the wound at the part covered by the protective being apt to arise in such cases, he found a weak solution of salicylic acid, when used for dipping the protective and cleansing the wound, an effectual preventive.

Possibly the strength of Mr. Callender's solutions may account for the difference, but we seem to want the experience of others before we can decide between such opposite opinions.

Mr. Pick's case we should be inclined to class with *cases treated with antiseptic agents, rather than treated antiseptically.* We italicise this in order to draw special attention to it, because on it—a correct understanding of the difference between the two expressions—hangs the whole question of antiseptic surgery as between Mr. Lister, with those who are content to follow his directions to the letter, and his opponents, with those who, while they profess to be his followers, advocate all sorts of alterations and modifications in the method, until its parent no longer recognises his offspring. We place Mr. Pick's case among those of partial treatment, for the following reasons:—It was one of the class of cases in which results are always uncertain, because the wounded surfaces had already been exposed for some time. The after-history of the case is more like that of a septic than an aseptic one; and though Mr. Pick mentions that the pus was sweet, we have no answer to Dr. Moxon's question as to the presence of bacteria. And, more than all, because Mr. Pick, by his own statement as to the time at which he changes his dressings, and the state they are in before he changes them, shows himself to be one of those who, while professing to follow, do not do so to the letter, Mr. Lister's method.

The subject is attracting so much attention just now that a short review of the opinions expressed by the various speakers may be of interest to the profession. Mr. Holmes struck at the root of the whole matter when he said such cases as that of Mr. Pick were not relevant. Aseptic surgery must depend not on statistics of such cases, but on those of cases operated on by the surgeon, and from first to last under his control. We have used here the word aseptic in preference to antiseptic, and we venture to suggest it as a better name for Mr. Lister's method, as showing what he aims at, while it may, perhaps, prevent the constant mixing up of the means and the end, which this very debate shows to be difficult for most surgeons to avoid.

One of the best examples of aseptic surgery is certainly the opening of a large abscess on Mr. Lister's method. The pus is thoroughly evacuated through a small opening, and then a drainage-tube is introduced to aid nature in getting rid of any fluid which may exude from the walls of the cavity, while at the same time the operation and after-dressings are so conducted that the antiseptic agent, used to shut out external morbific agencies, cannot have any possible influence on the result, because it never comes in contact with the diseased and exposed surfaces. Mr. Holmes differs widely from Mr. Lister in his belief that carbolic acid prevents suppuration. Mr. Lister considers that it causes and increases it, and hence one of the great difficulties he has met with in the perfecting of his dressings. He is obliged to use carbolic acid to protect his wounds from external agencies, and he is obliged, at the same time, to protect his wounds from any direct action of the agent, or at least to reduce such direct action and contact to a minimum. It has become the fashion to attribute much of the success to the personal care of the surgeon, and doubtless this is advantageous, but anyone who is acquainted with the working of Mr. Lister's wards will know that many cases do as well in the hands of house-surgeons, clerks, and dressers. Mr. Holmes considers eleven

(a) *Pharmaceutical Journal*, vol. ix., page 134.

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fatal cases of pyæmia out of 360 deaths in one year, and nineteen out of 359 deaths in another, "not a large proportion"; but would it not be much more satisfactory to have none? and is not a system which offers the chance of such a result, when *thoroughly* carried out, worthy of trial?

Mr. De Morgan and Mr. Barwell both advocate the use of antiseptics, but both, though in different degrees, prove themselves unbelievers in antiseptic surgery as understood and practised by Mr. Lister. Mr. Barwell, while pointing out to the Society that Lister's method and antiseptics were two different things, objects to many details of the former; while Mr. Heath objects to the spray; and Mr. T. Smith, while urging that the method, if tried at all, should be tried with absolute adherence to Lister's directions, still confesses he cannot see any evidence to make him a convert. All the speakers, then, really belong, though in differing degree, to the ranks of those whom Mr. Lister must regard as his opponents. He perpetually insists on the method being carried out to the letter of his instructions, and even goes so far as to think a partial use of antiseptics injurious, as, by irritating the tissues and causing more secretion, they increase the danger both by lessening the vitality of the tissues and giving the morbific agents, whatever they may be, more material to develope in. Doubtless there is much to be said on this side of the question, and we believe a good genuine discussion on Lister's method, carefully separating it from a mere use of antiseptics, might be of much service.

Most of the surgeons who advocate the open treatment of wounds are glad to avail themselves of antiseptic agents for purifying instruments, etc., and disinfecting discharges and evacuations.

If an accurate comparison could be made, we suspect a purely open system would be found to yield better results than any of the modifications of Lister's method which various surgeons advocate. It gives free and immediate escape not only to the secretions of the wound pure and simple, but also to these when changed by the admission of the atmosphere. For, however much surgeons may dispute as to the nature and cause of this change, none will deny that something of vast import does occur when bruised and lacerated tissues are exposed by accident or art to the atmosphere.

Those who use antiseptic agents aim at destroying or rendering harmless this something which forms in wound-secretions. Those who treat on the open system aim at letting it get away at once, and having no dressing to harbour it. Mr. Lister aims at preventing its formation. In order accurately to carry out the practice he advocates, it is only necessary, in the first instance, to believe that the morbific agents are particles suspended in the atmosphere, and adhering to everything exposed to that atmosphere. Once plant this idea firmly in the mind, and the carrying out of all the details soon becomes intuitive, and no longer an effort of memory. Discard the particulate theory, and we can imagine no system more likely to fail from omission of minutiæ.

The question as to what these particles are is a vastly wider one. Doubtless it will soon meet any surgeon who practises aseptic surgery with success, and carefully seeks for causes; but this we leave to future experiment and discussion, as a part of the subject which must be fought out by careful physiologists, and pathologists, and chemists. Mr. Lister is too profound a thinker to practise without a theory, and he, after long and patient work, has chosen the germ theory, as commending itself to him as a rational reason of his successes; or, to speak more justly, he chose the germ theory, and built a successful method of treatment upon it.

It remains for others either to give to the profession a better theory, with better consequent practice, or to prove conclusively that, without the theory and with different practice, they can show as good results.

THE WEEK.

TOPICS OF THE DAY.

The annual report of Dr. Corfield, the Medical Officer of Health for St. George's, Hanover-square, has recently been presented to the Vestry of that parish. For the sake of convenience, it includes the results of fifty-three weeks' observations. The gross total of deaths was 1694, a number less than any one during the past ten years, and making a death-rate of 18·73 per 1000 inhabitants, being less than the rate in London generally, or in any of the twenty large towns in the United Kingdom mentioned by the Registrar-General. The births were 2266, a rate somewhat higher than that of the previous year; for every 100 children born, 14·69 died under one year of age, against 15·5 in London generally. There was a noticeable difference in the number of deaths in the Hanover-square and Mayfair sub-districts, the former being 349, and the latter 187. No death was recorded from small-pox, the present being the first occasion upon which small-pox has been absent from the annual mortality tables of the parish. Each one of the seven principal zymotic diseases caused fewer deaths than the average for the previous six years; and from simple cholera there were two deaths, the exact average number. Scarlet fever was shown to have been decidedly more prevalent, and caused thirty-two deaths as against nine last year, but the number was considerably less than the average for six years to 1873. There were a considerable number of complaints during the summer of bad smells in Piccadilly and Knightsbridge. As there was no fault, however, with the sewer, it was evident that the unclean condition of the roadway was the cause, and they were much abated by its being cleansed.

At the Bicester Sessions, recently, Mr. William Abel Ryder, a grocer in an extensive business at Bicester, was sentenced to seven days' imprisonment in Oxford gaol for refusing to have a child vaccinated, and declining to pay a fine of twenty shillings and ten shillings costs for non-compliance. The defendant is known as a public speaker against vaccination. The magistrates passed the above sentence instead of issuing a distress for the amount.

In contradistinction to the action taken by the Metropolitan Board of Works in availing themselves of the powers of the Artisans' and Labourers' Dwellings Act, the Birmingham authorities have received and considered a further report of the Medical Officer of Health for that town, which states that other portions of the town, adjoining the district comprised in the recent improvement scheme, are unhealthy. Should the Town Council approve of this second clearance, it will very largely increase the original area, and will sweep away a number of dilapidated and wretched houses.

Another report has been presented by the Works and General Purposes Committee to the Metropolitan Board of Works, on the subject of improving an unhealthy area in the Whitechapel district by means of the Artisans' Dwellings Act. The area referred to is in extent about six acres, with a population of 3750; it extends from Dock-street on the east to Peter's-court on the west, and is bounded on the north by Royal Mint-street, and on the south by a portion of Upper East Smithfield. The plan embraces the following proposals:—1. The removal of the houses in Cartwright-square, extending to the wall of the Royal Mint premises, and also of so much of the property on the west side of Farthing-lane as is necessary for widening Cartwright-street to thirty feet. 2. The removal of the property in Crown-court and Butler's-buildings, and on the east side of Harris-buildings, with the exception of the public-house in Crown-court and the houses fronting on to Upper East Smithfield. 3. The widening of Darby-street to thirty feet throughout, for which purpose it will be necessary to include Nos. 38 and 39, Royal Mint-street in the scheme.

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4. The formation of a thoroughfare thirty feet in width from Cartwright-street to Dock-street. 5. The widening of Glasshouse-street to thirty feet. 6. The removal of Nos. 21 and 22, Upper East Smithfield, for the purpose of forming an entrance to Sun-court and Rose-court. The net cost of the scheme may be approximately stated at £54,400, which includes a sum of £10,500 for the formation of roads. The adoption of the report was moved, seconded, and eventually carried; the mover remarking that the present scheme was very different from the one submitted for the Gray's-inn-road area, where the property proposed to be improved was mixed up with other property which it was inadmissible to take under the Artisans' Dwellings Act.

As if expressly to illustrate for the public edification the difficulties met with by medical officers of health, and the need of the new Act, the papers reported the other day the following inquest, held in St. John-street, before Mr. Thomas, deputy coroner, upon the body of an infant aged four months, who was found dead at 4, Mitre-court, in the Liberty of St. Sepulchre, Holborn. Dr. Franklin, of St. John-street, stated that he was called at one o'clock on Wednesday afternoon to see the deceased, and upon reaching the house he was taken into a room on the ground floor. It was the darkest and foulest he had ever seen. The body was a mere skeleton, being entirely devoid of fat; on the right side of the skull was a fracture, with a clot beneath; the lungs were congested; the stomach contained some undigested milk. The cause of death was suffocation from want of fresh air, accelerated by general weakness from impure air, which also impoverished the mother's milk, and deprived it of its life-giving qualities. Dr. Franklin was of opinion that the court (a *cul-de-sac*) was, from the presence of decaying refuse, and want of cleanliness on the part of the inhabitants, unfit for habitation. Mr. Peacock, the Sanitary Officer of St. Andrew's, Holborn, stated that the Medical Officer of Health had tried to get permission to cause certain alterations to be made, so that the houses might get some ventilation from the back; but all his efforts had been futile. He considered that the ground floors ought not to be occupied. The verdict given was "Suffocation from want of fresh air." In the absence of a mortuary, it is stated that the body will remain in the room in which the parents and a remaining child live and sleep, until its burial. The post-mortem examination had also to be made in the same room. There can be no doubt as to the insanitary condition of Mitre-court, but we are somewhat surprised to find that neither Dr. Franklin nor the jury seem to have attached any importance to "the fracture of the skull, with a clot beneath."

It is rumoured that the Marquis of Northampton, seeing the difficulty in which the Clerkenwell Vestry is placed by the want of a mortuary (its crowded state and poor population rendering such a building an absolute necessity), has agreed to let them on lease a portion of the Spafields Burial-ground sufficient to erect thereon a coroner's court, waiting-rooms, dissecting-rooms, mortuary, and disinfecting oven, for a period of fifty years, at a nominal rental of ten shillings a year.

The Government have agreed to lease to the Improved Industrial Dwellings Company a large site adjoining the Chelsea Barracks at Pimlico; and among other sites acquired by this Company is one containing more than an acre of land between Upper-street and Liverpool-road, Islington, which has been purchased from the North London Railway, and will enable the Company to supply a want greatly felt in that neighbourhood.

The public will learn with much satisfaction that, at the instance of the masters of Uppingham School, a Government inquiry will shortly be held, with a view, if possible, of ascertaining the cause which led to the recent outbreak of typhoid fever in that establishment.

To commemorate the visit of his Royal Highness the Prince of Wales to Aden, it is intended to set aside the sum of 20,000 rupees to found a charitable dispensary, which, with permission, it is proposed to style "The Prince of Wales's Charitable Dispensary."

Dr. Philipson and Dr. G. Y. Heath have been delegated by the University of Durham to represent that body at the Conference of Examining Bodies, to take again into consideration the formation of a Conjoint Board of Examination for England.

DEATHS "NOT CERTIFIED."

NOTWITHSTANDING the strict manner in which the registration of deaths is carried out, and certificates of cause of death demanded, a large number of deaths are annually registered of which the causes are not certified. In most cases of uncertified death, the persons have been attended in their last illnesses by unqualified practitioners, who generally hold foreign diplomas obtained by purchase and *in absentiâ*. From the annual report of Dr. Dudfield, Medical Officer of Health for Kensington, for last year, which has just been published, and which, by the way, is a very interesting document, and full of information of more than local interest, we learn that during 1874 thirty-three deaths were registered in Kensington alone as "not certified." In 1872 and 1873 the numbers were twenty-one and thirty respectively. Thus it would appear that unqualified practice is extending. Doubtless the above numbers do not fully represent the number of fatal cases attended by unqualified practitioners, for although the registrars do not knowingly accept a certificate from an unqualified person, there is no doubt that in some cases, where a medical title is used by a stranger, "invalid" certificates are accepted. If it were made a misdemeanour for any unregistered practitioner to give a certificate of death, the difficulty would probably be met. The best course to adopt under present circumstances is to hold inquests on the bodies of all persons who die under the treatment of unqualified practitioners. This course was adopted in several cases in Kensington last year, and it led, in at least one instance, to the discreditable result of the Philadelphian M.D. who attended a sick child calling in a registered practitioner at the last gasp, so that he might certify as to the cause of death. An inquest was, however, held on the body, and the death was found to be due to quite a different disease from that entered on the certificate. The Board of Guardians, anxious to put a stop to such scandals, took proceedings against one unregistered practitioner at the Hammersmith Police-court, but the case was dismissed. "But," says Dr. Dudfield, "something should be done for the protection of the poor, who are almost exclusively the patients of the unqualified man, being unable to realise the distinction; and action is rendered the more necessary by the fact that children—infants of tender age—are most commonly the victims of the practice." This question is one of urgent importance, for as long as such a large number of "uncertified" deaths are registered, our registration returns as to causes of deaths must necessarily be fallacious. Were the Association of Medical Officers of Health to memorialise the Government on the subject, they might be induced to introduce an Act early next session, making the giving of a certificate of death by an unregistered person, or the signing of a false certificate by a registered person, penal offences.

AN UNSATISFACTORY INQUEST IN CORNWALL.

AN inquest (so-called) was recently held at Redruth, in Cornwall, on the body of a woman who fell out of bed, and died suddenly, after taking a draught which was given to her by a chemist who calls himself "Dr." Rowe, but whose only right to the title is said to be the possession of a "Philadelphian" diploma. Deceased had been attended

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previously by Mr. Hitchens (a local practitioner), but under the circumstances he very properly refused to give a certificate of death. It is scarcely credible, but we understand that no skilled evidence was called at the inquest. In lieu thereof, the man Rowe was permitted by the coroner to appear before the jury, and deliver his opinion as to what he believed was the cause of death. The draught he gave her was, he said, composed of "camphor and chloral, with a very small quantity of opium." Her complaint was insomnia, or sleeplessness, and the draught was intended to quiet the nerves. "When the brain was emptied of blood, she was subject to fainting. Until the brain was charged with blood she could not sleep." He believed that "the cause of death was concussion of the brain, because there was nothing in the medicine to bring about such a result. She must have received a violent blow from the fall, and, in consequence of the draughts she was accustomed to take, her brain would be more susceptible to injury than otherwise." With such ridiculous nonsense as this the coroner and jury professed to be perfectly satisfied, and returned the following verdict:—"Died from concussion of the brain, the effects of a fall." Judging from the newspaper reports of the case, we cannot accept this verdict as satisfactory. There was no post-mortem examination, and no medical evidence was adduced! It is most improbable that death occurred instantly from a fall out of bed, the worst effect of which accident is usually temporary insensibility; and it is known that, shortly before the woman was found on the floor dead, she was sleeping heavily from the effects of a draught containing an unstated quantity of three deadly drugs. It is useless to remonstrate with the coroner or the jury, but we trust that the attention of the Secretary of State will be directed to the case, and that some action will be taken to prevent a repetition of such a scandal under the authority of the coroner's court.

THE WATER-SUPPLY OF HASTINGS.

It is a matter of notoriety that the water-supply of Hastings has for a considerable time past been in a most unsatisfactory state. The local sanitary authorities long ago recognised the importance of doing something to meet the necessities of the town, and some time since they called in high professional assistance to report as to the best scheme to be adopted in order to give the town an increased water-supply. The report of the engineer consulted—Mr. Topley—was presented some months ago, but as yet nothing has been done in the matter. In our issue of August 14 last we discussed Mr. Topley's report, and recommended the adoption of his proposal to obtain water at Glynde, from whence a permanent and ample supply can be secured. We regret to learn, however, that the local sanitary authorities have recommended the adoption of a scheme which, at best, can only afford temporary relief from their difficulties. It is proposed to divert a portion of the water from the Hollington Well, which should be employed exclusively for the supply of St. Leonard's, for the purpose of supplying the high levels of the Hastings district. If a portion of the St. Leonard's supply is diverted to meet the necessities of Hastings proper, the inhabitants of the former township must suffer, for we hear that at present the water-supply is barely sufficient to meet their requirements. Should the inadequate expedient now proposed be carried out, it can only be a temporary measure; and there is no doubt that if Hastings continues to increase in size at its present rapid rate a comprehensive scheme will have to be adopted within a very short space of time. It would be better, then, if the local sanitary authorities would meet the difficulty boldly, and adopt a plan which will secure a permanent supply of pure water. The expense of so doing will, undoubtedly, be great, but in a matter of such vital importance the question of cost should be a secondary consideration.

ANOTHER OUTBREAK OF TYPHOID FEVER AT CROYDON.

Croydon has been visited by another severe epidemic of typhoid fever, the second outbreak of this disease there during the present year. Great doubt and uncertainty exist as to the cause of the outbreak, but evidence points strongly to contaminated water-supply. The subject has been very fully discussed by the Local Board of Health, and the medical practitioners residing in the district have memorialised the Board, urging upon them the necessity of most careful attention to general sanitary measures, especially to the importance of frequent and thorough flushing of the sewers, thorough cleansing of infected houses, early and free use of disinfectants, and a constant supply of water. The memorialists further state that one great source of danger is the existence of screw-down taps in water-closets in many parts of the parish, as they are specially liable to be out of order, and in that state, during an intermittent supply, cause direct infection of the water. The memorialists also express entire confidence in Dr. Philpot, the Medical Officer of Health for Croydon, and state their desire to aid him at all times in the discharge of his duties. The Local Board are taking every precaution to prevent, as far as possible, the spread of the disease. Many of the suggestions now adopted by the Board were proposed by Dr. Carpenter, of Croydon, as long ago as 1865, and agreed to by the Board, but were not fully carried out. Some of the inhabitants of Croydon are endeavouring to induce the Local Government to institute an inquiry into the origin of the present outbreak, and to decide as to the best means of preventing a recurrence of these periodical epidemics.

ACUPRESSURE OF THE EXTERNAL ILIAC ARTERY FOR THE CURE OF FEMORAL ANEURISM.

We are happy to be able to report that the man operated on by Mr. Robert Perssé White, at the Meath Hospital, Dublin, on Wednesday, October 27, is progressing most favourably. The operation of securing the external iliac (not the *common* iliac, as previously reported) was undertaken for the cure of a large femoral aneurism extending above Poupart's ligament. In the first instance, the artery was constricted by means of a silver wire, and Mr. Porter's arterial compressor, which was kept on for about eighty hours. It was then found to have made but little change in the state of the aneurism, and it was thought better to remove it. After a subsequent interval of seventy hours, no sign of consolidation presenting itself, the artery was again constricted by the same wire (which had been left *in situ*), and a simple compress, made of ivory by Mr. White himself. This was retained on the vessel eighty-two hours, when, on relaxing the screw, the aneurism was found free from the slightest pulsation. Thus, on Friday, November 5, ten days after the operation, the aneurism was completely cured. The wire was allowed to remain on for twenty-four hours longer. On November 9 the limb was warm, and healthy in colour.

INCREASE OF UNHEALTHY DWELLINGS AT BRISTOL.

From a correspondence in the *Bristol Times and Mirror*, initiated by the Vicar of St. Simon's, Bristol, we learn that the number of unhealthy dwellings in that city is being added to daily by the building of houses within the area of the floods of the River Froome. Many of the houses are situated at such a low level that, during flood-time, the floors will be covered with water to a considerable depth. In other instances the level is being raised by means of marl ashes, road-scrapings, and scavengers' refuse; and, on this vile mixture as a foundation, it is intended to raise whole streets of workmen's dwellings. The Local Sanitary Authorities appear to be unable to interfere in the matter, and are about to appeal to the Home Secretary. This is clearly a case which calls for some decided action. Houses are being built in such situations, and in such a manner, as will insure their being hotbeds of disease and

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as they become inhabited; and we trust that, now their attention has been directed to the matter, the Bristol Sanitary Authorities will see to it that the houses are not built as contemplated, or, if built, will condemn them at once as unfit for human habitation.

TYPHOID FEVER AT CREDITON.

The little Devonshire town of Crediton is in a sad plight. Typhoid fever is very prevalent, and spreading to such an extent as to cause serious alarm among the inhabitants. It is the same old story—bad and insufficient supply of water, defective drainage (or, rather, no drainage at all), the careful nursing of cesspits and other abominations, and the want of water-closet accommodation, more than suffice to account for the outbreak. The inhabitants have appealed to the Local Improvement Commissioners for help, and in response the latter have proceeded so far as to get a plan for a new system of drainage from their engineer; but the Commissioners appear to be afraid to commence any sanitary works on account of the inevitable expense to the ratepayers. To add to their embarrassment, the Medical Officer of Health for the town has sent in his resignation, on the ground that his salary—£7 per annum—is insufficient to remunerate him for writing out the reports, etc., that are required of him. We will venture to hope that, after a few more visitations of epidemic disease, the sanitary authorities at Crediton will cease to act as if they thought the pockets of the ratepayers of more importance than the health and lives of the inhabitants generally.

AMATEUR PHARMACY IN SHEFFIELD.

A child died recently at Sheffield through the administration of an overdose of an anodyne teething mixture, prepared and sold by an old woman in Sheffield. The vendor of the nostrum was called as a witness at the inquest, and stated that she had sold the mixture for about forty years. She generally sold a quart a week. She made it herself, according to the following recipe:—Coriander seed two ounces, aniseed two ounces, juniper-berries two ounces, spanish-juice one ounce, opium eighteen grains, and treacle half a pound, boiled with three pints of water, and evaporated to a quart. In addressing the jury, the coroner said that the number of children that had been poisoned by these mixtures was very great. It was the duty of the Legislature to stop the sale of such highly dangerous preparations. At present he could not tell what to do to prevent such practices. He was satisfied that there was no chance of a conviction if he sent the woman to trial for manslaughter. We quite agree with the coroner that the sale of dangerous medicines by amateur pharmacists should be stopped; but surely the present Pharmacy Act contains some clause to meet such cases if anyone could be found to put the law into operation.

NATIONAL TRAINING-SCHOOL FOR COOKERY.

We have, by request, visited the above institution at South Kensington, founded for the purpose of educating children of the artisan class in habits of thrift, cleanliness, and economy in all that appertains to the culinary art. The Society proposes to found a branch in every town and village in the kingdom for training children as cooks. The School Board for London is about to establish district centres where cookery may be taught. The school is divided into four sections—one for scullery cleaning, demonstrations and lectures on middle-class and artisan cookery, and the practice-kitchen. All that is usually consigned to the wash-tub or ash-bin is turned to profitable account, and in this way a fruitful source of illness from decaying refuse in houses is obviated. This department of national education promises to be a great boon to the working classes, besides increasing the supply of "good plain cooks."

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS, IRELAND.

The inaugural meeting took place on Wednesday, November 10. The President, Dr. Samuel Gordon, delivered an address, in the course of which he gave a very interesting and complete clinical history of the fatal illness of the late much lamented Mr. John Hamilton. The other communications were a paper by Sir Dominic Corrigan, Bart., entitled "Observations on Aix-les-Bains"; and one by Dr. A. W. Foot, entitled "Clinical Notes of a remarkable Case of Obesity treated with Liquor Potassæ and Extract of Fucus Vesiculosus."

ROTUNDA LYING-IN HOSPITAL, DUBLIN.

Dr. Lombe Atthill, President of the Dublin Obstetrical Society, and Vice-President of the King and Queen's College of Physicians, has been appointed Master to this institution by a majority of twenty-eight to nine votes. He succeeds Dr. George Johnston, the late Master, whose term of office (seven years) expired on the 5th inst. The appointment has given general satisfaction in medical circles in Dublin.

SCHOOL OF COOKERY FOR GLASGOW.

A conference was held on the 13th inst. to consider the propriety of establishing a school to teach the art of cookery in Glasgow. Mr. Buckmaster, of London, was present, and, in the course of an interesting address, advocated the establishment of a school similar to those in London and Edinburgh. We understand there is every probability of his suggestion being carried into effect.

HEALTH OF GLASGOW.

During the past week the death-rate has advanced from 21 to 26 per 1000. The number for the corresponding week last year was 36. Typhus fever seems to be on the increase, but typhoid fever and scarlatina are going down. The number of fever cases at present in the city is 161, as compared with 530 last year at the same time.

SCARLET FEVER ON BOARD THE "MARS" AT DUNDEE.

The steps taken to check the spread of scarlet fever which broke out a short time ago on board the training-ship *Mars* have proved successful. Though there are now 200 boys in their places, no fresh case has been reported. There are still about twenty boys ill in the infirmary, but all are doing well.

Consultations with Homœopaths.—The question whether it is permissible for a medical practitioner to meet a homœopath in consultation has lately been brought before the Medical Society of Calvados. The report upon it concludes in the following terms:—"Any practitioner calling himself a homœopath, or practising in that capacity, is to be considered as performing an act of charlatanism; and, consequently, any member of this Society should refuse to meet him." The report also observes that homœopathy at the present day is but a vain denomination, since it is nowhere actually practised, only serving as a cloak for charlatanism.—*Gaz. Hebd.*, Nov. 12.

Italian Registration Returns for 1874.—During 1874 there were 951,658 births and 827,253 deaths, so that although the births were 33,530 less than in 1873, they still exceeded the deaths by 124,405. There were 26,991 infants born dead. Of 114 centenarians, 39 were men and 75 women. In 1867 only 753 suicides occurred, and in 1873 there were 975, but in 1874 they increased to 1015, of which number 253 were by females; the greatest number took place in men between forty and fifty years of age (205), and between fifty and sixty (220). The marriages amounted to 207,977, being 6929 less than in 1873. There were 59 girls married at less than fifteen years of age, while 56 women took husbands after they had attained seventy; the men who married after that age were much more numerous—viz., 442.—*Union Méd.*, November 11.

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THE ROYAL VISIT TO INDIA.

We are happy in being able to publish the following letter from a correspondent travelling in the suite of H.R.H. the Prince of Wales:—

H.M.S. *Serapis*, Red Sea, nearing Aden, October 30.

We have got so far on our outward journey, and as we hope to catch the homeward mail at Aden, I write a few lines to tell you that we are in all respects, up to the present time, progressing favourably. The Red Sea has certainly been rather warm and sultry; the temperature has risen to 84° and 86°, and as the air is very damp, and the sea nearly, if not quite, as hot as the air, it is somewhat oppressive; but the ship is so well constructed for the purpose to which she has been assigned, and the ventilation so good, that we have scarcely been incommoded by the heat at all. The health of all, including the officers and crew of the *Serapis*, is excellent. His Royal Highness is in high health and spirits. We have borne the test of the heat of the Red Sea so well, that we may fairly hope that the rest of our travels may be as satisfactory. We hope to be at Bombay on November 8, when you shall have a further report on a subject that I know will interest all our profession—the health of the Prince of Wales in India.

THE EPIDEMIOLOGICAL SOCIETY.

On the evening of Thursday, the 11th inst., the twenty-fifth session of the Epidemiological Society was opened by an address from the President, Mr. Netten Radcliffe, on the progress of epidemiology in England. It was difficult, Mr. Radcliffe observed, for persons who had commenced the study of medicine within the past quarter of a century rightly to conceive the vast progress which had been made in our knowledge of epidemic diseases within this period. Twenty-five years ago the most important class of diseases which at present concerns public health administrations in this country —the continued fevers—was held to be one form of disease having several varieties, the distinguishing of which was expressly deprecated, except for conventional purposes, lest it should detract attention from the unity of the disease. The writings of Sir William Jenner in 1849-51 first made generally known the radical unsoundness of this teaching, and clearly unfolded the insuperable difficulties it had interposed to a sound study of the conditions under which fevers were developed and spread. Confirming and largely extending the researches of previous investigators, Sir William Jenner, in the writings referred to, made a knowledge of the specific characteristics of typhus, typhoid, and relapsing fevers the common property of medical men here and everywhere. These writings were a revelation. The confusion which had previously beset the subject at once passed away, and with it the difficulty which had made all true advance in the investigation of the causes of continued fevers impossible. But Sir W. Jenner's writings at this period were not only a revelation; they were, indeed, much more—they were an instauration. They brought medicine back from a seventh heaven of meaningless verbiage into which it had gone astray in treating of epidemics and their causes, to the true starting-point of all epidemiological knowledge, observations at the bedside. They recalled epidemiology from the outer spheres of semi-mystical speculation to the more moderate compass of a hospital-ward or of a bedroom, and substituted for the cosmos a common bedstead. In other words, they made clear that the difficulties which had prevented a true knowledge of the conditions of development of the most important class of epidemic diseases in England were difficulties arising from an improper discrimination of them. This great lesson has been the groundwork of sound progress in the study of epidemics since that day, and there is not an epidemic disease in our nosology of which an augmented insight has not been obtained from it. Even our knowledge of diseases so familiar as the common eruptive diseases of childhood (scarlet fever, measles, etc.) has been largely benefited by it, as Dr. William Squire has recently amply shown. But an amended discrimination of diseases, Mr. Radcliffe continued, was not the only great result which followed from Sir William Jenner's writings on typhus and typhoid. They exercised a not less important influence upon the notions as to contagion which were current at the time of their publication. A few years before these writings the question as to contagion was dealt with much in the same fashion as the dialecticians dealt with their discussion *de Nasis*, in Slawkenbergius's celebrated tale. They did not concern themselves with facts, they reasoned. Sir Thomas Watson demolished this manner of treating the subject in his well-known lectures, first published collectively in 1843. "You will hear persons," he then said, "disputing about the term contagion, but such disputes can only arise from the want of a distinct definition of the sense in which it is employed. I understand a disorder to be contagious when it is in any way communicable from person to person." The generic sense in which the term contagion is here used has since that time been almost universally adopted by teachers in this country and on the Continent; and it is altogether beside the mark to say of this word, as might be said of numerous other words in use, that the etymological signification is different from that which has become attached to it. But it was not until the discrimination of typhoid fever that it began to be clearly understood that there were ways of communicating a disease previously unsuspected, and that diseases might be communicable in ways peculiar to themselves quite distinct from and altogether unlike the ways of communication peculiar to the more commonly known contagious disorders. The modes of communication of typhus and typhoid, it was shown, were as unlike each other as were their natural histories. Few discoveries in medicine have borne and are still bearing such rich fruits. This discovery has prompted researches into the habits of particular diseases which have shown contagion acting widely, on one hand on common inflammatory diseases which fall within the surgeon's sphere of duty, and on the other in certain widespread chronic maladies. Moreover, in this differentiation of contagions, so to speak, and the modes of contagion has been brought to light that conditional action of contagion which is perhaps the most notable characteristic of modern knowledge on the subject. Mr. Radcliffe described at some length the various as yet ascertained conditions which influenced the activity of contagions and the diffusiveness of contagious diseases, particularly those local conditions which so largely governed the prevalence of typhoid fever, cholera, and other diseases. He showed how much misapprehension on this subject in this country, and more especially in India, was owing to fallacies mostly relics of a period which, if near to us as measured by years, was most remote as measured by the progress of exact inquiry. Especially to the writings of Dr. John Snow on the conditions of diffusiveness of cholera, and of Dr. William Budd on the conditions of the diffusiveness of typhoid fever, he said that they were destined to effect as great benefits in respect to these diseases among populations at large as had been and were still being effected by Jenner's discovery of vaccination. Mr. Radcliffe next described the manner in which the different questions as to contagion and the intimate danger of epidemic diseases were being brought successfully within reach of laboratory experiment and test by the various important researches carried out for the Privy Council under the direction of Mr. John Simon, and especially by the researches of Professor Burdon-Sanderson. Then recapitulating what he had said to this point, he observed that since the formation of the Epidemiological Society the study of epidemics had gained in the discrimination of diseases. Each step in discrimination had cleared up difficulties in the way of a just appreciation of conditions of prevalence. Of the difficulties thus removed, foremost have been such as were dependent upon erroneous conceptions of contagion, a clear knowledge of whose conditional action has now been obtained, together with much defined information of the conditions under which it acts. Of the greater number of current epidemic diseases, and of the one foreign epidemic we have chiefly to deal with—namely, cholera, —we have precise conceptions of the ordinary conditions of its prevalence both local and general, whilst of that of others the further line of research is well defined. Lastly, he said, the way has been prepared for the systematic study, hitherto unattainable, of the special periods of prevalence to which the term epidemic properly applies. Mr. Radcliffe next showed how the veil which had hitherto shrouded the mysteries of epidemicity had begun to lift, and how the time, long and patiently waited for and wrought for, has at length come, when by

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may be indulged of pushing investigation successfully beyond the common conditions of prevalence of epidemic maladies. Recent astronomical and meteorological research had established a relationship between certain larger cyclical meteorological phenomena and successions of good and bad crops with particular cyclical solar phenomena. Here was the clue for the beginning of the analysis of the cosmical relations of epidemics of periods of dearth (relapsing fever, typhus, etc.), and of epidemics most sensitive to meteorological changes (diarrhœa, typhoid, cholera, etc.). Such an analysis, so far as this country is concerned, had been made possible by the prescient labours of Dr. Wm. Farr, which, beginning in 1837, had continued to the present time. Mr. Radcliffe terminated his address by observing that such occultness as may still attach to the phenomena of epidemicity differs in nowise from that which is common to all subjects of scientific research.

NOTE ON THE PREVAILING CHOLERA EPIDEMIC IN SOUTHERN INDIA.

By W. R. CORNISH, F.R.C.S., Surgeon-Major, Sanitary Commissioner, Madras.

THE public anxiety attached to the movements of H.R.H. the Prince of Wales in India, and the telegraphic announcements that the tour arrangements of his Royal Highness have been marred by the presence of epidemic cholera in the southern districts of the Madras Presidency, make any information on the subject of cholera in that part of the country of more than ordinary interest. When I left India in March of the present year, the whole of Southern India was perfectly free from cholera. In November and December, 1874, and in the early months of 1875, the Prince of Wales might have traversed every district in the Madras territory without even hearing of such a disease; and this remarkable freedom had lasted from the year 1872 down to April and May of the present year. In February, 1875, cholera was reported to exist in epidemic form at Colombo and Galle, the two chief ports in the Island of Ceylon. Landing at Galle in the end of March on my way to Europe, I learned that the epidemic was still prevailing in Ceylon, and in writing thence to Dr. King, of Madras, who is acting during my absence as Sanitary Commissioner, I drew attention to the possible danger of the epidemic spreading from Ceylon to the mainland. In April or May, epidemic cholera appeared at Negapatam, a port in the Tanjore district of Madras, which is much used by the emigrants proceeding to and returning from Ceylon; and Dr. King, who investigated the circumstances, wrote me some months ago that the outbreak in Negapatam was unquestionably due to the arrival of coolies from Ceylon suffering from cholera.

From Negapatam the epidemic became diffused through the Tanjore and Trichinopoly districts, and the weekly records in the local newspapers inform me that it has since spread in nearly all the southern and central districts, and that it is at the present time diffused over a large area in Southern India.

In Southern India there are two periods of the year of cholera intensity; the first period is from July to September, and the second from November to February. The latter period is usually the one in which the epidemic is most severe in the districts south of 15° N. latitude.

From the rapid diffusion of epidemic cholera in Madras during the last few months, there can be no doubt that this is an invading epidemic. From the fact of its early appearance on the high table-lands of Mysore, I am inclined to think that the epidemic is likely to be a severe one, as, in all the great epidemics we know of, the Mysore country has suffered early and severely. The circumstances are sufficiently grave to justify Dr. Fayrer in the advice he appears to have given regarding the proposed change of tour of H.R.H. the Prince of Wales. Great crowds are unavoidable in connexion with a royal progress, and the massing of the people is a thing to be specially avoided in these unhappy seasons of cholera invasion. I observe that some organs of the public press have described the cholera now prevailing as of a local or sporadic type, and they have prophesied its disappearance in the cold weather. I wish it to be distinctly understood that the present outbreak of cholera in Southern India is not of the innocuous character represented by the correspondents of the daily press. My forebodings on this subject were some months since laid before the acting Governor of Madras, and the public may rest assured that the local authorities in India are fully alive to the gravity of the circumstances, that the tour programme of the Heir-Apparent was not modified without sufficient cause being shown. If the present epidemic is of the character I believe it to be, it is not likely to die out entirely for the next two years; and during this time, in favouring seasons, local outbreaks of a severe and deadly type are to be apprehended.

There are some very curious facts in regard to the epidemic now prevailing, which I will only briefly advert to on the present occasion.

The cholera undoubtedly reached Madras territory in this instance by way of Ceylon, whereas in all the records I have been able to consult, and according to all recent experience, cholera epidemics have progressed from Central India through the southern provinces, and finally passed over to Ceylon. The evidence in regard to this question depends on the dates of outbreak in the several localities, and so far shows Ceylon to have been affected some months before cholera appeared in Southern India in the present year.

The last invading epidemic of cholera pursued a peculiar course in the Madras Presidency. It came upon us in the year 1872, and progressed from the north in the usual way, until it stopped short about the River Kistnah, and did not reappear in succeeding seasons. Meanwhile, cholera moved down to the east of the Bay of Bengal, through Chittagong, Burmah, Tenasserim, Siam, and to the mainland and islands of the Straits. In 1873 and 1874 we heard of cholera embarrassing the Dutch forces in the war with Acheen, and, with this knowledge of the Eastern extension of cholera, the question naturally suggests itself, whether Ceylon might not have imported its cholera about the end of 1874, or beginning of 1875, from some of the trading ports in the Straits.

I have no evidence of any kind on this point, but it is quite certain that Ceylon could not have got its cholera from Southern India on this occasion, because there was none to be transported. The people of Southern India have been so long free from cholera, that this new epidemic is but too sure to find conditions suitable for its spread.

5, Sunderland-terrace, Westbourne-park, W.

FROM ABROAD.

CHANGES IN THE NAILS OF THE FINGERS AFTER ACUTE DISEASES.

AT the recent meeting at Graz (*Wien. Med. Zeit.*, October 26), Dr. Roth, of Bamberg, read a paper upon this subject, observing that although these changes occur with a certain amount of frequency, they have been but little observed, since patients do not remain long enough under observation after the termination of acute diseases. His attention has been drawn to the circumstance from having had the opportunity of observing it twice in his own person within the space of two years. In both instances this was after phlegmonous angina, the first attack being severe, and lasting for three weeks, and the other milder, terminating within twelve days. Some time after the termination of the malady, transverse furrows were observed in the lunula of the nails, running parallel to the free edge of the nails, these being pretty deep in some of them, especially those of the thumbs, and only superficial in others. They were formed gradually, and, in the further growth of the nails, the portion lying posteriorly to the furrow no longer exhibited its normal shining colour, but was very dull—an appearance that was plainly visible three months after the commencement of the illness. After the second illness the distance of the furrows from the edge of the attachment of the nail was measured at intervals of a week, and it was found that the growth of the nail amounted for the most part to half a millimetre in a week, and only in some nails to one millimetre per week. These results differ somewhat from those of Vogel, who places the growth at one millimetre per week; and probably there are individual differences, as Beau found that for every millimetre of advance forwards of the furrow four weeks were to be reckoned. It is also probable that there may be differences of advance in different diseases. In Dr.

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Roth's case, traces of the appearance were observable for nearly five months afterwards.

After referring to some notices by authors on changed condition of the nails, Dr. Roth observes that among the most interesting of these are the changes in their form and growth which seem to be dependent upon severe affections of the nervous system. Dr. Weir Mitchell describes the case of a woman, fifty-six years of age, in whom, after central paralysis of the left extremities, there were formed deep, saw-like furrows on the nails of the left hand, while the nails grew decidedly slower than on the unaffected right side. In a man, forty-seven years old, with paralysis of the right side after apoplexy, the nails of the right hand remained for three weeks without any change, and then began to grow again, movement of the hand and then of the arm also having again returned. In another case all growth of the nails of the affected side was stopped for seventeen days, and four days after the growth had recommenced, motion of the affected limbs was also observed. In this case, faradisation of the nails and soaking in warm water in nowise favoured the growth. According to these observations, therefore, the growth of the nails formed a valuable prognostic, inasmuch as it was the first sign of improvement. In traumatic paralysis of the radial nerve, Broca has observed, on the contrary, increased growth of the nails and hairs.

In Dr. Roth's own case he experienced a symptom which he has nowhere found indicated by others—viz., an abiding sensibility in the locality of the furrows, which was frequently increased to severe pain, when a sensation would be produced as if the nail were raised from its bed, or even torn away. Altogether, he regards the subject of sufficient interest to call for further observation, and he strongly recommends it to the notice of such practitioners who continue their intercourse with those who have been their patients.

Gynæcology in Vienna.

Under this title, Dr. Bozeman, the well-known writer on the surgical diseases of women, communicates, in a letter to the *New York Medical Record*, September 5, his impressions, from a prolonged examination, of the midwifery and gynæcological departments of the Vienna General Hospital. These receive from 8000 to 10,000 patients annually, and consist of three divisions, each having 180 beds, two for physicians and medical students, and one for midwives. To the former are appropriated about thirty beds each, for the diseases of women that are connected with the lying-in period. Of one of these divisions Prof. Carl Braun is at the head, and Prof. Joseph Spaeth of the other. At the head of the division for midwives Prof. Gustav Braun is placed, having Drs. Welponer and Paulik as assistant-physicians. In the Austrian empire there are twelve schools for physicians and twenty-six for midwives, the three principal schools of midwifery being Vienna, Pesth, and Prague. It is hence obvious "how much importance is attached there to the teaching and training of midwives, which is now only beginning, it seems, to awaken an interest in countries other than those of continental Europe, where the system has been for so long a time more or less in vogue." To study the system adopted at Vienna was a chief object of Dr. Bozeman's visit, and he found Prof. G. Braun lecturing to a class of women numbering about fifty, a large proportion of whom seemed to possess more than ordinary intelligence, judging from their prompt replies to the questions of the Professor, and when on duty in the wards, where from eight to ten deliveries took place daily. The operations performed by the Professor and his two assistants are very numerous, and great dexterity is naturally acquired. Simpson's forceps, with a slight modification of the blades, is the one preferred. The rule is to give castor-oil on the third day; and peritonitis and perimetritis are usually treated with digitalis, quinine, salicine, and morphia injections, varied according to circumstances, cloths wrung out of water of the temperature of the room being applied every half-hour. For tympanites, the abdomen is spread over with collodion, Prof. Braun attaching much importance to its compressive power. During three years he has had no case of rupture of the uterus or vesico-vaginal fistula, and very few cases of complete rupture of the perineum. Superficial rupture is quite common, for which two or three *serre-fines* are employed. In nearly all the forceps cases the practice is to make lateral incisions of the vulva, one to two inches on either side of the fourchette.

"In conclusion, now, I have only to say that the Vienna School of Midwifery furnishes, according to my judgment, a most excellent model of organisation and usefulness, and I earnestly recommend it to the notice of the profession. For many years I have myself been thoroughly convinced of the great necessity of such institutions in our own country, as a means tending to lessen the accidents of parturition, which I have so often been called upon to witness as a result of the ignorance of our so-called midwives; and equally long have I wondered why some of our medical institutions, possessing clinical advantages, have not taken the lead in organising schools for this worthy object, so essential to the well-being of society in every community.

"I will briefly state that the other two departments, under the direction of Professors C. Braun and Spaeth as physicians, are conducted in a similar manner to the above as regards midwifery, the difference being mainly in the gynæcological feature, which is also employed for clinical teaching. What strikes one in this connexion as a little singular is the smallness of the accommodation for diseases of women in a hospital so large. Prof. C. Braun holds the first place in the empire as a gynæcologist, and controls a very large practice, but he performs very few of the capital operations in his branch. Nearly all his cases of ovarian tumour, and many of vesico-vaginal fistula, he transfers to Prof. Billroth."

The operation for vesico-vaginal fistula being that in which Dr. Bozeman has gained so much distinction, he naturally paid much attention to it in Germany. Indeed, one of the chief objects in his visit was to study the results of Prof. G. Simon's (of Heidelberg) "doubtful expediency of *Kolpokleisis*." He had the opportunity, by the courtesy of this professor, of testing the applicability of his own operation in cases supposed to present insurmountable obstacles, excepting by the expedient of *Kolpokleisis*. In these cases, and in others submitted to him at Vienna, he found himself able to "adhere to my standard of cure—namely, the coaptation of the fistulous edges, and preservation of all the functions of the organs involved." He hopes, he states, soon to submit his views in an extended form.

Dr. Bozeman subjoins to his letter a copy of Prof. G. Braun's replies to a series of queries as to the details of the system of instruction of midwives pursued at Vienna, forwarded by Earl Derby through the British Ambassador.

The Accidents and Failures of Transfusion.

Treating of these in a paper read at the late Brussels Medical Congress (*Presse Méd. Belge*, Nov. 7), Dr. Casse observed that first among the accidents following the operation shivering may be noted. It comes on in from a quarter to half an hour, and is sometimes so intense as to resemble a convulsion. Dr. Casse has never known it to be absent, and that whatever blood might be employed; but only in one instance, among fifteen operations he has himself performed, has he known the shivering to recur after it has once ceased. Warm drinks and broths, and hot bottles to the feet are the means which seem to be most useful. Suppuration of the wound and phlebitis are said to be of frequent occurrence, but this is not in accordance with Dr. Casse's observation. Diseased veins are very susceptible of inflammation, but when in a normal state they seem capable of being punctured almost with impunity. In general, the wound caused by the operation heals by the first intention, and is very rarely followed by prolonged suppuration. With respect to phlebitis, Dr. Casse cites a case which should put us on our guard in attributing this too readily to the operation. A patient suffering from alarming epistaxis, it was decided to resort to transfusion, but the operation was not performed owing to the impossibility of finding a vein of sufficient calibre. In the meantime, plugging had succeeded in arresting the bleeding, and transfusion was never attempted. The patient did well, but at the end of a week true phlebitis of the saphena occurred and led to a complete obliteration of the vessel. Had the blood been injected by this vein, as it was wished to be, the subsequent phlebitis would certainly have been attributed to the transfusion.

Among the causes of want of success in transfusion the principal is its application to cases that it is not suited for. When it is objected that there is a greater proportion of failures after transfusion than attend other means of treatment, it is to be observed that the territory occupied by it is a new one, and that the experimental investigation has not sufficiently advanced to allow of the circumstances favourable to its employment being yet rigorously laid down. In transfusion, also, almost all the instances in which it has been performed have

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been recorded, which cannot be said of other therapeutical agents.

It is to be recollected that transfusion is not applicable in all cases in which the blood has undergone change in its composition or quantity; and it is only under certain conditions that it is admissible. Among these are chronic or acute simple anæmia; certain cases of mania, especially when related to anæmia; and some forms of poisoning, such as that by the oxide of carbon, chloroform, etc. In other cases it may produce a certain amount of amelioration without effecting a complete cure. Even in suitable cases, failure may ensue from too little blood being injected, or from the disease being advanced too far. Statistical deductions with respect to transfusion have often been imperfectly made, in consequence of the circumstances under which the operation has been undertaken having been insufficiently inquired into. If the different cases of transfusion are attentively examined, it will almost always be found that when the indications for its performance have been precise and its execution has been skilful the results have been favourable, and that whether defibrinated blood has or has not been employed. There is a future for this operation, when time and experience have determined its true indications. There is something besides the mere adding blood to blood,—an energetic modification of the economy taking place, the laws of which will be known at a later period. It is only then that we shall be able to appreciate at its true value this powerful therapeutical agent.

PROVINCIAL CORRESPONDENCE.

SCOTLAND.

Edinburgh, November 11.

Opening of the Medico-Chirurgical Society.

The first meeting this session of the Medico-Chirurgical Society took place yesterday. The President, Dr. Haldane, occupied the chair, and there was a good attendance of members. This meeting was, at the outset, remarkable for an entire absence of pathological specimens, the exhibition of which usually occupies at least the first hour. It is to be hoped that this is a favourable sign, and indicates a desire on the part of the surgeons, who are the principal exhibitors, to exercise that self-repression in this direction which is so necessary for the prosperity of the Society.

For some years past the growing tendency to produce, at each meeting of the Society, everything great or small—from a corn or wen to a huge ovarian tumour—that has been removed by operation from the human body, has been becoming intolerable. We are not yet in a position to establish a separate Pathological Society in Edinburgh; but we have certainly reached the period when it has become necessary—if members of the Society are not to be driven from attending its meetings altogether by the constant postponement of papers which they have come, often long distances, to hear—to impose some definite restrictions on the length of time to be allowed for the exhibition of pathological specimens.

The first paper read was by Dr. John Duncan on "The Treatment of Nævus." It is impossible to give a fair abstract of this paper, which was characterised by fulness and conciseness; but I would beg to draw the attention of surgeons to it, as a most able discussion of a topic on which no one in this country is entitled to speak with more authority than the author. It will, I believe, appear shortly in the *Edinburgh Medical Journal*, and will repay a careful study.

In the second paper Dr. W. Craig discussed "The External Applications of Chloral." 1. Several bodies were injected with a solution of hydrate of chloral (ninety grains to each body), and placed within the dissecting-rooms of Edinburgh University. These subjects were as well preserved from putrefaction as bodies injected with the ordinary preserving fluids. The muscles were softer, but the nerves could be more easily dissected out. The colour of the parts was well preserved, except when they were carelessly exposed to the air, in which case they became much darker in colour, and gave off a peculiar mawkish odour. 2. The employment of solution of chloral as a preservative fluid for anatomical specimens was next illustrated. Dr. Craig showed a "wen" which had been in a solution of chloral (five grains to the ounce of water) since August, 1874. He also exhibited the lungs, heart, liver, kidneys, and other viscera of a rabbit which had been kept in the same way since December last. These were all very well preserved. Three minnows which had been in the chloral solution since February had retained their colour beautifully. Dr. Craig also mentioned that, at his suggestion, Mr. Stirling had put up some preparations in chloral at the Anatomical Museum of the University of Edinburgh. 3. In surgical cases a lotion containing five to fifteen grains of the hydrate to the ounce of water had been found to form an excellent application to wounds, ulcers, burns, etc. In these cases chloral acts as an antiseptic and as a sedative. Several cases were mentioned illustrative of the value of the local application of the hydrate of chloral in surgical practice.

A letter was read from Dr. P. Heron Watson, who has had considerable experience of the employment of hydrate of chloral as a surgical dressing. Dr. Watson regretted that he was not able to be present at the meeting and bear testimony to the efficacy of the lotion of chloral as an application to wounds.

Dr. John Duncan had employed the solution of chloral according to the antiseptic method—employing both spray and dressing—in a case of amputation at the thigh. It was used as a spray during the operation, but the vapour was found to be most disagreeable and irritating to the air-passages, greatly incommoding those engaged in the operation. But this was not all, nor the worst of it. A short time after the wound had been dressed in the manner recommended, the patient was found to be so deeply narcotised with the chloral which had been absorbed from the dressings that the latter had to be removed, while the patient was only with difficulty, and after considerable anxiety, roused out of his stupor. Dr. Duncan's experience of chloral in this case did not lead him to expect great things from its employment as a dressing in surgical cases.

Dr. Craig regretted the absence of Dr. Watson, who was in a position, from considerable experience of its use, to give evidence in favour of the local use of this substance as recommended by him.

The third paper read—for which the Society was also indebted to Dr. W. Craig—was on Jaborandi. Dr. Craig related several experiments with the infusion of jaborandi. In all these he used the strained infusion, and in no case failed to get the actions of jaborandi both as a sialagogue and as a diaphoretic. He maintained that the active principle of jaborandi is soluble in water, and that the strained infusion possesses all the activity of the drug. This, he held, was proved by his experiments. He also experimented with a substance prepared by Messrs. J. F. Macfarlane and Co., of this city, called "pilocarpine"—a substance destitute of the acidity and characteristic odour of jaborandi. This substance was perfectly soluble in water, and possessed all the physiological actions of the drug. It was very active in doses of one grain. He found that, when injected up the rectum, both the infusion and the pilocarpine produced the same effects as when swallowed. Dr. Craig made some remarks on the botany of the plant, and then recommended jaborandi in fevers, dropsies (especially into the pleural cavities), diabetes, etc. The following conclusions were deduced from his experiments:—1. The leaves are possessed of remarkable diaphoretic and sialagogue properties. 2. Boiling water is capable of extracting the most, if not the whole, of their properties. 3. The strained infusion possesses all the activity of the drug, and seldom produces any untoward results. 4. A substance (pilocarpine) destitute of the characteristic odour of jaborandi, free from acidity, perfectly soluble in water, and which possesses the physiological properties of the medicine, may be separated from the crude drug. 5. The dose will correspond to from five to twenty grains of the leaves, and from one-twelfth to one-third of a grain of pilocarpine.

Dr. Brakenridge had had some experience of the uses of jaborandi in various conditions. He might mention the following:—In a case of pleuritic effusion a full dose rapidly removed the effusion. It returned to some extent two days later, and was again removed permanently by a second dose, followed by appropriate treatment. He had at present two cases in his wards in the Royal Infirmary under treatment with this drug. One, a young man suffering from severe post-scarlatinal nephritis, had now taken daily thirty grains in divided doses, for about ten days, with most satisfactory results. The other case was more interesting, and he would refer to it in detail, because the condition which it illustrated (post-scarlatinal dropsy) was one in which he believed jaborandi would yet prove very useful. The patient, a boy fourteen

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years of age, was brought into his ward from Dr. Guthrie's Ragged School, on October 20. He was then suffering from very marked anasarca of the face, throat, and abdomen, with considerable ascites, a very slow pulse, ranging from forty to sixty per minute, and a normal temperature. There was a very small proportion of albumen in the urine, and the bowels were regular. Ordinary treatment by digitalis and other diuretics, purgatives, and hot external applications to induce perspiration, was persevered in for five days, not only without benefit, but with the result that the patient's condition had gradually become worse. On the sixth day, on going into the ward, Dr. Brakenridge observed that the breathing was laboured, and found, on auscultation, considerable œdema of both lungs. The amount of albumen in the urine had also increased, and the total amount passed in the twenty-four hours was only twenty ounces. The same afternoon, about three o'clock, convulsions commenced, and before nine o'clock on the following morning he had twenty-one fits. These were controlled by the inhalation of chloroform. The digitalis, which had been administered by the mouth, being now vomited, was ordered to be given by the rectum, and dry-cupping to be applied over the loins. Mr. Forjett, Resident-Physician in the Fever-House, that afternoon administered —most appropriately, as the result proved—ten grains of jaborandi, followed by doses of five grains until thirty grains had been administered. A moist state of the skin, with gentle diarrhœa and a moderate flow of saliva, was thus induced. This action was, by Dr. Brakenridge's orders, kept up steadily day after day, by the daily administration of thirty grains of the drug in divided doses as at first. In three or four days the dropsy had entirely disappeared, and the urine was normal in amount, with only a trace of albumen. The other points of interest in this case to which Dr. Brakenridge wished to draw attention particularly were the following:—1. The action of the jaborandi on the skin, bowels, and salivary glands was, contrary to what might have been expected, accompanied by a steady increase in the amount of urine passed. Thus the daily quantities, dating from the twenty-four hours previous to the commencement of the jaborandi, were 20 oz. on that day, then 26, 28, 30, 60, 65, and 67 oz. on the following six days respectively. That this increase in the amount ought to be attributed, not to the dry cupping, nor to the digitalis, but to the jaborandi, was clear; for after it had been given for nine days, the amount of the urine being then 65 ounces, the supply of jaborandi ran short. Only ten grains were given on the succeeding day, and none at all on the next, and the urine again fell, notwithstanding that the digitalis was still continued, to 45, and then to 35 oz. A new supply of jaborandi having been obtained, and its administration resumed, the amount of urine passed again rose at once to above 60 oz. This Dr. Brakenridge considered a most important fact, if confirmed by further cases. 2. Little effect was produced on the temperature or pulse. 3. Both in this case and the one immediately preceding it, among the first effects of the drug observed were an improvement in the general feelings, and increased appetite. In this boy it became, and had continued, ravenous. 4. Dr. Brakenridge believed the method of giving the drug in small frequently-repeated doses, adopted in these cases, will prove to be the most effective and safe mode of administering it. In this case it had been continued steadily—with the exception of the interval referred to, when the supply ran short—for a fortnight, with the effect of accomplishing a complete cure. Dr. Craig had stated that the action of jaborandi was identical with that of the active principle (pilocarpine). Dr. Brakenridge observed that Mr. Langley, of Cambridge, in an able article on the action of jaborandi on the heart, published in the *Anatomical and Physiological Journal* for October, held that the actions of pilocarpine and its nitrate and hydrochlorate, which were all originally discovered by Mr. Gerrard, of University College Hospital, London, are not identical with that of jaborandi. He thinks, therefore, that there is probably more than one active principle in the drug. Dr. Brakenridge ventured, in conclusion, to throw out a suggestion to the accoucheurs who were present. Experiments regarding the action of jaborandi in exciting increased secretion of glands have been made chiefly on the submaxillary gland. From the investigations of Heidenhain, Vulpian, and others, it would appear that both jaborandi and its physiological antagonist atropia act on the terminations in the gland of the true secretory fibres of the chorda tympani, not on the vaso-dilator or vaso-inhibitory fibres of the nerve. Further, Dr. Sydney Ringer believes that belladonna applied locally to the breast arrests the secretion of milk by thus acting locally on the terminations of the true secretory fibres of the motor nerves of the mammary gland. Might not the external application of jaborandi, from its perfect antagonism to atropia, be expected, in like manner, by acting on the same glandular nerve-terminations, to stimulate the secretion of milk, when an increased flow of that fluid was desirable?

Dr. Claud Muirhead stated that his experience of the employment of jaborandi did not correspond with that of Dr. Brakenridge. He had given it in a case of dropsy which occurred in Dr. Haldane's wards in the Infirmary, when they were under his (Dr. Muirhead's) care. He began with moderate doses in this case, increasing the doses gradually, until the patient got thirty grains three times daily. The treatment had not the slightest effect in relieving the patient.

GENERAL CORRESPONDENCE.

THE OWENS COLLEGE, MANCHESTER.

LETTER FROM DR. A. GAMGEE.

[To the Editor of the Medical Times and Gazette.]

SIR,—As Dean of the Medical School of Owens College, I beg to draw the attention of your readers to the fact that the number of students of the largest of the provincial schools of England is really increasing, and not diminishing, as they would gather from an examination of the numbers of the students entered upon the returns made to the Government Inspector of Anatomy by the Royal College of Surgeons. This year the number of medical students who have registered as such in Owens College amounts to 156, as compared with 142 in 1874, and 138 in 1873—results which indicate that the increased educational facilities which are now afforded in Owens College have apparently not been without some effect on our numbers. It has been a custom in the Manchester Medical School to enter upon the Practical Anatomy return, made to the College of Surgeons, the names of all the students of the School. I am not aware when this incorrect practice originated; it existed, at any rate, before the incorporation of the Medical School with Owens College; and by some oversight it has existed until this year, when, in my capacity as Dean of the Medical School, I superintended the returns made to the Royal College of Surgeons. As this year our Practical Anatomy return includes only *bonâ fide* dissecting students, whilst last year it included every student of the School, it *appears* to indicate that our numbers are falling off. As I believe all will agree that it would be a misfortune to the cause of medical education if the efforts which are now being vigorously made in Manchester to form a great provincial medical school were to fail, I trust you will insert this explanatory letter in the columns of your paper.

I am, &c.,
ARTHUR GAMGEE, M.D., F.R.S.,
Brackenbury Professor of Physiology in Owens College; Dean of the Medical School.

November 16.

THE CHELSEA HOSPITAL FOR WOMEN.

LETTER FROM MR. JAMES DEBAC.

[To the Editor of the Medical Times and Gazette.]

SIR,—Some comments appeared in your issue of the 16th ult. on the expenditure at the Chelsea Hospital for Women. As Treasurer of that institution, I shall be much obliged if you will permit me to offer some explanation. With regard to the amount for housekeeping, it has been found, on a careful examination of the accounts for the past year, that various items were erroneously included, which should be deducted from it before a fair comparison can be made. They are as follows:—Arrears, £23 0s. 3d.; linen, etc, £13 13s. 9d.; laundress, £26 7s. 9d.; wages (servants), £35 13s. 5d.; postage, £8; newspaper, £1 16s.; total, £108 11s. 2d. This deducted from £469 16s. 4d., gives £361 5s. 2d., which will be, therefore, the correct amount of housekeeping expenditure. The balance-sheet exhibits a total outlay of £1872 3s. 11d., but this includes arrears and non-recurrent expenses, which may be fairly taken at between £400 and £500, leaving £1400 as the actual expenditure of the Hospital; but with the

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amount reduced to these more moderate proportions, the Committee would be far from satisfied if they were not also using strenuous efforts to accumulate a fund for the purpose of extension. When the Committee are able to obtain a building more suitable to the requirements of the Hospital, the proportion of expense to relief afforded will be very largely diminished. On behalf of the Committee, I may say that they court inquiry, and sincerely desire to profit by all fair criticism.

November 11. I am, &c., JAMES DEBAC.

[We will leave our readers to estimate for themselves the value of the above explanation, the result of a three weeks' incubation, as a reply to our article on the Chelsea Hospital for Women. On our own part we will only remark that the *naïve* admissions by the Treasurer, that "a more careful examination of the accounts" has shown that of the total sum charged to "housekeeping" nearly 30 per cent. was erroneously so charged, and that of the total expenditure—£1872 for the year—a sum "which may be fairly taken at between £400 and £500" ought to have been placed under other heads, more than justifies our criticism of the balance-sheet. The Treasurer, not unnaturally perhaps, confines his reply to financial points.—ED. *Med. Times and Gaz.*]

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, NOVEMBER 3.

WILLIAM OVEREND PRIESTLEY, M.D., F.R.C.P., President, in the Chair.

THE following gentlemen were elected Fellows of the Society:—John Ford Anderson, M.D.; R. T. Fancourt Barnes, M.B.; John Branson, L.S.A. (Rotherham); and William Stewart, L.R.C.P. Ed. (Barnsley). The President announced that Dr. Farre had accepted the Honorary Presidency of the Society.

HYDROCEPHALIC HEAD IMPEDING DELIVERY.

Dr. EDIS exhibited an infant which presented by the breech; traction upon the trunk failing to accomplish delivery of the head, Dr. Edis was sent for. Examination of the abdomen showed that no second child was present, so that the question of twins with locked heads was negatived. The patient was a pluripara, and vaginal examination failed to detect any deformity of the pelvis. The child being dead and the head evidently much enlarged, perforation behind the right ear was effected, a gush of clear fluid confirming the supposition that had been made that the case was one of hydrocephalus. Delivery was then readily accomplished. The head when distended with fluid measured seventeen inches in circumference. The patient convalesced normally. The placenta had been examined microscopically by Dr. Coupland, who failed to detect any change in its structure throwing light upon the case.

GENERAL ANASARCA IN A FŒTUS.

Dr. PROTHEROE SMITH exhibited a fœtus of six months and a half, the subject of general dropsy. The mother, aged thirty-five, had previously had three living children born, three miscarriages, and three premature labours at the twenty-sixth week following each other. In the last two pregnancies she had suffered from albuminuria and liver derangement. Before the eighth labour the patient was kept lying up and well fed; before the last she got about and was thin. On both occasions there was incompressibility of the pulse and flushing of the face; and the labour was attended by considerable hæmorrhage both before and after. The body of the fœtus was anasarcous; there was a large quantity of clear brownish-yellow fluid in the peritoneal cavity, and also some fluid in the pericardium and pleural sacs. The kidneys were healthy. The placenta was large, and consisted of only the fœtal portion.

The PRESIDENT inquired whether there was any trace of syphilis in the mother, and whether the œdema existed during the life of the fœtus, or was only a post-mortem appearance, the result of decomposition.

Dr. SMITH replied that the fœtal heart had been heard the day before birth.

Dr. BRAXTON HICKS inquired whether there was any symptom of obstruction to the funis, to which

Dr. SMITH replied in the negative.

Dr. SNOW BECK stated that the fœtus when born was in such a fresh, healthy condition as to preclude all idea of decomposition.

CASE OF GENERAL DROPSY IN A FŒTUS.

Mr. LAWSON TAIT related the particulars of a case where the skin was so tense that it was not possible to bend the limbs without risk of bursting it, and the scalp was so distended that the bones could nowhere be felt, and, in fact, the head had been mistaken for the breech during labour. The abdomen was enormously distended by highly albuminous fluid, as also the pleuræ and pericardium. The placenta was large and very œdematous. The cause of the general dropsy seemed to be the premature closure of the channel between the auricles, there being no direct opening between the auricles through the foramen ovale.

Dr. PROTHEROE SMITH considered this to be evidently a disease primarily and altogether of the ovum, whereas in his own case the disease had originated from the disordered health of the mother. He would like to know whether any of the Fellows had met with similar instances—hyperæmia with liver derangements. There was in his own case great peculiarity of the pulse, which was extremely incompressible. The mother's lips were of a crimson tint, and she had had several abortions. In one patient who had aborted seven times, he had bled her once and she went to full time. In his case he had tried abundance of fruit and wine in one pregnancy, and exactly the reverse in the latter, the result being the same in both. He had witnessed in a few cases frequent consecutive abortions at about the fifth or sixth month arrested by venesection, and followed in succeeding pregnancies by living children.

Dr. MADGE said he could hardly accept Dr. Smith's explanation as to the cause of the death of the fœtus. He had given considerable attention to the subject, but he had never understood that a common disease or derangement of the liver in the mother could affect the child in utero in a somewhat similar way. It was well known that the mother may be morbidly affected in many ways—even with albuminuria resulting in convulsions,—and still give birth to a perfectly healthy child. A syphilitic history, if such existed, might afford an explanation. The fœtal liver, receiving the tainted blood direct from the mother, became affected with syphilitic inflammation and deposit, leading to obstruction of the portal system and ascites.

Dr. ROUTH inquired if there had been any specific examination of the foramen ovale of the first child.

Dr. HEYWOOD SMITH replied that the heart on examination was found to be perfectly normal. The last three times pregnancy had ceased at the twenty-sixth week, showing that there was some disease of the ovum. The liver was also disordered in former confinements. He would be glad if any fellow of the Society could throw any light upon the intermittence of the albuminuria during pregnancy.

Dr. SNOW BECK remarked that he had the opportunity of examining both Dr. Smith's cases, and had also seen two other very similar specimens. The clinical histories of each had been very much alike. Healthy living children at first; then premature expulsion of a dead fœtus about the six month, presenting evident signs of previous and serious disease. Effusion of fluid into the peritoneal cavity existed in all, far too large in quantity to be the result of post-mortem change. The organs, excepting the liver, were healthy; this was paler than normal, soft, readily torn with the finger, the liver cells being much broken down. The parents were singularly free from even the suspicion of a syphilitic taint. The effused fluid was too large and too generally diffused to be caused by any mechanical disturbance of the circulation. The only probable explanation of this condition of the fœtus, appeared to be from some deficient or altered state of the nutrition—whether fœtal or maternal it appeared impossible to determine from the facts at present known.

The PRESIDENT said that in considering the pathology of these cases it was well to bear in mind that the subcutaneous cellular tissue in children after birth was prone to become œdematous from the infiltration of serum in certain depressed conditions of health. It was no uncommon occurrence in hospitals, to find children who had been ill-fed and exposed to adverse influences the subjects of general œdema, which might proceed to an extreme degree, without such malformation or disease as to account for it. The villi of the placenta in Dr. Protheroe Smith's case had the appearance of being

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atrophied; and he might suggest that possibly the œdema in the child was due to its imperfect nutrition in utero, and to the passive congestion this induced.

On a New Form of Blunt Hook and Sling for Assisting Delivery in Cases of Breech-Presentation.

Dr. J. G. Swayne (of Bristol) brought forward a communication on this subject. The instrument consisted of an ordinary blunt hook with the end curved back upon itself, so that a loop could be hitched upon it. When the hook was withdrawn, after being passed over the groin, the sling, consisting of a piece of strong silk cord with a loop at each end, was left *in situ*. Traction was then made in the usual way, and, as the sling was padded, there was less risk of injuring the soft parts of the child than when the ordinary blunt hook was employed.

Dr. J. Braxton Hicks thought that in the use of the blunt hook sufficient attention had not been given to the assistance afforded by external pressure applied to the fundus uteri in breech cases, and the delivery of the aftercoming head through the brim. He thought half the strain was taken off the thigh, and that without undue crushing of the uterine wall, by the hand-pressure. Text-books generally omitted to notice the great help given, and although he had no doubt some practitioners employed extreme pressure, yet very frequently it was never thought of, but all the force was put upon the hook.

Dr. Madge had had reason to be dissatisfied with the blunt hook. He was afraid that in any case, when much force was required, some injury must be inflicted, whatever the plan adopted. He had suggested covering the hook with india-rubber, compressed sponge, or wash-leather. If this could be properly carried out, it would probably be a safer instrument than Dr. Swayne's, and could be much more quickly and easily applied.

Dr. Aveling remarked that the life of indiarubber was only about three years, it then became brittle, and if put aside would be found useless. He feared, therefore, that the suggestion, though ingenious, was not very practical.

Dr. C. Godson agreed that whenever a foot could be brought down in an impacted breech it was the best plan to adopt, but where this was impossible, the hook must be employed. He had recently tried that known as Lazarewitch's, but found that the bulb at the extremity of the hook was the point which received the force applied, and pressed severely upon the tissues. He regarded it as a dangerous instrument. In one instance the skin had been cut through, and much bruising of the surrounding soft tissues produced, by its employment.

Dr. Lawrence had seen a case where the saphena vein had evidently been lacerated from the use of a blunt hook. The sling was far less likely to cause injury.

On Prolapse of the Funis during Labour.

Dr. George Roper read a paper, tending to show that this accident was rarely primary, but mostly the result of some other abnormality. After alluding to the various conditions predisposing to this complication of labour, and mentioning the different methods of accomplishing reposition, he stated that the real difficulty consisted in keeping the cord within the uterus after it had been returned. The best means of doing this seemed to be in securing the firm adaptation of the presenting part to the os uteri. The question of turning in place of forceps was then considered; the author preferring the latter method, considering that there was less shock to the mother. Reports of six cases were given. The author concluding by stating that prolapse of the cord is for the most part associated with some other complication of labour, and that it behoved us to make observations as to what that complication might be, as the management of the cord would in a great measure depend upon the nature of the complication —in some cases the funis could be saved from pressure, in others not.

Dr. Braxton Hicks had employed cephalic version in transverse presentations with prolapse of the cord, using one hand externally to press down the presenting part into the os uteri, the funis being pushed up simultaneously by the internal hand.

The President inquired if Dr. Hicks combined the postural method with reposition of the cord.

Dr. Hicks replied that he had not found it necessary. He had experienced no difficulty in pressing up the head and carrying the cord up by the same hand as quickly as possible, and then the outside hand pressed the head into the os. In prolapse with head-presentation, pressing the breech to the fundus is not needed as in transverse presentations.

Dr. Brunton thought Dr. Roper had not given sufficient prominence to the postural method. He (Dr. Brunton) had found it the most satisfactory of all methods of treatment of prolapse of the cord, and considered it applicable in all cases. He questioned whether Dr. Hicks would be able with his middle finger to reduce a long loop of cord protruding from the vagina. By the postural method this could be done.

Dr. Edis called attention to the correct postural position being the genu-pectoral or knee-shoulder, not knee-elbow position, as had been spoken of by many.

The President referred to a paper read by Dr. Thomas, of New York, some eighteen years ago.

Dr. Roper asked what was the *rationale* of the postural position? Gravitation would not account for it.

Diseased Placenta.

Mr. Lawson Tait narrated briefly the outlines of a case of diseased placenta. The patient, aged twenty-nine, miscarried three months after marriage. She bore a child at full term next, which died of convulsions three days after. She next miscarried between the sixth and seventh months, and again about the seventh and a half month, the child being alive. When six months advanced with her next, Mr. Tait put her upon chlorate of potass and perchloride of mercury, and she went her full time, and was delivered of a healthy living child. The chief point of interest was in the appearance of the placenta. It was disproportionately small to the size of the child, and fully two-thirds of its surface had undergone a peculiar change. This the author had examined most minutely, and described most thoroughly, the communication being one of much scientific interest.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tuesday, November 9.

Mr. Charles Brooke and Sir Wm. Jenner, Bart., Vice-Presidents, successively in the Chair.

On Diphtheria and its Relations to (so-called) Croup.

Dr. R. H. Semple read a paper on the above subject. The author began by setting forth the reasons which induced him many years ago to regard as erroneous the doctrines formerly held in Great Britain on what was called "croup," and to propose a new nomenclature for the maladies which that term seemed to include. These reasons were drawn from his study of the French writings on what was called diphtheria, together with his own clinical researches into the pathology of the disease so named by Bretonneau. That physician and other French authors regarded diphtheria when it attacked the trachea as synonymous with membranous croup. When the disease now called diphtheria broke out at Tours, Bretonneau had previously seen only two cases of croup (to use his own language); but when it showed itself as an epidemic he studied it carefully in combination with his then pupils Velpeau and Trousseau, and they all found a remarkable uniformity in the symptoms and post-mortem appearances, and, from the constant presence of the false membrane, Bretonneau applied to the malady the name of "diphthérite." The physician of Tours, however, not only studied the actual features of the disease as it presented itself to his notice, but he endeavoured, moreover, to solve the important question whether any such epidemic as he then witnessed had ever presented itself before in the history of the world; and the result of his inquiries was to convince him that his "diphthérite," although under different names, had existed from all antiquity, and had been described in the earliest medical writings. Dr. Semple, following out Bretonneau's views in this direction, and examining the historical evidence in existence, does not agree with the French physician that diphtheria has been clearly described by the Greek and Roman medical writers, for he (Dr. Semple) has failed to find in the original Greek of Hippocrates or Aretæus, or in the Latin of Celsus, so distinct a description of the false membrane lining the trachea as would constitute such a disease as the "diphthérite" of Bretonneau. But from researches into the writings of a more recent period, Dr. Semple is convinced that the disease has been accurately described as an epi-

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demic by Spanish, Italian, Sicilian, Swedish, and French physicians. The names of the medical historians and the titles of their works, and references to important passages, were given by Dr. Semple in his paper, the chief authors consulted by him being Herrera, Fontecha, Villa Real, Sgambati, Carnevale, Nola, Ghisi, Cortesius, Wilcke, Marteau de Grandvilliers, Bard, Starr, and Francis Home. At the commencement of the present century, owing to the death of a relative of the Empress Josephine from so-called croup, a number of essays on that disease were written by various European physicians; but, after examining them all, Dr. Semple has found that they include under the name of "croup" at least three different diseases. Very soon after the publication of these essays, Bretonneau began his well-known researches, in which he confined the term "croup" to those cases in which there was a distinct false membrane in the windpipe; and this view was adopted by his successors of the French school, such as Trousseau, Guersant, Bouchut, Empis, Daviot, Valleix, and Rilliet and Barthez, all of whom adopt Bretonneau's name of diphtheria. Dr. Semple proceeded to adduce cases from his own experience, one of which occurred only a short time before his paper was written, and the preparation from which was shown to the Society. He compared this case with others, also from his own experience, and he showed that they all present characters exactly similar, both in their symptoms and post-mortem appearances, to the cases described by Bretonneau. He has also compared his own specimen with others contained in the pathological department of the Museum of the College of Surgeons, which are in the catalogue of that museum described as "croup," and he finds that they are exactly identical. He also described the nature of the false membrane, which differs essentially from that which is effused from inflamed serous surfaces, and he showed that the greatest German authorities, like the French, regard the membrane of croup and tracheal diphtheria as identical. The general conclusions at which Dr. Semple arrives, from his own clinical experiences, from the perusal of the literature of the subject, and from his historical researches, are mainly the following:—He by no means alleges that croup and diphtheria are synonymous words, but he maintains that the term "croup," as generally employed, comprises at least three very different affections, namely—(1) Laryngismus stridulus, (2) infantile laryngitis, and (3) tracheal (or, rather, laryngo-tracheal) diphtheria. He thinks that diphtheria (although under many different names) has probably existed, like other diseases, from all antiquity; and although its features have not been described with sufficient distinctness by the ancient Greek and Roman medical writers, its epidemics have been clearly indicated by Spanish, Italian, Sicilian, French, German, Swedish, American, and British authors from about the end of the sixteenth century down to the present time. He considers that diphtheria, as an epidemic, did not visit London until about the year 1858 or 1859; and he regards as the last European epidemic of diphtheria the visitation of the disease in Florence and the neighbourhood of that city from 1860 to 1870. But although diphtheria, as an epidemic, has prevailed only at fitful and irregular intervals in the history of the world, sporadic cases have always existed; the case which accompanied the present paper was of that description, and would probably have been called "croup" by a former generation.

Dr. West thought that thanks were due to anyone who laboured at a subject on which there was so much room for doubt, for the last word had not yet been said as to the relations of croup and diphtheria. Moreover, however interesting were the researches as to the archæology of the disease, he doubted their practical utility. The older physicians gave a wonderfully striking account of disease, but they overlooked the smaller points now considered necessary to the making of a sound diagnosis. So with the older anatomists: they described clearly enough the main features of a part, but left the finer anatomy untouched. Thus, at the present day we looked for certain striking nervous phenomena after the local symptoms of diphtheria had passed away, yet they were unnoticed by Bretonneau. Some years ago, at the Children's Infirmary, Lambeth, he must have seen many cases of diphtheria, yet he had no note of nervous symptoms. Croup, as described by Dr. Cheyne—a most accurate observer,—sets in after catarrhal symptoms, with hurried respiration, a noisy cough, speedily followed by great distress and dyspnœa, with a tendency to rapid death by suffocation. But all this might be relieved by bleeding, and he himself had bled from the jugular. When these symptoms went, all the important phenomena of the disease disappeared. With diphtheria there was little or no preliminary catarrh, but pain on swallowing, enlarged and painful glands in the neck, with extreme depression, and different laryngeal symptoms from those of croup, often albumen in the urine; and here venesection would surely kill. These symptoms were followed, if not fatal, by nervous derangement. Were these diseases one and the same? were they allied to each other, as two cases of simple and malignant scarlatina? He believed the two were distinct, but his belief was becoming less positive. The question could not be settled by a single individual, and he would suggest the appointment of a committee of the Society to investigate the subject. The questions to be considered were such as these:—Do croup and diphtheria prevail epidemically at the same time and in the same locality? Do croup and diphtheria prevail at the same time in the same family? Is the croup of Cheyne ever accompanied by albuminuria or followed by paralysis?

Sir W. Jenner had long held that croup and diphtheria were different diseases; but larger experience had made him recently change his views, and he now believed the evidence to be all but conclusive on the other side. The grounds of his change of belief were much as follows:—He had seen albuminuria in genuine croup coming on with catarrh, and where there was no pharyngeal membrane. He had seen a surgeon in attendance on a case of diphtheria become attacked with a true laryngo-tracheal membranous deposit, which again was followed by paralysis; and he believed that there might be quite as much fever from diphtheria as from croup. He considered that the conclusion as to the effects of bleeding was *à priori* as regards diphtheria, and that Cheyne had confounded, in certain instances, catarrhal with membranous laryngitis, just as they confounded relapsing with typhus fever, and deduced from the effects of bleeding in the former its great value as a treatment for the latter. He had also seen true diphtheria follow cold, and croup might be followed by nervous symptoms.

Dr. Dickinson had seen a large number of cases, both of croup and diphtheria, at the Hospital for Sick Children, and he was still prepared to adhere to the view of their being wholly distinct. The opposite view simply amounted to this: that there was one common cause for all membranous inflammations of the larynx. But membrane might be thrown out by various forms of irritation—hot water, foreign bodies, cold, the poison of diphtheria, etc. The tendency was for the two maladies to run a distinct course; in diphtheria the malady was clearly asthenic; in croup the tendency to death was from suffocation merely. He concurred in the suggestion of a committee.

Dr. Semple having replied at some length, and the motion for a committee having been carried,

Dr. Hughlings-Jackson brought before the Society a patient subject to certain irregular nervous movements.

MEDICAL NEWS.

King and Queen's College of Physicians, Ireland.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, November 9, 10, and 11, the following candidates were successful for the licence to practise Medicine:—

Hartford, Henry William.	Pilkington, Henry.
Hutchinson, Joseph Bouch.	Tanner, Charles Kearns Deane.
Maturin, Leslie.	Yeo, Robert Frederick.

For the licence to practise Midwifery—

Hartford, Henry William.	Pilkington, Henry.
Hutchinson, Joseph Bouch.	Tanner, Charles Kearns Deane.
Maturin, Leslie.	Yeo, Robert Frederick.
Molson, William Alexander.	

Royal College of Surgeons of England.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 16th inst., viz.:—

Allen, Richard Grammer, Belper, Derbyshire, of the Birmingham School.
Angove, William Thomas, L.S.A., Besborough-gardens, of St. Bartholomew's Hospital.
Archer, Robert Kendray, L.S.A., Highgate, of the Westminster Hospital.
Bacon, Alfred Thomas, L.R.C.P. Ed., Leeds, of University College.
Bigger, Samuel Ferguson, Belfast, of the Liverpool School.
Bower, Ernest Dykes, Leeds, of the Leeds School.
Chant, Thomas, L.S.A., Lowestoft, of the London Hospital.
Dennis, Augustine, L.R.C.P. Ed., Burnham Westgate, Norfolk, of Guy's Hospital.

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Harvey, Thomas Prickard, L.R.C.P. Lond. and L.S.A., Pyrland-road, W., of the London Hospital.
Hick, Henry, L.R.C.P. Ed., Wakefield, of the Leeds School.
Hutchinson, Joseph, L.R.C.P. Ed., Luton, Beds, of the Manchester School.
Iles, Alfred Robert, Fairford, of St. Thomas's Hospital.
Jacobs, Henry Ralph, Aberdare, of St. Mary's Hospital.
Jenkins, Aneurin, L.R.C.P. Ed., Langhor, Glamorganshire, of the Dublin School.
Kellard, James Thos. Wm. Stenteford, L.S.A., Stoke, Devonport, of Guy's Hospital.
Leigh, Reginald Heber, L.S.A., Aberdare, South Wales, of Guy's Hospital.
Livy, Frederic Young, Bolton, Lancashire, of the Manchester School.
Manders, Horace, L.S.A., Marlborough, of St. Mary's Hospital.
Mason, John Wright, M.B. Aberd., Marston, Grantham, Lincolnshire, of Guy's Hospital.
Morgan, Evan Abraham, L.K.Q.C.P. Ire., Liverpool, of the Liverpool School.
Phibbs, Robert Featherstone, L.R.C.P. Ed., Boundary-road, N.W., of King's College.
Randle, James Mayne, L.R.C.P. Ed., Lizard, Cornwall, of University College.
Shain, William Frederick, Liverpool, of the Liverpool School.
Simon, Robert Michael, B.A. Cantab., Nottingham, of Guy's Hospital.
Steil, George Robert, L.R.C.P. Ed., Shepherd's Bush, of the London Hospital.
Whitby, Edward Vickers, Birmingham, of the Birmingham School.
Wilkins, Gilbert Hamilton, L.S.A., Brixton, of St. Thomas's Hospital.

The following gentlemen passed on the 17th inst., viz.:—

Amphlett, Edward, M.A. Cantab., Leamington, student of Guy's Hospital.
Aplin, Alfred, Heavitree, Exeter, of University College.
Blake, Henry, L.S.A., Bedford, of St. George's Hospital.
Bowling, Charles James Lovelace, Ramsgate, of St. Bartholomew's Hospital.
Brock, Charles de Lisle, Guernsey, of St. Thomas's Hospital.
Carrington, Robert Edmund, Brixton, of Guy's Hospital.
Edwards, Frederick Swinford, St. Peter's-park, W., of St. Bartholomew's Hospital.
Evans, Thomas, L.S.A., Pwlheli, North Wales, of King's College.
Godfrey, Charles Walter, Romsey, of University College.
Harvey, Henry Frederick, L.S.A., Gower-street, of University College.
Heard, Charles Goodridge, L.S.A., Truro, Cornwall, of St. Bartholomew's Hospital.
Johnson, Wm. Boyter, L.S.A., York-road, S.E., of the London Hospital.
Kidd, Walter Aubrey, Blackheath, of Guy's Hospital.
Morshead, Ernest Garstin Anderson, Sidmouth, Devon, of University College.
Musgrave, Reginald Vernon, L.S.A., Finchley-road, of St. Mary's Hospital.
Patmore, Tennyson Deighton, Hastings, of University College.
Pilkington, Henry, L.K.&Q.C.P. Ire., Liverpool, of the Liverpool School.
Truman, Charles Edwin, Old Burlington-street, of St. Thomas's Hospital.
Woodward, Frederick Edward, Coventry, of St. Bartholomew's Hospital.

Eleven candidates, having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months. Mr. Erichsen, the recently elected member of the Court of Examiners, took his seat on this occasion.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 11:—

Harper, Robert Russell, Oakden-street, Kennington-road.
Roth, Bernard Mathias Simon, 43, Wimpole-street, W.
Thompson, Harry Young, Newport, Monmouthshire.

The following gentlemen also on the same day passed their primary professional examination:—

Blakiston, Arthur Alexander, University College.
Stover, Walter, Guy's Hospital.
Todd, John, Guy's Hospital.
Woollett, Charles Jerome, Charing-cross Hospital.
Whitfield, William Clarke, Bristol Infirmary.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

CASSAN, T., M.R.C.S. Eng.—House-Surgeon to the Royal South Hants Infirmary, Southampton.

PACKER, W. HERBERT, L.A.C.—Junior Assistant Medical Officer to the Gloucestershire Lunatic Asylum, near Gloucester, *vice* T. Cassan, M.R.C.S. Eng.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Fleet-Surgeon George Duncan, M.D., has been placed on the retired list from October 21 last, and Fleet-Surgeon James Gibson Thomson Forbes has been placed on the retired list of his rank from the 8th inst. John C. B. Maclean, Surgeon, to the *Lynx*. John Dudley, Surgeon, to the *Foam*. The following promotion, to date the 1st inst., has been made for services in the recent expedition against Pirates up the River Congo:—Surgeon John Neesom Stone to be Staff Surgeon in her Majesty's Fleet. The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in her Majesty's Fleet, with seniority of October 20, 1875:—Edward Mulcahy, George Curtis, Ingham Hanbury, Alexander Scott, William Jabez Inman, George Robertson, M.D., and John Richard Burke, M.D.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major James Leiteh, M.D., from half-pay, to be Surgeon-Major *vice* Andrew Acres Stoney, retired on half-pay. Surgeon Reginald Croft Lever, M.B., to be Surgeon-Major, *vice* Joseph Fletcher Lougheed, retired on temporary half-pay. Surgeon Bronislaw James Jaszdowski, M.B., to be Surgeon-Major, *vice* William Alexander White, M.D., retired on temporary half-pay. Surgeon-Major Edwin Drew retires on temporary half-pay. Surgeon-Major Ormsby Bowen Miller retires on temporary half-pay. Surgeon John Edward Barker, M.B., resigns his commission. Surgeon Charles Spurway, on the half-pay list, resigns his commission.

BREVET.—W. A. Kidd and C. L. Fox, First-class Apothecaries, of the Bengal Establishment, to have the honorary and local rank of Surgeon.

BIRTHS.

BUZZARD.—On November 9, at 56, Grosvenor-street, W., the wife of Thomas Buzzard, M.D., of a son.

CLARKE.—On November 11, at Coleraine-terrace, Salford, the wife of Alexander Carson Clarke, M.D., of a son.

COLTHURST.—On November 8, at Wincanton, Somerset, the wife of James Bunter Colthurst, M.R.C.S. Eng., L.S.A., of a son.

JONES.—On November 15, at St. Leonard's-on-Sea, the wife of Alfred Orlando Jones, M.D., of a son.

SCOTT.—On November 15, at Castle Cottage, Marford, near Wrexham, the wife of R. R. Scott, Surgeon-Major Army Medical Department, of a daughter.

MARRIAGES.

ALLT—WEBB.—On November 10, at St. Barnabas Church, Pimlico, Terence Thomas Allt, L.R.C.P. Edin., L.R.C.S.I., of Oaks House, Beckley, Sussex, to Catherine Elizabeth, eldest daughter of Edward Lowe Webb, M.R.C.P., M.R.C.S. Eng., L.S.A., of 9, St. George's-road, Eccleston-square, S.W.

BROADBENT—SEED.—On November 2, at St. Mary's, Bryanston-square, W., J. C. Broadbent, The Heights, Rochdale, Lancashire, to Octavia Elizabeth Maria, youngest daughter of the late Joseph Seed, F.R.C.S., Rochdale, formerly of the Royal Navy.

FRY—BURRELL.—On November 11, at Frimley, Augustus B. Fry, M.R.C.S., of Harcourt House, Yorktown, Frimley, to Emily Elizabeth, only daughter of J. F. Burrell, Esq., J.P., of Frimley Manor, Farnborough, Hants.

DEATHS.

BEAUMONT, WILLIAM R., M.D., F.R.C.S. Eng., at Glenhurst, Toronto, Canada, the residence of his son-in-law, Edgar J. Jarvis, Esq., on October 12.

BRETT, JOHN, M.D., Deputy Surgeon-General Retired List H.M. Madras Army, at 49, Ladbroke-grove-road, North Kensington, W., on November 16, aged 57.

COCHRANE, HANNAH, widow of the late John Cochrane, Surgeon R.N., at High Bank, Croydon, on November 16, in her 81st year.

COSTELLOE, MARY TERESA, widow of Daniel Costelloe, Deputy Inspector-General of Hospitals, Bombay Presidency, at 14, Westmoreland-road, Bayswater, W., after a short illness, on November 16, aged 65.

HARRISSON, HENRY ROBERT, eldest son of Henry Harrisson, M.R.C.S. Eng., at 64, Great Portland-street, W., on November 11, aged 18 within one day.

WALKER, WILLIAM HOLMES, M.R.C.S., L.S.A., at Middleton House, Lee, Kent, on November 7, aged 89.

WILLSON, GEORGE, M.R.C.S. Eng., L.S.A., late on the medical staff of the Middlesex County Asylum, Hanwell, at 7, Warwick-gardens, Kensington, W., on November 6, aged 65.

WILSON, JOHN, M.D., L.R.C.S. Edin., Ext. L.R.C.P. Lond., at Hanover-terrace, Whitby, on November 15, aged 82.

WINTLE, The Rev. OGLE RICHARD, M.A., Lincoln College, Oxford, formerly Head Master of Bridgwater Grammar School, second surviving son of the late F. T. Wintle, M.D., of Headington-hill, Oxford, at Wing Rectory, near Uppingham, on November 12, in his 42nd year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

AMERSHAM UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, on or before December 6.

CHARING-CROSS HOSPITAL.—Assistant-Physician, and Physician or Surgeon for the Skin Department. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 25.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

DOVER HOSPITAL AND DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Mr. Elwin, 13, Castle-street, Dover, before November 30.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 11, Tavern-street, Ipswich, on or before December 8.

GLOUCESTER INFIRMARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Dr. Washbourn, Gloucester, on or before November 25.

INFIRMARY FOR CONSUMPTION, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Physician-in-Ordinary. Candidates must be M.R.C.P. Lond. Applications, with testimonials, to the Secretary, on or before Nov. 25.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Hon. Sec., Mr. J. Calder, Liver Chambers, Tithebarn-street, Liverpool.

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QUEEN CHARLOTTE'S LYING-IN HOSPITAL, 191, MARYLEBONE-ROAD, W.—Physician to the Out-patients. Candidates must be duly qualified, and must attend a meeting of the Committee of Management of the Hospital on Monday, November 22, at two o'clock precisely.

RADCLIFFE INFIRMARY, OXFORD.—House-Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before November 24.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Carmarthen Union.—The Carmarthen District is vacant; area 17,685; population 12,904; salary £60 per annum.

Cerne Union.—Mr. John Ewens has resigned the Western District; area 15,044; population 2892; salary £70 per annum.

Eltham Union.—Mr. E. J. Kent has resigned the Sellinge District; area 5686; population 1306; salary £25 per annum.

Henstead Union.—Mr. A. M. F. Morgan has resigned the Third District; area 10,400; population 2871; salary £42 per annum.

Whitehaven Union.—Mr. D. E. Flinn has resigned the Lamplugh District; area 35,835; population 5338; salary £30 per annum.

APPOINTMENTS.

Bellingham Union.—Malcolm Brodie, L.R.C.P.&S. Edin., to the Second District. William Sutherland, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Sixth District.

Chorley Union.—George Tobin, M.R.C.S. Eng., L.S.A., to the Chorley and Coppull District.

THE Drapers' Company have voted an additional donation of twenty guineas, and the Clothworkers' Company an annual subscription of ten guineas, in aid of the Royal National Hospital for Consumption, situated at Ventnor.

PROFESSOR SCHWANN.—The veteran Prof. Schwann, of Liége, one of the originators of the cell-theory of physiology, has just been elected a Foreign Corresponding Member of the French Académie de Médecine.

THE HEALTH OF ST. MARYLEBONE.—From the monthly report of Dr. Whitmore, Medical Officer of Health for St. Marylebone, we hear that scarlet fever is still very prevalent in the parish, twenty-seven deaths having taken place from that disease during October, which exceeded by sixteen the monthly average of the last nineteen years. Whooping cough of a severe type is also epidemic in Marylebone, fifteen deaths having occurred during the month, all the fatal cases being children under five years of age. The total deaths in the parish for the four weeks ending October 30 number 271, which is equivalent to an annual death-rate of 22·12 per thousand.

PROFESSIONAL EXAMINATIONS. — The following are copies of the questions submitted to the candidates for the diploma of Membership of the College of Surgeons on Friday and Saturday last, the oral examination for which was brought to a close on the 18th inst., viz.:—Principles and Practice of Medicine: 1. Describe a typical case of typhoid fever, with its treatment. For what other diseases might typhoid fever be mistaken? and how would you distinguish between them? 2. Mention the chief morbid changes to which the valves of the heart are liable. State the effects produced on the walls and cavities of the heart by these affections; and give the leading signs by which they may be recognised during life. 3. Indicate the medicinal qualities of the following preparations, and the class of cases in which they are used, together with the doses:—Ext. ergotæ liquidum; tinct. digitalis; elaterium; zinci sulphas; acidum gallicum; extractum belladonnæ; plumbi acetas; hydrargyri perchloridum; liquor arsenicalis. Surgical Anatomy and the Principles and Practice of Surgery: 1. Describe the dissection required to expose the *right* common carotid artery; on what part would you place a ligature? 2. Mention the structures divided in a circular amputation through the middle of the arm. 3. Describe the symptoms and treatment of delirium tremens following injuries. 4. What are the microscopic appearances presented by articular cartilage when undergoing the changes described as "absorption"? 5. Give the pathology, diagnosis, and treatment of psoas abscess. 6. What are the symptoms of a complete transverse laceration of the urethra in the perineum? How would you treat the injury? and what would be the most probable results? (Candidates were requested to answer at least four—including one of the first two—out of the six questions.)

HORNY SKIN.—A curious specimen of horny skin was seen on the hand of a military undergraduate. It was on the parts of the fingers where the bowstring and arrow touch them, and was the result of twenty years' practice with the bow and arrow. His father and brother were military graduates. The requirements he said are:—(1) To write an essay (which may be done by proxy), (2) to shoot six arrows consecutively into the bull's-eye of the target (the patient had achieved five), (3) exercises with large and small bows, on horseback and on foot, (4) to lift the heavy stone, and (5) exercises with the knife. The last two are becoming obsolete, and may be done by a substitute. Already the use of Western arms is beginning to tell on the whole of this training, and ere long it will have become a thing of the past.—*Dr. Gauld's Report of the Medical Missionary Hospital at Swatow for* 1874.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Dr. R. R. Taylor, Santillana.—Letter, with enclosure, received.

Erratum.—In Professor Maclean's paper on Warburg's Tincture, *for* "for the crown and people of India," *read* "of England."

As Usual.—Whilst the European community (states the *Bombay Gazette* of October 18) have liberally subscribed over £5000 towards the European General Hospital Endowment Fund, the Government of Bombay have refused to act in a similarly liberal manner, but persist in the intention of converting the Fort St. George Barracks into a permanent hospital for Europeans, in spite of medical opinion against the site and buildings.

A Subscriber.—The late Dr. Neil Arnott, in 1869, gave to each of the Universities of Aberdeen, Edinburgh, Glasgow and St. Andrews a donation of £1000 for the promotion of the study of experimental physics among the medical students. He also placed at the disposal of the Senate of the University of London £2000 to found a scientific scholarship.

N. N.—The Court of Queen's Bench Division of the High Court of Justice last week refused to quash the writ of *mandamus* to put in force the law as to vaccination, which was granted last term against the Keighley Board of Guardians.

G., Ipswich.—The London School of Medicine for Women during last year (its first year of existence) admitted twenty-three students. Five new students joined the institution at the beginning of the present session.

Desiderius.—The lightest human brains on record have been examined and described by Professor Marshall. The one, that of an idiot boy, weighed only eight ounces and a half; whilst the weight of the other, from an idiot woman, scarcely exceeded ten ounces.

Sax.—The Croonian Lecture, "On the Structure and Uses of the Membrana Tympani of the Ear," by Everard Home, F.R.S., was read to the Royal Society on November 7, 1799.

Senex.—The Centaur Chiron, who lived in the thirteenth century before Christ, and who was probably a prince or chief of Thessaly, has obtained the credit of having first initiated the Greeks in the art of medicine. Among his pupils was Æsculapius, who became more celebrated than his preceptor.

A London Householder and others.—In all that relates to the drainage of houses, we can refer, from personal knowledge, to Mr. H. Shaw, of 25, Broad-street-buildings. He carries out the principles advocated by Mr. Lovegrove, of Hackney, who, twenty years back, devised means for preventing the reflux of sewer-gas into the house-drains, and for allowing the gas in the house-drains to escape into the open air, not into the house. As for a plumber who will see to the cisterns, supply- and escape-pipes, sinks, upstair traps, etc., we should strongly advise our correspondents to see to such things themselves. Plumbers and builders have no sanitary ideas at present, though they may be readily taught. Mr. Banting, builder, of 9, Emily-street, Westbourne-square, W., is a careful tradesman, and intelligent about indoor pipes and cisterns.

A Fox in Goose-skin.—A petition to Parliament is being hawked about for signature, which means more than is apparent on the surface. The petitioners express their desire that the Public Health Act, 1875, may be so amended as to "subject to a penalty any person who, suffering from disease, whether infectious or contagious, shall knowingly spread or personally communicate the same." This looks innocent on the surface—possibly useful, for it would furnish an additional weapon against inoculation of small-pox. But we suspect that, in reality, it is intended to introduce a discussion for the purpose of damaging the Contagious Diseases Act, and raising a variety of nauseous topics which were better let alone. "Women who give disease," they would argue, "are shut up. Why not apply the same penalty to men?" But who are to be the complainants? Women, for the purpose of this discussion, may be divided into three categories—1. Married women; and if these are diseased by their husbands, there is a remedy already in the Divorce Court. 2. Single women, who "break Diana's laws" only under great temptation. But would these publicly complain? 3. Prostitutes; and who would listen to a complaint from a prostitute against any man? Some subjects are so intrinsically disgusting that the less they are disturbed, when once settled, the better.

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COMMUNICATIONS have been received from—

The Registrar of Apothecaries' Hall, London; Mr. F. Gordon Brown, London; Mr. George Street, London; Mr. J. W. Groves, London; The Secretary of the Royal National Hospital for Consumption, Ventnor; Mr. T. W. Blake, Andover; Mr. H. R. Oswald, Scarborough; Dr. Edis, London; Mr. H. Morris, London; Dr. A. Platt Wilks, Ryde; The Registrar-General, Edinburgh; Professor Maclean, Netley; Our Edinburgh Correspondent; Mr. R. Kershaw, London; Dr. Gamgee, Manchester; Mr. F. Scott, Manchester; Mr. J. Ingpen, London; Our Paris Correspondent; Dr. A. Farr, London; Dr. Philipson, Newcastle-on-Tyne; Dr. W. Lush, Fyfield; Mr. T. P. Pick, London; Dr. H. Lawson, London; Dr. Davidson, Liverpool; Dr. R. H. Semple, London; Mr. Jonathan Hutchinson, London; Mr. W. E. Poole, London; Mr. J. Chatto, London; Our Liverpool Correspondent; Mr. E. Hopgood, Ryde; Dr. Renton, Hamilton; Dr. Curnow, London; Dr. B. Bramwell, Newcastle-on-Tyne; Our Dublin Correspondent; Mr. Mogford, London; Mr. Hegarty, Kilrea; Mr. E. Force, Exeter; Dr. Taylor, Santillana; Messrs. Salt and Son, Birmingham.

BOOKS AND PAMPHLETS RECEIVED—

Schoepff on the Climate and Diseases of America during the Revolution, translated by Chadwick—Statistical Tables of the Patients under Treatment in the Wards of St. Bartholomew's Hospital during 1874, by the Medical and Surgical Registrars—Brunton's Experimental Investigation of the Action of Medicines; Part 1, Circulation—A Statement of the Relations of the Faculty of Medicine and Surgery in the University of Michigan to Homœopathy—Russell's Report on Certain Recent Outbreaks of Enteric Fever in Glasgow—Report on Indian Cattle Plagues—Bauduy's Lectures on Diseases of the Nervous System—Epps on Ovarian Dropsy and Ascites—A Physician's Notes on Ophthalmology, second series, by Dr. Hughlings-Jackson.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Practitioner—Paris Médical—Recueil d'Ophthalmologie, Octobre—Daily Bristol Times and Mirror—Deutsche Medicinische Wochenschrift—Journal d'Hygiène—Chicago Medical Journal and Examiner—New York Medical Journal—American Journal of Insanity—Canada Lancet—Canada Medical and Surgical Journal—Western Morning News—Redruth Times.

APPOINTMENTS FOR THE WEEK.

November 20. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

22. ***Monday.***

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. de Havilland Hall will exhibit a Pathological Specimen of Tumour of the Liver; Dr. Thorowgood, a Specimen of Cirrhosis of the Liver in a Child, and a new Inhaler and Respirator by Mr. Carrick, of Glasgow. Dr. Brunton, "On the Rational Treatment of Tapeworm."

23. ***Tuesday.***

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society, 8½ p.m. Dr. Pavy will exhibit a Specimen of Sugar obtained from Healthy Human Urine, and prove its existence by the appropriate tests. Mr. F. H. Welch, "On Aortic Aneurism in the Army, and the conditions associated with it.",

24. ***Wednesday.***

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Hunterian Society (London Institution), 8 p.m. A Clinical Evening.

25. ***Thursday.***

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

26. ***Friday.***

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Murchison, "On a Case of Acute Cancer of the Liver, with Pysemia, in a man aged 24;" also, "On Two Fatal Cases of Acute Pyelitis and Nephritis, apparently consequent on Gonorrhœa." Mr. Berkeley Hill, "On a Case of Amputation at Hip-Joint for Fibro-plastic Tumour." Mr. George Lawson, "On a Case of Melanotic Tumour of Orbit."

Queckett Microscopical Club, 8 p.m. Mr. T. Charters White, "On the Histology of the Hard Dental Tissues."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 13.

BIRTHS.

Births of Boys, 1251; Girls, 1198; Total, 2449.
Average of 10 corresponding years 1865-74, 2281·1.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	782	785	1567
Average of the ten years 1865-74	747·8	698·1	1445·9
Average corrected to increased population ...	...	...	1547
Deaths of people aged 80 and upwards ...	...	...	51

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	8	19	2	10	1	...	—	7
North	751729	...	10	32	2	13	1	1	...	7
Central ...	334369	...	5	8	1	4	...	3	...	...
East	639111	1	7	20	2	8	1	4	2	3
South	967692	...	18	37	5	14	1	4	2	7
Total	3254260	1	48	116	12	49	4	12	4	24

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·247 in.
Mean temperature	43·0°
Highest point of thermometer	57·0°
Lowest point of thermometer	30·3°
Mean dew-point temperature	39·1°
General direction of wind	Variable.
Whole amount of rain in the week	1·92 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 13, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Nov. 13.	Deaths Registered during the week ending Nov. 13.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2449	1567	57·0	30·3	43·0	6·11	1·92	4·88
Portsmouth ...	122632	27·3	80	44	...	...	...	...	...	...
Norwich	82842	11·1	50	32	53·8	31·0	41·5	5·28	2·35	5·97
Bristol	196186	44·1	140	135	55·9	29·4	41·9	5·50	3·71	9·42
Wolverhampton ...	71718	21·1	59	36	52·2	31·3	40·6	4·78	2·11	5·36
Birmingham ...	366325	43·6	289	159	50 0	31·5	41·3	5·17	1·59	4·04
Leicester	109830	34·3	63	51	50·0	29·8	41·1	5·06	2·09	5·31
Nottingham ...	92251	46·2	51	50	52·0	27·1	39·8	4·34	1·30	3·30
Liverpool	516063	99·1	374	247	50·8	33·5	40·9	4·94	1·55	3·94
Manchester ...	356626	83·1	295	181	51·0	27·1	38·5	3·61	2·22	5·64
Salford	135720	26·3	130	78	52·7	30·6	40·3	4·61	1·75	4·44
Oldham	87437	18·7	51	50	...	...	...	...	...	...
Bradford	168305	23·3	128	103	53·0	34·0	39·7	4·28	0·80	2·03
Leeds	285118	13·2	233	152	53·0	33·0	40·4	4·66	0·85	2·16
Sheffield	267881	13·6	238	107	50·0	30·0	39·8	4·34	2·22	5·64
Hull	133932	36·8	109	61	47·0	30·0	39·6	4·23	1·85	4·70
Sunderland ...	106342	32·2	88	35	56·0	30·0	42·7	5·95	1·24	3·15
Newcastle-on-Tyne	137665	25·6	103	65	...	...	...	...	...	...
Edinburgh	211626	50·5	119	94	47·0	22·0	36·2	2·33	...	...
Glasgow	534564	88·6	363	270	...	...	...	...	...	...
Dublin	314666	31·3	160	168	52·0	24·4	39·0	3·89	2·09	5·31
Total of 21 Towns in United Kingdm	7742889	37·0	5572	3685	57·0	22·0	40·4	4·66	1·85	4·70

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·25 in. The lowest was 28·45 in. on Thursday morning, and the highest 29·81 in. on Friday evening.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

ON THE DIAGNOSIS AND TREATMENT OF NEURALGIA,

ESPECIALLY BY HYPODERMIC INJECTION OF MORPHIA; FOUNDED ON PERSONAL EXPERIENCE.

By HOFRATH PROFESSOR VON PITHA.

(*Continued from page 568.*)

Our therapeutics in neuralgia have hitherto exhibited remarkable poverty—a necessary consequence of our imperfect knowledge of its physiological condition. We only know that reflex actions from all nervous regions may take place in every direction; but why such reflex actions in analogous or the same pathological processes may at one time be absent or very mild, and at another so painful and terrible,—why at one time they affect neighbouring or symmetrical nerves, and at another time those which are remote and entirely unconnected,—all this is entirely unknown to us. We therefore are unable to come to any exact determination in favour of therapeutics; and even where empiricism seems to furnish an indication, we do not see our way how to utilise it. For example, when we find the Arab horse-dealers curing sciatica by applying the cautery to the tragus, we seek in vain for the key to this enigmatical occurrence. Here and there we catch a glimmering light, as when sciatica is relieved by croton oil, and we suppose that this happens in cases of constipation, when the hard fæcal mass compresses the lumbar or sciatic plexus.

When the cause of the neuralgia can be detected, the removal of this is the obvious procedure to be adopted; and this is especially practicable in cases of tumours compressing nerves, ill-formed callus, the penetration of splinters or other foreign bodies, the inclusion of nerves in cicatrices, etc. In other cases, in which we have to do with localities externally accessible, portions of nerves, the excision of the affected trunk gives at least temporary relief. Even in centric neuralgia, cold water sometimes, but only exceptionally, does good, applied as a compress or as a filiform douche; while in other cases the same end is attained by the employment of warmth by means of a hot iron, a stream of warm water, or warm cataplasms. In my own case, I have sometimes derived benefit from cold, but only in neuralgia of the knee and the tibia, especially when the pain has been accompanied by a sensation of heat. The relief, however, was never of long duration, and only occurred at the first application. So, also, Richardson's spray-producer has sometimes been of benefit for a short time. In the neuralgia of joints persisting after rheumatism or sprains, I once met with surprising success from the use of acupuncture, as recommended by Teale. Narcotic frictions or enveloping the parts with opiates, belladonna, or chloroform I have frequently tried, but usually without success. As an internal remedy, chloral has often been of distinguished service. Unfortunately, it produces vomiting in many persons, and cannot be borne, while in anæmic subjects it should be prohibited. We possess no substitute for morphia as an anodyne, and both belladonna and cannabis indica, which have most reputation in this respect, I have long tried in my own case without any benefit. Atropia, even in the smallest doses (as one-hundredth of a grain), inflicts on me a troublesome and long-enduring dryness of the mouth and throat without affording the slightest relief. From aconitia and colchicine I have twice witnessed temporary good results; but I wish to give a caution against the use of hyoscyamine, an injection of one-tenth of a grain of which produced on me such frightful effects that I at once fell into a swoon. All these narcotics are evidently of only temporary utility; but while their employment is only attended with partial success, a knowledge of their properties is highly desirable. In obstinate cases they serve to gain time, and they are especially useful in keeping impatient persons from a too frequent abuse of morphia. Bromide of potassium, iodide of potassium, gold, and silver, have been recommended as curative agents, and the first of these has attained a high reputation in England. I have tried all these means with perseverance for a long time, and in increasing doses, and have not derived the slightest benefit from them.

After repeated trials on myself and others, I find myself compelled to make the general statement that subcutaneous injections of morphia constitute the only decided and effectual and truly invaluable method of treating neuralgia. Taken internally, morphia is far from exerting so complete and beneficial an effect. This I have not only observed in many cancer patients, who, in despair, have increased the doses to four or six grains, but have undoubtedly proved it in my own person. For while a grain of the acetate would produce headache and violent vomiting and a general feeling of stupefaction, yet the pains continued undiminished, although sometimes changed in form; whereas one-quarter or one-sixth of a grain of morphia injected, under exactly similar circumstances, insured a most welcome diminution of suffering, almost without inducing narcosis. The morphia is no radical means of treatment, but as a palliative it is invaluable; for to relieve the unfortunate subjects of severe neuralgia even for a few hours from their torments is to confer upon them an inestimable benefit. An especial advantage of the injection consists in the magical rapidity with which it acts, and the ease and simplicity of its employment. In slight cases a single injection, and in sensitive individuals very small doses (as from one-twentieth to one-twelfth of a grain), may relieve the pain for a whole day, and sometimes for several days. In severe cases, and when the neuralgia has persisted for a long time, the doses have to be increased, yet it is rare, even after several years' continuance, to find the remedy losing its efficacy. I have known several patients who have employed the injections every night for five or six years, and remained quite satisfied with the results. They may also be used twice daily without inducing any unpleasant narcotic effects. It is unfortunate where they are required oftener than twice a day, for when they too rapidly follow each other, even in small doses, the narcotic effects accumulate, and may easily reach an alarming height. This is an important point, and we cannot too earnestly caution patients against a too frequent use of the injections, giving a preference in such cases to other means, which, if they are less certain, may at least serve as makeshifts. The extent to which the abuse of morphia may be carried in very violent neuralgia, even by sensible patients, is incredible. Thus, I know a colleague who, during two years, resorted every three or four hours to concentrated injections, and would not listen to any representation. Even the most painful immediate consequences will not deter desperate patients from these repetitions. I once saw, with horror, the entire body of a young woman, and especially her back and chest, so covered with furuncles, from the size of a pea to that of a walnut, that it had become almost impossible to find any vacant spots for more injections; and yet would she not abstain from the use, and stigmatised her numerous attendants, who agreed in advising abstention, as unfeeling barbarians. Such noxious consequences as this are fortunately only exceptional, and are due to peculiarities of disposition or other circumstances, to which I shall again advert.

As a general rule, the injections, when properly performed, are quite simple in their nature, and easily borne; and in most cases the dose may be gradually increased to a considerable quantity (above two grains) without causing any essential mischief. Prof. Nussbaum made it known eight years since that he had employed upon himself 2000 injections, reaching to two grains several times daily, without the slightest ill-effects having resulted. Since then he must have increased this number by many thousands without his well-known extraordinary activity having been in the least interfered with. Experience, indeed, has shown that morphia in general is very well borne, and is not followed by any bad effects; and this amply proved harmlessness constitutes its most valuable peculiarity. In the public mind, however, there exists an extraordinary prejudice against opium, and especially against morphia, which is regarded as the most violent of poisons; and even practitioners, unfortunately, sometimes countenance this prejudice, so that there is often the greatest trouble in inducing the unfortunate sufferers from neuralgia to avail themselves of its valuable properties—a circumstance greatly to be deplored in the interests of these sufferers. Nussbaum has struggled with all his might against this mischievous prejudice, and has exerted all his authority in defence of the innocuity of the subcutaneous employment of morphia; and from my experience in my own person, as well as from that derived from the treatment and observation of so many patients, I most assuredly agree with him. But if the remedy is to prove innocuous, it must be employed according to suitable indications, *lege artis*, with proper caution, and especially with reference to the patient's individuality. Above all things must the not unfrequent idiosyncrasies with respect to morphia, especially in women, be borne in mind; so that the injections

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must be commenced tentatively in the smallest doses, as from one-tenth to one-twentieth of a grain, and in very sensitive and delicate women in yet smaller doses. Young, inexperienced, and over-bold practitioners may perhaps smile at such exaggerated prudence; but through profiting by my experience they may be spared bitter regrets.

Two years since I had to treat a boy twelve years old for a neuralgia of the ulnar nerve which had supervened on a fracture of the radius. In him the injection of one-twenty-fourth of a grain of morphia sufficed on every occasion to immediately and completely relieve his violent pains, and that for from twenty-four to forty-eight hours, not the slightest ill-effects following its employment. The mother of this boy, a very nervous subject, but otherwise healthy, had a great dread of morphia, but, suffering from lumbago, at last allowed a trial of this much-belied remedy to be made. Her great sensitiveness being known, only one-twenty-fourth of a grain was injected, but this trifling dose was immediately followed by vomiting, syncope with deadly pallor, cold sweats, etc., which persisted until the next day, and occasioned the greatest alarm to her attendant. I likewise witnessed a not less alarming scene in the person of a colleague, Dr. S., who, in the night, had injected himself with about one-twelfth of a grain of the acetate. I found him pale and corpse-like, and apparently in the agony of death, and it was not until the various means had been continued for half an hour that he gradually began to breathe again. He suffered from mitral insufficiency, as well as an involuntary aversion to the use of morphia, and for both these reasons he did wrong in resorting to its injection. I could adduce many examples that I have met with in which the internal use of morphia has also produced violent symptoms of poisoning; and from an early period I laid it down as a rule always to employ this drug with the greatest prudence—a prudence I cannot sufficiently enforce—and that notwithstanding the numerous examples on the other side in which it has been taken for days or years in truly gigantic doses. Such instances must not mislead us and encourage us to lightly employ heroic doses; and I again assert that the subcutaneous injection of morphia should be conducted with the greatest prudence. Such prudence, indeed, is not only required with respect to morphia, but for all narcotic substances, and especially the powerful alkaloids, atropia, hyoscyamine, strychnia, brucine, aconitia, etc.—all of which far surpass morphia in their poisonous properties. The same care is required for two other much-used substances, chloroform and chloral, which with morphia constitute our most powerful and indispensable weapons. These three cardinal anodynes, which have proved in innumerable cases of such invaluable service that we cannot do without them, have also on many occasions exhibited by dearly bought experience their insidious reverse side. Their insidious danger arises from the fact that their pernicious effects may not only occur when they are given in imprudent and foolhardy doses, but also, in certain individuals, when they are administered with the greatest care. If we peruse the accounts of the accidents which have followed the use of these means, we find that the fatal cases have ensued after only a few inspirations of chloroform or taking small doses of chloral; and exactly the same occurs with respect to morphia. I have, indeed, never met with an example of fatal consequences from the subcutaneous injection of this, but on several occasions death has seemed to be near at hand, and these have all occurred when small doses of less than one-sixth of a grain have been employed. Either a peculiar idiosyncrasy has been brought into play, or there has been organic disease of the heart. The employment of either morphia, chloroform, or chloral, in subjects suffering from heart disease, is a serious error, against which attention may guard us, as careful and competent examination enables us in most cases to diagnosticate with tolerable certainty the contra-indications. It is quite otherwise with regard to idiosyncrasies, for these are met with even when all organs that are accessible to examination seem to be in the enjoyment of full integrity, and therefore in apparently completely healthy persons.

It is obvious that the practitioner who has to wield these dangerous remedies should be conversant with the proper rules for combating these possible accidents, and be prepared with the necessary antidotes. The first dose of a morphia injection for an unknown individual must be a very small one—at most not more than one-twelfth of a grain; and if he is a subject of the idiosyncrasy alluded to, the signs of poisoning at once show themselves. Thus there may be syncope, spasm of the heart, or an asthmatic paroxysm, the skin being covered with a cold sweat, etc.; and fresh air should at once be admitted through opened windows, while the patient's face is diligently fanned. An assistant bathes the face and temples as well as the bared chest with vinegar, and these parts are sprinkled with cold water. A strong decoction of coffee is administered as an enema, or, when possible, given by the mouth; and, in extreme cases, artificial respiration must be resorted to. In most cases these means will succeed, providing that the dose has not been too large. When the vomiting and disposition to syncope persist without yielding to the usual measures, I would recommend a careful and interrupted inhalation of chloroform, on the strength of a case that made a great impression upon me. A colleague of mine at Prague, having lived twenty years in India, where he contracted, in a marshy region, severe neuralgia in both the upper extremities, was obliged at last to return to Europe. He took large quantities of morphia in gradually increasing quantities, until six grains were taken as a dose; and when chloroform was discovered, he employed it several times a day. He was a great sufferer, threatened to shoot himself, and was so violent in his movements and singular grimaces that it was distressing to be near him. It was, as is commonly the case, his lot to have his sufferings underrated, and his threats of suicide derided; and I now painfully regret that I often caused him pain by inconsiderate rebukes. He raised the dose of morphia to the incredible quantity of fifteen grains (freely employing chloroform in the intervals), evidently in search of death. And, finally, he one evening took half a drachm of morphia, and adjusting a vessel filled with chloroform over his mouth and nose, and fastening the door, went to bed in the expectation of certain death. When the door was forced next mid-day he was found lying on the floor near his bed, with stertorous breathing, and incapable of being aroused. He continued to sleep until next day—above forty hours—and then awoke, vexed at the failure of his intentions, but otherwise little changed. He continued to live for two years longer, and then terminated his sufferings by shooting himself. This is, indeed, a most striking example of the bold employment of a heroic remedy, the like of which is not likely to be again met with, and it forms a remarkable contrast to the examples of intolerant idiosyncrasies. It exhibits the wonderful peculiarity of this substance, which while in some cases it will prove fatal in the smallest doses, in others can be taken in enormous quantities, especially when it has been employed for a long period in gradually increasing doses. This support of large doses was also essentially aided by chloroform being employed simultaneously or alternately with it—or, in other words, chloroform and morphia serve as welcome antidotes and correctives of each other. I had later at Vienna a rare opportunity of closely observing another instance of the mutual action of these substances when employed in large doses. This case was that of R., a regimental surgeon, a man of quite moderate habits, nowise inclined to drink, and of a quiet, gentle disposition. When I was about to perform the operation for hernia upon him in 1860 he proved most refractory to the influence of chloroform, and so great was his uncontrollable excitement that after an hour's perseverance I was obliged to postpone the operation until next day. The chloroform, notwithstanding the care with which it was administered, caused such constantly increasing excitement as to resemble true mania, during which the patient threw himself about with such violence that my two assistants and two servants were scarcely able to secure him. Such an intoxication from chloroform as this, although, as all experienced operators are aware, occasionally observed in certain individuals, and especially in confirmed drunkards, seemed very surprising in one of such moderate habits and gentle temperament. The explanation of this was not furnished until the next day. We then found the patient so fast asleep that it was impossible to awaken him. Indeed, I made no attempt at this, but gladly seized his present quietude for the performance of the operation. During its execution he remained as quiet as a corpse, and after being replaced in bed, continued to sleep until mid-day. He then awoke, and asked for a light, not crediting that it was noon, and still less that he had been operated upon. He was, indeed, blind, with widely-dilated pupils, having ever since the commencement of the strangulation, the day before, made abundant use of belladonna, rubbing it as ointment freely into the groin, while the infusion was administered as an enema every two hours.

(*To be continued.*)

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ORIGINAL COMMUNICATIONS.

IS LEPROSY, OR IS CONSUMPTION, CONTAGIOUS?

By GAVIN MILROY, M.D., F.R.C.P.

No. III.

In my last paper (*Medical Times and Gazette*, July 17) I examined the evidence adduced by Dr. V. Carter in favour of the contagiousness of leprosy, and adverted to his conjectures respecting the supposed *materies morbi*, or, as he prefers to call it, the *contagium* of the disease. On the latter point he has, doubtless, been influenced by the novel views recently put forward in regard of another and allied form of cachexia—viz., tuberculosis. Before proceeding to relate some fresh testimony, lately received from different countries abroad, on the other side of the above important question, it may be not without profit to consider briefly the arguments and evidence for these said views in relation to the analogous malady.

In the last report of the Medical Officer of the Privy Council (1874), Mr. Simon states his belief that "tubercular disease," of which pulmonary phthisis is the most conspicuous example, "is a chronic, locally-originated zymotic process, which, starting under certain conditions in one first spot of the [predisposed] animal body, advances by successive steps in definite anatomical lines to infect the entire system;—a process which, by means of its characteristic products, is inoculable from part to part, and from subject to subject; but of which, in certain other cases, the locally originating cause or *contagium*(a) appears to be the common septic ferment, or a ferment not yet separable from the septic." On what grounds does this belief rest? Mainly on the opinions and statements of M. Villemin,(b) who, without hesitation, declares that tuberculosis is a specific and contagious disease. Prior to performing any experiments of inoculating animals with tuberculous matter, he had come to the conclusion that *tubercle is a zymotic disease*, whose cause must be a specific infective material, like that of syphilis or glanders, capable of multiplying itself in the body of the individual, and also of transmission from the diseased to the healthy. The considerations which had led him to this conclusion are thus enumerated by Dr. Sanderson:(c)—

"1. Tubercle, like the zymotic diseases, is rarely met with in elevated situations. 2. It is most prevalent in crowded populations, and especially in great manufacturing and commercial towns. 3. Persons who live in common, and are confined to their dwellings, as prisoners, monks, etc., are liable to tubercle; while 4. Those who live in the open air, or lead a nomadic life, are comparatively exempt. 5. The frequency of tubercle is greater among soldiers when in barracks than in armies in the field. 6. Those who live with phthisical patients, *in close and ill-ventilated dwellings*, are apt to become phthisical. 7. Phthisis, unknown to certain savage races before their intercourse with Europeans, is now the most destructive scourge. 8. Bovine phthisis prevails most amongst animals that are confined and overcrowded. 9. The antagonism between phthisis and malaria may be explained on the ground that malarious countries are sparsely inhabited. 10. The contagiousness of phthisis has always been a matter of common belief. 11. In its development, phthisis resembles several of the zymotic maladies." Typhoid fever and farcy are specially dwelt upon as resembling phthisis in this respect.

Most physicians would regard the majority of the above positions as serving to indicate the autogenesis of pulmonary consumption rather than its transmissibility from the sick to the well. Two or three only call for particular notice. And first let us see what are M. Villemin's data on the extremely interesting point alluded to in No. 7. Having had no opportunities of personal observation or inquiry, he has derived almost all his information from Hirsch's great work of compilation, selecting such statements (in part from unprofessional sources) as seemed to accord with the views he had already adopted, and thereupon he proceeds to remark:—"It is certainly a very curious phenomenon that these native races [in New Zealand, Australia, Tahiti, etc.] melt away, so to speak, and tend to disappear, under the ravages of a scourge of which they knew nothing before their intercourse with Europeans. In face of such facts, what is more natural than this recent prevalence of phthisis—'*comme une contamination*' by the invading strangers?"(d) And he goes on to observe that this explanation of the phenomenon is the more probable, inasmuch as "measles, scarlatina, typhoid fever, etc., were also imported by Europeans."

The reader will naturally first ask, What is the evidence for the allegation that "the disease was quite unknown before the arrival of Europeans"? None whatever. And if he consults Hirsch for himself, he finds that several of the cited authorities distinctly specify the operation of other agencies rather than that of the alleged "*contamination*." One instance which Hirsch quotes as especially interesting is that dwelt upon in a communication by Pietra Santa, in a late number of the *Annales d'Hygiène* (1861), "On the Causes of the Recent Great Prevalence of Phthisis among the Jewish and Mohammedan Population of Algiers":—"These causes may be referred to two heads—(1) the total neglect of all the laws of hygiene, and (2) the deplorable influence of our [the French] conquest on the manners and customs of the natives, who have hitherto borrowed from our civilisation only the elements of dissoluteness and demoralisation." Nearly to the same effect are the observations of Dr. Suckley in regard of the American Indians in the United States, as given by Hirsch:—"Throughout the country phthisis appears to be the most common non-specific disease with the aborigines—the unfortunate result of bad habits, etc., attendant upon their intercourse with the whites." And here it may not be irrelevant to allude to the remarkable increase of phthisical disease among the working Creole population of Demerara within the last twenty-five years, mentioned in my late Report on Leprosy in the West Indies (page 10), and the cause of which increase is considered by the resident medical men to be the deteriorated condition of their general health.

With respect to the propositions Nos. 6 and 10, M. Villemin adduces no evidence whatever of the supposed contagiousness of phthisis either from his own experience or that of his friends. All that he says, after mentioning that the popular belief in some countries is very decided on this point, is, that "the number of medical men who still adhere to the same opinion is very considerable," without, however, specifying any names except that of M. Andral, who has merely stated that "on more than one occasion he had seen the early symptoms of the disease begin to manifest themselves in women shortly after the death of phthisical husbands, with whom they had continued to sleep to the last moment of their lives."

As the solution of this question of contagion being an element in the propagation of the disease is one of great social interest and importance, it surely behoves our profession to determine the exact truth respecting it, and not leave the point in uncertainty to perplex or mislead the general public. The experience of such an institution as the Brompton Consumption Hospital might easily, one should imagine, decide for all practical purposes the problem for us, as regards at least this country. Meanwhile, it may not be useless here to cite the recorded opinions of two or three of the best authorities among our own physicians of the last and present centuries.

"It has been frequently supposed," says Cullen, "by physicians that the phthisis is a contagious disease; and I dare not assert that it never is such; but in many hundred instances of the disease which I have seen, there has been hardly one which to me could appear to have arisen from contagion. It is possible that in warmer climates the effects of contagion may be more discernible."

Sir James Clark says: "The view which I take of tuberculous cachexia, without which, in my opinion, tuberculous disease of the lungs cannot occur, leads me entirely to disbelieve that consumption can be communicated by contagion. But I consider the practice of sleeping in the same bed, or

(a) The common-sense and dictionary meaning of this word (*à contingendo*, quia quem tetigerit polluit) is "contagion, a catching disease." How can it be rightly used, as it is by Carter and Simon, to denote the hypothetical something presumed to be the proximate or immediate cause of diseases which may not be "contagious" at all?

(b) "De la Tuberculose." Paris, 1868.

(c) Tenth Report of the Medical Officer of the Privy Council. 1868. Page 144.

(d) The same argument is used in a leading article in the *Times* newspaper of May 25 last. The writer (evidently medical) cites the opinion of that ingenious theorist, Dr. W. Budd, that consumption is infectious, 'differing from the infectious fevers chiefly in the slowness of its progress, and in the long period of latency which might follow exposure to contagion." Since M. Villemin's researches, "the veil of mystery which previously hung over the causes and nature of consumption has been removed," and the writer predicts "a near future, in which it will be within the power of medical science to banish consumption as utterly as it has already banished some of the diseases by which our forefathers were afflicted"!

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even in the same room, with a patient in the advanced stage of consumption, highly objectionable, because the rooms of the consumptive are rendered peculiarly injurious to health by the nature of the disease, etc."

Sir Thomas Watson asks—"Is phthisis contagious? No, I verily believe it is not. A diathesis is not communicable from person to person. . . . Yet in Italy a consumptive patient could not be more dreaded or shunned if he had the plague. And in this country the suspicion will now and then arise that the disease may be infectious. . . . The disorder, I am satisfied, does not spread by contagion. Nevertheless I should, for obvious reasons, dissuade the occupation of the same bed by two persons, one of whom laboured under pulmonary consumption."

Dr. C. J. B. Williams, in his recent work on Consumption, 1871, says: "Although I concur in the opinion that we have no evidence that it is infectious like small-pox, scarlatina, or typhus, or that it depends on a specific poison, yet I think that both reason and experience indicate that a noxious influence may pass from a patient in advanced consumption to a healthy person in close communication, and may produce the same disease; just as foul pus or putrid muscle will produce tubercles in an inoculated animal. I, therefore, always recommend such persons to sleep alone."

Mr. Simon refers to "very striking illustration of the communicability of tubercle" being afforded "by the results of experimental feeding with the milk of living tubercular animals, or with bits of diseased texture from such animals when dead; it having been found that in the subjects of such experiments the *contagium* penetrates by the absorbing organs of the alimentary canal, and so diffuses from them its influence to other organs of the body so as to produce general tubercular disease." As the authorities for these statements are not given, comment would be misplaced further than to remark that the development of tubercular (and the same is true of leproid) disease is doubtless much influenced by the nature and quality of the food and general diet, just as it is by other unhygienic conditions affecting the health of the constitution. Of these none is more conspicuously detrimental than prolonged detention in unwholesome, crowded prisons, and especially when the dietary is at the same time defective or otherwise objectionable. The observations of Dr. Baly on his experience at the Millbank Penitentiary some years ago are conclusive upon this head; nor are those of Pietra Santa on several of the prisons in France and Algeria less convincing. Neither writer expresses any suspicion of the disease having ever seemed to be communicated from one person to another in any of the large number of cases of phthisis among the inmates. The mere confinement in close cells for a length of time, without a due amount of exercise in the open air, seemed to be the principal provocative cause in its development. At this we cannot be surprised, if the following remarks by Sir James Clark on the ill-results of mere inaction in ordinary life are to be accepted as of any authority:—"The effect of sedentary habits in all classes and conditions of society is, in my opinion, most pernicious, and there is perhaps no cause, not even excepting hereditary predisposition, which exerts such a decided influence on the production of consumption, as the privation of fresh air and exercise. Indeed, the result of my inquiries leads to the conviction that sedentary habits are among the most powerful causes of tuberculous disease, and that they operate in the higher classes as the principal cause of its greater frequency among females." M. Villemin holds very different views, as appears from the following remarks:—"La tuberculose, comme toutes ses congénères, n'est pas une création spontanée de l'économie. Il n'y-a ni débilitation, ni fatigue, ni misère, ni froid, ni chaud, etc., qui puissent la faire eclore dans l'organisme. Pour naître, il lui faut un germe qui ne peut lui venir que de dehors."

And now let us briefly consider the scientific value of his experiments on animals, which Mr. Simon considers to have revealed "an infinitely interesting light of new knowledge with regard to tubercular disease in the discovery of its being inoculable from subject to subject." That the implantation of a piece of tuberculous matter into the body of a healthy animal (rabbits and guinea-pigs have been generally used) is in many cases followed by the development of genuine internal tuberculosis of the system, was first distinctly ascertained by M. Villemin, and was shortly afterwards verified by other observers. Hastily concluding that here was proof positive that this artificial production of the disorder was due to the introduction of a specific animal poison or ferment which multiplied and propagated itself throughout the economy, just as the virus of small-pox or of syphilis or glanders does, he confidently maintained that henceforth phthisis must be regarded as a true zymotic and communicable disease. But it was soon shown that identically the same pathological lesions were found in the bodies of animals when various other animal substances besides genuine tubercle were used for implantation, and even when no such matters at all were used, and only a seton-wound, kept open for a sufficient time, was had recourse to in the performance of the experiments. The observations of Drs. Clark, Sanderson, and Wilson Fox seem to be conclusive on this head. No longer, therefore, can, to use the words of Dr. Sanderson, "the results of tuberculous inoculation be regarded as necessarily dependent on any property or action possessed by the tuberculated material in virtue of its having been taken from a tuberculous individual." Dr. Fox expresses the same opinion when he says that "Villemin's position that tubercle is a specific disease, producible by tubercle alone, cannot, I think, be held to be true."

It is always to be remembered that many of the animals died from the results of the experiments in from three or four weeks to as many months, their general health becoming gradually more deteriorated and seriously damaged, so that it is at least not unreasonable to suspect that the lowered and depraved condition of the system may have had not a little to do with the development of the degenerative changes discovered on dissection.

On the whole, the endeavours to artificially induce in some of the lower animals a chronic disorder like phthisis scarcely seem to promise more for the advancement of practical medicine, either preventive or curative, than have those of Thiersch and others in respect of an acute malady like malignant cholera. Nor should it be forgotten that hitherto the attempts to artificially induce scrofula or leprosy in any of the lower animals, by inoculating them with the morbid products of those diseases, have been without result. It is by patiently interrogating, much rather than by torturing, Nature that her hidden processes of health or disease are most likely to be discovered. Hence the diligent study of *comparative pathology* appears to be a much more encouraging field of research than the pursuit of *experimental pathogeny* to the philosophic nosologist. The local and personal causes which induce the development of tuberculous disease among many of the lower animals, are known to be much the same as those which favour the like morbid condition in the human subject; and thus the diligent history of the one cannot but serve to throw light upon that of the other. This branch of inquiry deserves more attention than it has yet received in this country. Then, again, the hitherto but little explored area of topographical and geographical research in relation to the genesis and extension of consumption is one from which a fruitful harvest of instruction may be confidently looked for. An excellent example has been furnished in Dr. Buchanan's paper "On the Distribution of Phthisis as affected by Dampness of Soil," in the Tenth Report of the Medical Officer of the Privy Council, and of which that able officer remarks that the conclusion at which Dr. Buchanan arrived on the subject from his careful personal investigations—viz., "that wetness of soil is a cause of phthisis to the population living upon it"—seems to be indisputable. It is much to be desired that this line of investigation should be followed up, under the auspices of the Government, in different districts of the country, as they have been so instructively commenced in respect of the three south-eastern counties of Kent, Surrey, and Sussex. Then it would add not a little to the value of the inquiry if regard could be paid at the same time, together with continued exploration of the surface-condition of the ground, to the influence of other local agencies, such as the general dietary of the working classes, the state of their dwellings, the crowding of the inhabitants, etc. How much the prevalence of the manifold forms of scrofulous disease is dependent on the social and personal peculiarities of a resident population in every region of the world, as well as on some of the geognostic attributes of their country, need not be told.

The larger subject of the geographical distribution of phthisis, and of the influence of climatology on the development and prevalence of the disease, has not yet, notwithstanding its great importance, sufficiently engaged the general attention of the profession. Although the section on this head in Hirsch's comprehensive work contains much that is both

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instructive and interesting, many of the statements, being derived as they are from very varied sources of information, can scarcely be accepted as perfectly exact data, such as only can, or should, satisfy the demands of scientific investigation. What is first wanted is a sufficient collection of accurate reports from medical men resident in different regions and countries of both hemispheres in the Old and the New World, so that we could feel assured that we had faithful records of facts and events verified by personal observation or inquiry on the spot. Such preliminary work could only, it is obvious, be effectually obtained through the aid of governmental co-operation, as was done a few years ago in the case of leprosy, and the results of which appear in the report of the College of Physicians on that disease. No subject for similar investigation would be more fruitful of benefit to the welfare of the public in all countries than a systematic inquiry into the prevalence of scrofula, and of its multiform manifestations, including, of course, pulmonary consumption, and into the probable causes which conduce to their development. Whenever the project of the Government, that was submitted last summer to the College of Physicians, to issue a regular series of medical reports relating to the health of our numerous and widely-scattered colonies, shall be carried into effect, there may be a fine opportunity for laying the foundation for the initiation of such a scheme, which, if rightly executed, could not fail to be productive of infinite advantage alike to science and to humanity.

CHOLERAIC COLLAPSE: ITS ANALOGY TO STOKERS' COLLAPSE.

WITH REMARKS ON THE ETIOLOGY OF MALIGNANT CHOLERA, AND ON SOME OF THE THEORIES OF CHOLERAIC COLLAPSE, ETC.

By J. TEMPERLEY GRAY, L.R.C.P. Lond.

(*Continued from page* 468.)

It has already been noticed that, whilst the external temperature of the body in cholera may be lower than normal, the internal temperature is often much elevated. This is so constantly the case, that Mr. Simon is of opinion that the temperature observations to this effect of McKenzie, Güterbock, etc., prove "quite conclusively that the choleraic affection of the bowels is a heat-making or 'inflammatory' process,"(a) of which the manifestations are suppressed or circumscribed. If we adopt this belief, difficulties crowd around us, for, viewed in this light, we have truly a remarkably conflicting combination of conditions. We have, it is conceded, two potent causes of diminution of animal heat—viz., abstraction of elements for the production of animal heat, and failing action of the heart—coexisting with what is considered to be an active local inflammatory process. Of these "antagonistic influences" Mr. Simon takes partial cognisance, but apparently does not consider their antagonism to involve incompatibility. Neither is it necessary to do so, for the antagonism which would involve incompatibility, as I think, is only apparent, and lies, so to speak, in the adopted nomenclature—a nomenclature which implies that where there is great excess of heat there must be inflammation. It need hardly be said that every special localisation of excess of animal heat does not of necessity indicate the existence of a true inflammatory process, however much it may simulate one. Inflammation is, no doubt, always a heat-making process, but the converse is not equally true. Bearing directly on this subject, Dr. Thudichum remarks(b) that, in the collapse of acute cholera, "the temperatures of the cavities are above the temperatures of the axilla—*i.e., the heat produced in the deeper tissues accumulates in them*, not being carried away by flowing blood, but having to find its way slowly through badly conducting materials." This seems a reasonable view, for the mere existence of excess of heat in a part does not prove that the part is in a state of inflammation. Not to make caloric too much an entity, it may be affirmed that, so far from increase of internal heat being necessarily the result of an inflammatory process, it may be nothing more than what the bare fact indicates—an excess from accumulation, as stated by Dr. Thudichum; the weakness of the circulation with the associated pulmonary obstruction, in this particular instance, favouring the internal *retention* of animal heat by interfering with its normal diffusion. It should be noted, also, that the exudation from the intestinal mucous membrane being watery, or at most a serosity, indicates a state short of inflammation, but corresponding to an analogous one of the mucous membrane of the kidney, where a thin serosity is exuded—a state, in fact, of simple hyperæmia (Jenner). If, indeed, Mr. Simon be right in his conclusion, and the increased rectal temperature in cholera be taken as an indication of an inflammatory affection of the bowels, the increased vaginal temperature must equally be taken as an indication of vaginitis, and so on. Indeed, it is not clear whether or not the normal heat-producing function of the liver—evidenced by the blood of the hepatic vein being several degrees higher in temperature than the rest of the body—might not equally plausibly be pronounced an inflammatory process, and thus supply an *ad captandum* reason why this organ is always out of order! Further, Mr. Simon's opinion is very much at one with that of Niemeyer, and is equally opposed by the frequent occurrence of rapid recoveries. It is not possible for a patient affected with an acute inflammation of the whole alimentary canal to recover completely in forty-eight hours, which not rarely happens in severe cases of cholera. That gastro-enteritis does every now and then occur during or after choleraic attack, is undisputed: it is a complication which is probably not infrequently an effect of the abuse of such remedies as brandy and calomel, but not an essential feature of the disease, which may exist and run its course to recovery or death, without it ever being developed.

It has been maintained that "morbidly changed blood materials," discharged from the bloodvessels through the mucous membrane of the stomach and bowels, are the immediate cause of the purging. Of this hypothesis there can be no satisfactory proof. We might as well assume that when a dose of elaterium is taken it operates hypercathartically by first morbidly changing the blood materials. We do not know how the poison of cholera acts, but we do know that some of its earliest and most manifest effects upon the alimentary canal are, in many respects, like those of a hydragogue purgative. These effects may or may not be eliminative, but inferentially—apart from the positive teachings of experience—it would be just as rational to treat the hypercathartic effects of a dose of elaterium by a dose of another purgative as it is to treat cholera by means of castor oil. The reason why castor oil is at all tolerated—"wonderfuly tolerated," its advocates say,—and is not, perhaps, greatly injurious in choleraic collapse, may be found in the absolute inaction of its purgative principle, and its consequent merely local demulcent or sheathing action, as when applied to an irritated conjunctiva. If castor oil be the most soothing application to a cornea denuded of its epithelium (Bowman), the postulate that it has a local stimulant action upon the mucous membrane of the intestines, comparable with that of mustard upon the stomach (as believed by the chief advocate for its use in cholera), is at least improbable. On the contrary, its specific, rather than its local, mode of action appears to be established by the fact that it acts as a purgative in whatever way it may be introduced into the system. Moreover, as Dr. Johnson says its action in cholera is "in no degree proportioned to the magnitude of the dose," it is more than probable that the symptoms of the disease itself have been mistaken for the effect of the remedy, and that it is inoperative in collapse, just as other and much more powerful drugs are inoperative: its tolerance is evidence of its non-action. There is no doubt a difference between a drug and the intangible poison of cholera; but the difference is of that kind which would enforce, with stronger emphasis in the case of the latter, anything that might be predicated of the treatment of the effects of the former. The hypercatharsis of elaterium may be prevented, or moderated, or arrested by the use of opiates, etc.; and so, also, may that of cholera. The effect of the unchecked exudation of watery fluid—the collapse—requires other treatment, any that merits the name of successful being yet unknown. A number of cases must inevitably prove fatal if early measures do not succeed in preventing the accession of collapse, for, that being developed, remedial treatment of any kind is all but useless, since the power of absorption is greatly diminished or entirely lost. Were it not for this, pure water would be the remedy, and its plentiful use is, notwithstanding this drawback, the *sine qud non* of the treatment of choleraic collapse. It is, however, absolutely necessary that the water be "*pure*," for it cannot but be dangerous to go on giving the very water, it may be, which contained the organic poison which primarily caused the disease. It is not improbable that inattention to this point

(a) Ninth Medical Report of the Privy Council, p. 510.
(b) Eleventh Medical Report of the Privy Council, p. 127.

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may have been, in some cases, the cause of the truly restorative water-treatment proving inefficacious. I may add, incidentally, that in India and elsewhere the use of doubtfully good or bad water may often with advantage be superseded by the use of soda (aërated) water prepared at some distant and uncontaminated place; when this is unattainable, the ordinary precautions of boiling and filtering the water before use are imperative, and should never be neglected. Further, during convalescence from cholera, it may be quite as necessary—in accordance with the old Hindoo notion—for the patient to go away for a change of water, as for a change of air.

Does the amount of the evacuations bear a direct relation to the degree of collapse? This has been much questioned, since in some cases, and these bad ones, collapse has occurred after few evacuations, and the ratio—judged by other cases where there was more purging and less collapse—has been thought to be inverse. Leaving the consideration, that evacuation and exudation are not synonymous terms, on one side, all that these cases prove is, that the ratio is variable—that what is one man's ratio is not another man's ratio,—a small evacuation appearing to produce in one individual as great an effect as a large one in another individual. *Cæteris paribus*, the larger the dose of a purgative taken, the greater the effect; and no one would think of asserting that the ratio is inverse because one man is purged by a teaspoonful of castor oil, whilst another is not purged at all by ten times as much. This is, however, with but slight modification, the argument of those who maintain the inverse ratio of the evacuations to the collapse. Because one man is collapsed after one evacuation, while another is not collapsed till after ten, or is not collapsed at all after the same number of evacuations, therefore, they say, the ratio between the purging and the collapse is inverse; or, in other words, the less the purging the greater the collapse. This conclusion would accord with the view of those who consider the evacuations to be non-essential phenomena. If, on the other hand, we look upon the exudation of fluid as the cause of the collapse (collapse being an *effect*), it is necessary to lay much stress upon the fact that the accompanying evacuations are no measure of the preceding and really causative ones of the collapse. Dr. Sutton, indeed, with reference to his cases of inverse ratio, expressly states that "although they were not purged while in hospital and under our eyes, *they were very much purged* previous to their admission into the hospital, and before going into collapse." Whilst, therefore, agreeing with Dr. Parkes and Dr. Sutton that some of the worst cases of *collapse* are unattended by much or any vomiting and purging, I am unable to perceive that in such cases the ratio is other than direct to the preceding evacuations. At the same time it is incontrovertible that the degree of directness of the ratio is variable. It is not that there is no ratio, or that the ratio is inverse, but that the ratio is directly variable. Hence, if we analyse the variable conditions of the subjects of cholera, we may hope to find an explanation of the varying ratio. This has been done by Mr. Simon, who has called special attention to two important variables.(c) First there is the idiosyncrasy of the patient in the matter of toleration of discharge, or, to use Mr. Simon's expression, "the varying susceptibility of the individual patient,"—which is probably as variable as the toleration of bleeding by different individuals. The second variable of Mr. Simon is, "that the power of the intestinal flux to produce collapse may vary with the rapidity, rather than with the mere degree, in which it tends to inspissate the blood." Both these variables, but especially the latter one, are probably related to, if not dependent upon, other variables, for rapidity of exudation, however it may accelerate or intensify, does not seem to be essential to the production of collapse. In fact, though it is probable that the degree of inspissation requisite to produce obstruction may vary, it is quite conceivable that in some cases the rapid discharge of a small quantity of watery fluid may cause the same amount of obstructive inspissation as the slow discharge of a much larger quantity in other cases; for with rapid discharge, implying acute disease, we may have a total absence of compensatory absorption of fluid, which may take place in the state of pre-collapse, or of sub-collapse, associated with slow exudation. This actually occurs in most cases of dysentery and diarrhœa, where there may be frequent watery motions; but, the stomach and upper intestine being but little implicated, compensatory absorption goes on, the fluidity of the blood is maintained, and symptoms allied to those of choleraic collapse are consequently not produced. Further, if we suppose the degree of inspissation of the blood requisite to bring about the impeded circulation of collapse to be uniform, its development must vary with the natural hydræmia, or otherwise, of the patient affected. This third variable, which is related to Mr. Simon's first, is suggestive of an explanation of the fact that the most robust men are often the most suddenly the victims of cholera—the very richness of their blood, so to say, leading to its rapid inspissation and its consequence, collapse. This position, that the richer the blood is in solids the more rapidly will it become thick by the abstraction of its water, is correlated to my former proposition that the more aqueous the exudation the thicker the blood. The quality or composition of the exudation is of course another variable; and, from my point of view, since its syncopal action as a drain or serous hæmorrhage is negatived, it necessarily follows that the more watery it is, the more dangerous it is. These variables all have reference to the subject of the disease; it should, however, be remembered, though not directly connected with the question under consideration, that the morbid poison itself is also liable to vary, the severity of the seizure varying either with the absolute potency of the poison or with the strength of the dose received into the system. That the poison is not of uniform potency appears to be indicated by the varying malignity of different epidemics, and by the fact that its first manifestations at the beginning of an epidemic are, like a cobra's first bite, the most deadly. This virulence may, however, be due simply to concentration of the poison, and the consequent reception of a larger dose; and the mild attacks towards the close of an epidemic may be due to dilution of the poison, and consequent feebleness of action.

The cases of so-called cholera sicca which have been described, appear to me to be resolvable into three classes—First, they may have been examples of rapid collapse, and death from effusion of fluid into the bowels—the further usual, but inconsequential, sequence of expulsion per anum not ensuing; or second, they may have been cases in which the cholera poison, so to say, expended its force upon the skin, causing profuse cutaneous exudation instead of intestinal exudation; or, third, they may not have been cases of cholera at all, but cases of sudden death by syncope,(d) of entirely extraneous origin, and of mere coincidental occurrence during a cholera epidemic; or at most, only so much related to it that "cholera fright" might have been the predisposing or emotional cause of the syncope. The first class of cases is believed by Dr. C. Macnamara, and other careful observers, to comprehend most, if not all, the cases of alleged cholera sicca. The second, I think, finds its exemplification in the Kurrachee epidemic of 1846, concerning which it is stated that "there was often an absence of purging, vomiting, and cramp, but in no case did the skin fail to pour out fluid in large quantity; this might have been called the chief symptom." The third class is not complimentary to diagnosis, but receives incidental support in relation to cholera, from the fact that syncopal attacks are occasionally the immediate cause of death in malarious fever, and Dr. Morehead has known such an attack mistaken for one of cholera. The "home" of cholera, and of remittent fever, is one in the East; but whether these syncopal attacks be connected with the latter disease, or attributable to cholera panic or other fortuitous causes, the postulate seems not unwarranted, that sudden deaths from whatever cause, occurring during a cholera epidemic, have not infrequently, without more ado, been put down to cholera, the absence of the usual symptoms of the disease not being considered sufficient to negative the diagnosis. Dr. Parkes lends his great authority to this opinion, for he says that the absence of vomiting, purging, and cramps "would not *in the least* affect the diagnosis of the disease." In my humble opinion, the total absence of these usual symptoms would very materially affect the diagnosis, the forms of cholera without intestinal symptoms being extremely rare. But, further, a patient affected with slight choleraic symptoms may die from emotional syncope on finding himself the subject of this dread disease: in such a case the usual symptoms would appear quite disproportionate to the result, which, indeed, would be only indirectly connected with, and probably but little dependent upon them. This intercurrent syncopal death will also account for some of those deaths in so-called cholera sicca, where

(c) Ninth Privy Council Report, p. 432.

(d) In this class also may be included certain cases of embolism described by Dr. A. Carpenter which were actually registered as cholera (*Lancet*, vol. ii. 1871, p. 618).

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the effusion into the intestinal canal, found after death, has seemed inadequate in quantity to produce collapse, when compared with the quantity effused or evacuated in other cases without its supervention. True cholera sicca is, however, as much a myth as it is a misnomer; but if we allow certain exceptional cases to exist of the first and second varieties mentioned, they afford no ground for objection to Snow's theory. How exceptional cases of so-called cholera sicca must be, may be inferred from the fact that neither Dr. Macpherson nor Dr. Morehead ever met with any such cases in the course of their large experience. Neither had Dr. Parkes witnessed such when he wrote that in every one of his own fatal cases "purging was present at some period of the case"; yet, and notwithstanding a further admission, that "in *most* cases there is vomiting and purging before there is loss of heat," he arrives at the conclusion that they are non-essential symptoms of cholera. Some of the discrepant opinions on this subject of essential symptoms may be explained by the fact that the term "cholera" is sometimes solely applied to the collapsed stage, it being assumed that cholera is not present, or is not developed, till that stage sets in. This error I conceive to be the source of much confused and apparently contradictory theory, which would be avoided, and might perhaps be harmonised, if it were definitely recognised that "choleraic diarrhœa is a stage of cholera as much as collapse" (Murray), and that the former is by no means an essential or a constant symptom of the latter, whether it be esteemed its cause or not. A theory which only explains the later stages of a disease, or "which only accounts for the symptoms and appearances in the fatal cases, can scarcely be the correct theory of the disease" (K. Mackinnon). Vomiting and purging of effused fluid are features of the early stage of cholera; they may be present in incomplete collapse; when collapse is complete, they commonly cease. If vomiting and purging continue during complete collapse, the evacuations consist of previously effused or of recently ingested matters. When the accession of collapse is rapid, the possibility of its occurrence without the appearance of discharge may be granted—the collapse directly following the effusion and preceding the vomiting and purging. If the collapse thus arising be great, and the patient suddenly succumb before evacuations take place, a case of so-called cholera sicca is constituted. Whilst, however, vomiting and purging are almost constant phenomena of the disease, peripheral algidity, with obstructed pulmonary circulation and general collapse, are only prospective, though not infrequent, results. Even when gastro-enteric symptoms are not very conspicuous, the watery exudation goes on, for it is generally in these cases, as has been noticed by Professor Maclean, that we have those profuse perspirations which, if solely manifested, constitute the second variety of cholera which I have alluded to. This last feature strongly sustains—I would almost say, completes—the analogy between choleraic and stokers' collapse; the latter bearing a similar relationship to the collapse of sweating cholera that the collapse of ordinary simple cholera does to that of the ordinary malignant form.

(*To be continued.*)

THE VIENNA MEDICAL FACULTY.—The Vienna University has just issued its first annual report, drawn up by a committee of professors. From this, it seems that the Medical Faculty now consists of 111 persons—viz., 22 ordinary and 32 extraordinary professors, and 57 privat-docenten. The birthplaces of these are as follows:—Bohemia, 24; Vienna, 18; the Hungarian Crown Lands, 17; Moravia, 9; Lower Austria, 6; etc. There are only two professors who were born out of the Austrian dominion—viz., Brücke and Billroth—both of the highest importance to the University. Prof. Meynert was also born in Dresden, and Privat-docenten Monti in Italy, and Lett in Göttingen, but all three from their earliest youth have resided in Austria. The report shows that since 1870 there has been a constant diminution of medical students, whereas during the period 1865-70 their numbers constantly increased. From 708 in the winter of 1864-65 the number rose to 1470 in that of 1869-70, while during almost the same interval it diminished, in 1874-75, to 877. The number of first year's students shows a similar diminution—viz., 155 in 1864-65, 246 in 1869-70, and 133 in 1874-75.—*Wien. Med. Woch.*, October 23. [It is stated that the number of young men entering all the German universities has diminished, local causes determining the amount of such diminution.]

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

LIVERPOOL NORTHERN HOSPITAL.

CASE OF CARBOLIC ACID POISONING—RECOVERY AFTER TAKING FOUR OUNCES OF CRUDE CARBOLIC ACID.

(Under the care of Dr. DAVIDSON.)

ANN N., aged forty, residing at Bootle, was admitted into the Northern Hospital shortly before midnight, June 15, 1875, suffering from the effects of carbolic acid poisoning. About nine o'clock that evening she had voluntarily swallowed nearly a teacupful (two pennyworth) of crude carbolic acid, which would be about four ounces. About twenty minutes after she had taken this, she was seen by Mr. E. S. Wood, who found her in the following state. She was unconscious, collapsed, and blanched. There had been no vomiting or convulsions. The breathing was stertorous; the pupils were contracted; the pulse was hardly perceptible, not rapid. Mr. Wood at once used the stomach-pump, and washed out the stomach with tepid water. The contents of the stomach smelt strongly of carbolic acid, and some of the fluid coming in contact with his hand caused considerable smarting. This washing out was repeated five times, and he then injected one pint of olive oil into the stomach. He also caused mustard-poultices to be applied to the calves of the legs and to the heart. Two hours after, her condition was better; the colour of the skin, the pulse, and respiration being markedly improved; but she remained unconscious. She was then sent to the hospital (three miles distant). On her admission about midnight, her state was the following:—She was semi-conscious; pupils contracted; pulse quick and feeble; surface of body cold. Soon after admission she had some convulsive twitchings of the limbs, and vomited some blood and oily matter. At 2 a.m. consciousness had returned, and she was able to swallow milk and brandy, but vomited.

June 16.—Patient continues to vomit a greenish watery matter without odour. Bowels have acted several times, the motions being at first black, afterwards dark brown, and without odour of carbolic acid. The urine is of a smoky colour and aromatic odour. The addition of strong sulphuric acid to it causes a purple colour, changing rapidly to blue; no odour of carbolic acid is given off. No albumen present. She complains of great burning pain in throat and epigastrium. There is tenderness on pressure over the stomach and cæcum. Fauces reddened and covered with mucous exudation. There is a dark brown stain on the skin of the upper lip and running down the left side of the mouth and chin. Pulse rapid; temperature in evening 102°. Treatment: Small quantities of barley-water, milk and lime-water, and ice.

17th.—Pulse 128; temperature 102·5°. She slept in the night. This morning she is very weak; pain and vomiting continue. Urine drawn off by catheter; still smoky.

18th.—Rather better. Pulse 104; temperature 102·2°. Urine slightly smoky. After this date she improved slowly, and left the hospital on July 17.

The chief point of interest in this case is the large quantity of poison which was taken without fatal result. The patient stated that she had drunk nearly a teacupful of the common brown carbolic acid. That she purchased this quantity is confirmed by the statement of the chemist who sold it; and, seeing she took the poison intentionally with a view to suicide, and not by mistake, it is not unreasonable to suppose that the whole quantity was swallowed.

On referring to Taylor's work on Poisons, and Guy's Forensic Medicine, no case is mentioned where so large a quantity of carbolic acid was swallowed. Several instances are given in which smaller doses (half an ounce to two ounces) proved fatal in times varying from half an hour to thirteen hours. One case is mentioned by Guy, where one ounce caused death in a few minutes; and it is stated that dangerous symptoms have been caused even by seven drops. In this case the recovery was owing, no doubt, to the rapidity with which the poison was withdrawn from the stomach, and it is possible that the contents of that organ may have been sufficiently abundant to dilute and so weaken the corrosive action of the acid.

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THE MIDDLESEX HOSPITAL.

CASES UNDER THE CARE OF MR. DE MORGAN.

[From notes by the Senior House-Surgeon, Mr. Scott.]

Case 1.—*Compound and Comminuted Fracture of the Superior Maxilla and Frontal Bones, involving the Roof and Floor of Orbit—Recovery without Impairment of Vision.*

L. T., aged twenty-nine, an Italian asphalte labourer, admitted into hospital on October 19, 1875, at 4.30 p.m., having met with the following remarkable accident:—

He was in the act of descending from a height by means of a pulley-rope, on the ascending portion of which was fixed a hook. This hook caught him on the right cheek just below the malar arch, making a large ragged trifid wound in the skin and soft tissues, and crushing the malar process of the superior maxillary bone. The point of the hook then passed through, and broke up into fragments, the floor of the orbit, traversed the outer side of the eyeball, and cut its way out through the eyebrow, crushing the roof of the orbital cavity. The lower wound went deeply to the back of the orbit, and there was from this point considerable arterial hæmorrhage. Vision was unimpaired in the right eye, the patient being perfectly conscious, and but slightly shaken. A lint compress and a bandage were applied, and the patient put to bed and kept absolutely quiet. At 10 p.m. his pulse was 80, full, soft, and regular; his manner mostly somnolent, though he was at times restless; the left pupil was active; there were free movements of the limbs.

The compress was left undisturbed for two days; when removed, no further hæmorrhage ensued, and the wounds were lightly dressed with carbolic acid lotion (1 in 40). The eyeball was quite uninjured.

The man has since made an uninterrupted recovery. There is, however, a slight degree of ectropion from contraction of the cicatrix of the lower wound.

When first admitted, it was impossible to say to what structures the injury was limited. The antrum of Highmore was known to be laid open, and both the floor and roof of the orbit could be seen and felt to be fractured; on the other hand, it was pretty clear that the eyeball itself had escaped any serious participation in the injury. It was feared that the cranium had been penetrated, although the great thickness of the margin of the orbit at the superior external angle, and the frequency of the extension of the frontal sinuses for a considerable distance outwards, allowed of some hope that the brain and its membranes had escaped. The sequel of the case proves pretty conclusively that this hope was not unfounded. At the first there was very sharp and profuse arterial bleeding, which at one time assumed an alarming character. Fortunately it was stopped by compresses, for the ligation of one carotid for hæmorrhage from such a wound in all probability would not have had much effect.

Case 2.—*Fracture of Femoral Condyles into Knee-joint, and Dislocation Backwards of the Tibia with the Fragments.*

[Reported by Mr. Karop, Junior House-Surgeon.]

George H., aged forty-five, a gunmaker, was admitted into the hospital on the night of November 13, having sustained severe injury to his knee in trying to avoid, whilst crossing the street, a Hansom cab. He states that in starting to run out of harm's way his foot slipped on the greasy mud, and he came down heavily on to the left knee, the leg bending under him. He was picked up and brought to the hospital at once.

On admission, he looks anxious but complains of no pain. He is unable to move his left leg; the knee-joint appears swollen, and there is marked shortening and slight eversion of the limb. In the ham can be felt a hard mass, and on moving the leg there is distinct crepitus just above the condyles. If the patella be moved from side to side it may be felt to grate on rough bone, and it (the patella) can be drawn upwards to a considerable extent, leaving a deep depression where the head of the tibia should be—the ligamentum patellæ having been ruptured by the extreme sudden flexion. The nature of the accident was evident from the manner in which it was received, and from the observable symptoms. A man falling with all his weight, and increased momentum, on the flexed knee, receives the direct impact on the apex of the patella and on the femoral condyles. These being driven asunder, and the ligaments of the joint stretched, the tibia and the condyles are forced up behind by the hamstrings and by the direction of the violence, the continuity of the ligamentum patellæ being likewise destroyed. The case is being treated by simple extension. A perineal band, passed round the patient, was made fast to the bed-head on the opposite side to the fracture, a long straight splint (ordinary Liston's) was fixed firmly to the thigh; a long piece of strong strapping, two inches in width, was then taken round the leg from the outer to the inner aspect, leaving a loop at the sole of the foot, in which was fixed an ordinary roller. This band was further bandaged to the leg, and the leg so lightly to the splint that it might work through it, and yet be kept in apposition to it. A seven-pound weight working over a pulley at the end of the bed was then fastened to the roller at the sole of the foot, thus making continual steady traction. To have an ice-bag to the knee, and liq. opii sed. ℥xx. at once, and to be repeated if necessary.

November 14.—Patient has passed the night comfortably and without pain. On inspecting the knee, the dislocation was found quite reduced, and the swelling considerably gone down; but there was still effusion into the joint.

16th.—Complains of starting pains in the knee. There is less swelling of the joint. Towards night he had a slight attack of noisy delirium. To have liq. opii sed. ℥xx. stat. in ʒij. brandy and hot water; to be repeated at intervals until quiet.

The next morning he looked rather wild and nervous. To have brandy ʒvj. daily, and liq. opii sed. ℥xx. every night. He has since had no return of the delirium, feels pretty comfortable, and is doing well.

Case 3.—*Compound Dislocation Backwards of Second Phalanx of Index-Finger—Reduction—Recovery, with Movable Joint.*

[Reported by Mr. Karop, Junior House-Surgeon.]

The points of interest in this case were, firstly, the total absence of any local or constitutional disturbance during the whole course of repair, the wound doing well from the first, and healing without redness, pain, or scarcely any suppuration; and, secondly, the almost perfect use of the finger, after suffering from a compound fracture through the joint, and after being kept extended for twenty days.

Benjamin B., a lad aged seventeen, was admitted on October 30 with a lacerated wound on the palmar surface of the left index-finger, opposite the head of the first phalanx, which was protruding through the wound. The second phalanx was dislocated backwards, its base forming a swelling on the dorsal surface.

On looking into the wound it was found that the head of the first phalanx was forced through the insertion of the tendon of the flexor sublimis digitis—of course, with rupture of the anterior ligament of the joint. The lad stated that whilst he and several others were playing he received a kick from a heavy boot on the palmar surface of the finger, the hand at the time being half-flexed in the act of grasping a comrade.

The dislocation was reduced by steady, gentle traction and extension, and the wound washed out with carbolic acid solution (1 in 40), and the finger fastened on the dorsal aspect to a straight splint. Carbolised oil on lint was then applied, and a bandage over all.

The next day the wound looked healthy, and there was very little suppuration. Dressed in the same manner.

November 1.—No pain. Sleeps well. Wound looking nicely.

12th.—Skin wound healing. To be dressed every morning with lotio rubra, the splint being retained.

From this date the healing continued without any interruption, and on November 19 was quite complete. On taking off the splint he could flex the second phalanx to about forty-five degrees. Ordered to use gentle exercise and cold shampoo.

22nd.—Quite well. Flexion nearly perfect.

Centenarians on the Continent.—These are so frequently reported to exist, that it is certain that their pretensions want a little of that sifting which they have obtained in this country at the hands of Mr. Thom. The *Union Médicale* reports (November 18) that at Benimaclet, in Spain, a medical practitioner 105 years of age still pursues his calling, being blessed with a wife also 103 years old, and is in excellent health. This week the *Gazette Hebdomadaire* states that there were recently in Paris two *concierges*, husband and wife, each being 108 years of age!

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Medical Times and Gazette.

SATURDAY, NOVEMBER 27, 1875.

JURIES ON HOSPITAL TREATMENT.

A remarkable inquest, noticed by some of the daily papers under the heading "Extraordinary Hospital Treatment," has been lately held before Dr. Hardwicke upon the body of Mary Jane Bull, aged thirty-one. The mother of the deceased said her daughter had been living at Leighton Buzzard, where she had been suffering from an internal complaint. She was advised by several medical men to come to London, and one gave her a letter of introduction to Sir William Fergusson at King's College Hospital, into which institution she was received on the 27th ult., and was placed in a ward stated to be appropriated to Sir William's patients, a card over her bed bearing his name. Every time, however, that the mother went to see her daughter, the latter complained that she had never been seen by Sir William Fergusson, and that she had been subjected to treatment which she believed was killing her. She further implored to be taken out of the hospital, as she said four cans of cold water were poured over her daily. On the 4th inst. she was removed, and placed under the care of Dr. Willoughby Davis, who attended her till she died. Dr. Davis stated that he was called to see deceased, and found her in a sinking state; he prescribed for her, but she died the next day. The body was very much wasted; and on post-mortem examination he found extensive tubercular deposits in the apex of each lung; the kidneys also were very large and diseased, one being filled by a large abscess, and the other having in it ten small abscesses. The immediate cause of death, in his opinion, was exhaustion from tubercular disease of the lungs and kidneys; the deceased, he said, was quite sensible, and told him about the cold water being thrown over her in the hospital. The inquest was then adjourned for a week, for the attendance of the hospital authorities, and on its resumption Mr. Footner and Mr. Fowler were present from King's College Hospital. From their evidence it appeared that the deceased was admitted on the 27th ult. by Mr. Fowler, at that time House-Surgeon, and prescribed for by him; that on November 1 he was succeeded in the office of House-Surgeon by Mr. Footner, who carried on Mr. Fowler's treatment; that Sir William Fergusson had been told all about the case by the House-Surgeon the day after the woman was admitted, and that Sir William remarked that he had heard about her from the medical man who sent her up, and that she was a nervous woman; that he did not examine her, but left the case in the hands of his House-Surgeon; and that "it was usual for Sir William to leave general cases in the House-Surgeon's hands." The two House-Surgeons agreed in doubting if the deceased could possibly have died of tubercular disease in such a few hours after leaving the hospital. It was stated also that when admitted the poor woman was labouring under incontinence of urine; that the chest was examined without the existence of serious disease having been discovered; and that the urine "was examined or tested, but not microscopically," by a student who had been a dresser about six months. The jury in the end returned a verdict to the effect that the woman had died of "tubercular disease and disease of the kidneys, accelerated by her removal from King's College Hospital by her friends." The jury were good enough also to express their disapproval of the treatment adopted in the hospital, and their surprise that "a more diligent diagnosis should not have been made than that of entrusting it, without microscope or other appliances, to a dresser who had been only six months under tuition." As to this it may be observed that the jury were probably ignorant of the fact that a dresser is, as a rule, an advanced student, and ought to be perfectly competent to examine the urine of any patient, and to report as to whether or not it is healthy. And as to the cold douche treatment, it was carried out thus: the patient sat or stood in a warm bath in front of a fire; on the first morning four, and afterwards only two, small canfuls of cold water were then poured down her back through a cullender; she was dried with warm towels, and placed in bed between warm blankets. She was under the care of qualified medical men, and they were, to say the least, much better judges of treatment than any "intelligent twelve," forming an ordinary jury, could be. Looking at the case by the light of Dr. Willoughby Davis's post-mortem examination, it must be considered unsatisfactory that no grave organic disease had been discovered during life; and people may be inclined to agree in the coroner's remark, that there "had been a series of mistakes and misunderstandings." But we are glad that Dr. Hardwicke has written to the *Times*, denying that, in reply to the question from the jury, "if in the public hospitals it was the practice to put the name of some eminent public man over the beds of the patients as a mere 'decoy duck,' and then allow other people to act in the great man's name," he had answered that "it was a common practice." Dr. Hardwicke states that he really replied that "it is not unusual for patients to be admitted under the care of some physician or surgeon, and afterwards, when the exact nature of the disease is ascertained, to place them in charge of that officer in whose department such cases are usually treated." This was, perhaps, considering the imputation implied in the question, an unfortunately vague answer; but it was, at any rate, not absolutely incorrect, as was the reply first published in the daily papers. It would have been better to state, for the information of the jury and the public, that when hospital physicians or surgeons have themselves carefully diagnosed a case, they then, not seldom, entrust its management to their assistants, simply inquiring on their visits how the patient is going on. The inquest points to the mischief that may arise from juries stepping outside their duties, and from the eagerness of daily papers to make sensational-headed paragraphs for their readers.

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ALUM IN BREAD.

The alum question in bread, as it is called, has again been brought prominently before the public, and in a manner which is likely to cast discredit upon public analysts. The general body of the public, looking broadly upon the mere fact of discrepancies in the results of analyses, is sorely puzzled; whilst traders will, of course, not hesitate to make every possible use of conflicts of professional opinion, to upset the working of the Sale of Food and Drugs Act.

It may be well, then, to point out the sources of failure in bread analyses, and the most approved method of ascertaining the presence and amount of alum in bread-stuffs; since, judging from recent publications by some well-known chemists who have not paid special attention to the detection of alum in bread, the latest improvements in estimating alum require to be more generally known. It is understood that the officials at Somerset House, to whom disputed cases are now to be referred, are but little versed in mineral analysis, and, it is rumoured, will have to apply to others to help them in cases of difficulty.

The old processes for alum, laid down in the text-books up to the time when the late Adulteration Act was passed, were eminently defective. We need only refer to those described by Drs. Normandy and Hassall, respectively, in their well-known manuals, as processes which could not possibly result in a correct determination of the quantity of alum present in bread. It is true that in gross cases of adulteration such processes might lead to approximately accurate results; but in more delicate cases they were insufficient, and in some instances, though worked by practised hands, they failed altogether to prove the presence of alum in bread.

We are, therefore, surprised to find in the new edition of "Normandy's Handbook of Commercial Analysis," published this year, a process recommended for the estimation of alum in bread, on the authority of a well-known public analyst, which cannot possibly yield an accurate result; and that the recent labours of other workers in the field of food analysis are ignored. We are bold to say that with the improved methods now at his command no chemist ought to find alum where it is not, and that it is scarcely possible to overlook its presence.

The old and imperfect method of ascertaining the presence, and determining the amount, of alum in bread-stuffs consisted in incineration of the substance, dissolution of the ash in oil of vitriol, the precipitation by means of caustic alkali of the earthy phosphates, which were then filtered off, and final precipitation of the alumina by the addition of ammonium chloride until all the free fixed alkali was destroyed. There are many sources of error involved in this mode of procedure. It was at one time supposed—and the error is still held by some—that aluminium might be volatilised in the form of chloride when too great heat was employed in the incineration; but this is certainly not the case. The employment of a high temperature has, however, this disadvantage—that the alumina is rendered very difficult of solution in oil of vitriol; and in some cases it is quite unattacked by this solvent even at a high temperature. Once in solution, the alumina adheres most firmly to the earthy phosphates when these are precipitated by potash or soda, and is with difficulty removed by prolonged washing with hot water. The earthy phosphates, too, are by no means insoluble in solutions of the caustic alkalies, and are apt to go down in the final precipitate—the so-called alumina—which is, in reality, a variable mixture of alumina and aluminium phosphate, more or less impure, with the phosphates of lime and magnesia. The sooner this imperfect mode of procedure disappears from the text-books, the better.

The more accurate of our analysts, well aware of the imperfections of the above method, recommend other but extremely complicated schemes of analysis, a specimen of which may be seen in Crookes' "Select Methods of Analysis." These were, however, too elaborate to meet with general acceptance.

The plan now adopted by all the more careful analysts, and one which yields very accurate results, consists in the incineration of a definite quantity—generally 100 grammes—of the bread to a grey-white ash. This is then drenched with equal parts of hydrochloric acid and water, evaporated to perfect dryness to render the silica insoluble, and again taken up with hydrochloric acid, and filtered. The silica remaining on the filter may be weighed, and, if in abnormal amount, fused with sodium carbonate, and treated with acid in the same way as the bread-ash. It will be found that with careful manipulation all the alumina has passed into the first hydrochloric acid solution. This highly acid solution is now treated with an excess of ammonium acetate, whereby the whole of the iron and alumina are thrown down as phosphates on the application of a gentle heat. The precipitate is filtered off, washed, redissolved in hydrochloric acid, the solution treated with excess of pure soda (from sodium), the iron phosphate removed by filtration, and the alumina finally precipitated from the filtrate by rendering it acid with acetic acid, and warming gently. The precipitate is pure aluminium phosphate, from the weight of which the proportion of alum in the bread may be readily calculated.

An allowance must be made for the alumina naturally present in wheaten flour, or accidentally present in the form of insoluble silicates. This should never exceed the equivalent of ten grains of alum per four-pound loaf. It is generally much less—about three grains only.

By following the above course of procedure, and making the allowance just mentioned, no careful analyst could, we imagine, find alum where it was non-existent; and not many, we should imagine, would overlook its presence. There must, nevertheless, always remain a few cases where the quantity of alumina present is so small that it would be impossible to aver that *alum* had been *purposely* added to the bread.

THE CARBOLISED CATGUT LIGATURE.

In considering the use of the catgut ligature for tying arteries in their continuity, the question presents itself—Is carbolic acid a necessary agent in the preparation of the catgut? In order to answer this question, we may briefly consider the mode of preparing this so-called *cat*gut. The material is really a part of the peritoneum of the sheep, with some fibres of unstriped muscle. This, having been properly cut into lengths and sizes for ligatures, might be simply dried and used, or used fresh, but in either of these conditions it is slippery, hard to tie, and when tied apt to stretch, and the knot to slip. Mr. Lister, anxious to procure a ligature which should melt away and be absorbed without acting as a foreign body in the wound, and looking to the somewhat unsatisfactory experiences of Astley Cooper and others, found that by a special preparation this catgut was so altered as to become a firm and useful ligature. If it is suspended in an emulsion of oil and water, during the first few days it becomes dull and opaque, but then a remarkable change occurs: it becomes clear, bright, and hard, and capable of being tied without stretching and slipping. In order to attain this changed condition it is necessary to keep it suspended in the emulsion for about two months, the bottom of the vessel being so arranged that the water, as it separates from the oil, falls down clear of the suspended catgut. It will be ready in two months, but it goes on improving if kept in the emulsion for a much longer period. In order to make a very fine emulsion, the water was mixed with something which the oil would take from it—say

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spirits of wine,—and the water was thus left suspended amongst the oil in very minute drops. Mr. Lister wished to have an antiseptic ligature, and he found that carbolic acid had the requisite properties for forming along with water and oil the required fine emulsion. Hence the *carbolised* catgut ligature.

This answers our question; but it seems probable that if nothing to prevent decomposition was mixed with the emulsion, the animal tissue kept in it for a considerable length of time would be apt to become putrid, and if it did not at the same time lose its special properties, still it would, from its putridity, be very unfit for surgical purposes.

The next question—Is the catgut, carbolised or not, a safe ligature for application to arteries in their continuity?—divides itself into several heads, which we may endeavour to answer from the experiences related during the discussion at the Clinical Society.

If properly prepared, the general experience seems to point to the fact that it is safe, provided the artery be in a fit state for any surgical interference. But an element of uncertainty arises, as some surgeons in tying it divide the internal coat of the artery, while the majority find that they do not. We believe that if sufficient force be used to divide the internal coat, with the additional bruising to the outer coats that this implies, the catgut will be found inferior to silk, because from its liability to softening and absorption it does not maintain a firm hold on the artery nearly so long as silk, and consequently does not give Nature so long a time to complete her safeguards against secondary hæmorrhage.

On the other hand, it seems that the ligature may be so used as to cause ulceration externally, and yet relax so soon as to leave the artery pervious,—a very serious state of things.

The remedy to such misfortunes appears to us, however, to lie in a little more experience as to the proper amount of force to employ in tying it, so as effectually to occlude the artery and allow the formation of clot without dividing the internal coat on the one hand, or causing ulceration or sloughing of the external coat on the other.

So far we have kept altogether out of sight the question of its use in aseptic surgery, for which it was introduced in its present form by Mr. Lister.

In his hands, and in those of other surgeons who thoroughly carry out his method, it has been found most trustworthy both for ligature of arteries in their continuity, and also for the ordinary tying of divided arteries; the number of cases in which secondary hæmorrhage has occurred being so very small, that, looking to the varying nature of the cases, it may fairly be pronounced perfectly successful. Nor must we forget that Mr. Lister only advocates its use in aseptic cases, and that some, at any rate, of the cases we have just alluded to, in which secondary hæmorrhage has occurred, have been septic ones from some failure in the details of his method.

In speaking of the preparation of the catgut, we have alluded to the probability that it would become putrid if no antiseptic agent were used; and now we come to the question—Do fluids in a putrid state act in a different manner on the prepared gut to the natural secretions of a wound in an aseptic state? We are inclined to think that if pieces of the same catgut were placed in the secretions of a wound which was distinctly septic, and in those of a wound which was as distinctly aseptic, a marked difference would be found in the state of the material when withdrawn after a few days.

Evidence on this point would not be difficult to obtain, and would have a most important influence on the settlement of this question. Certainly clinical experience points to some such theory to account for the uncertainty in the results obtained by those who merely use the ligature, as compared with the certainty of results obtained by those who use it along with Lister's method.

THE WEEK.

TOPICS OF THE DAY.

NOTWITHSTANDING all the efforts which, as we previously stated, were being made to secure for St. James's-street the boon of a silent, or wood-pavement, it now appears that the opponents to improvement have carried the day, and an enlightened vestryman has hinted at the probability of the subject being considered in about ten years from the present time. St. James's-street has the misfortune to obtrude itself into two parishes; it is hardly necessary, therefore, to point out that with two parochial bodies to control its destinies, its chance of being sensibly dealt with is small indeed. The Vestry of St. James's, in answer to an appeal which it could scarcely ignore from some of the leading ratepayers, referred the matter to its neighbour, St. George's, Hanover-square, with regard to their portion of the thoroughfare, and the committee of works of the latter parish, after inspecting the locality, met to consider the question. Dr. Love moved that no action be taken in the matter at present, as the street would last for ten years more. Mr. Cremer thought the street required repairs, but not re-laying. Mr. Browne said some attention should be paid to the ratepayers, who had asked for wood-paving in the street; he thought the condition of the street a disgrace to the metropolis. Mr. Walker said Piccadilly was in a much worse condition, and it was to be considered next week. He had some doubts as to wood-paving, and thought it might possibly be better, notwithstanding the expense, to lay down macadam, which he found most of the cabmen considered the best and safest for horses. Eventually the committee agreed to recommend the Vestry to return a reply to the memorialists and to St. James's Vestry, stating that the street did not need re-laying at present, but when this became necessary the advantage of laying down wood-pavement should be considered.

With reference to an article which recently appeared in the *Sanitary Record*, stating that the analyses of 119 samples of ale and porter, sold over the counter by publicans in various parts of London, showed such a percentage that a person who drank two quarts of fourpenny ale or porter consumed more alcohol than is contained in half a pint of brandy or whisky, Mr. Dugald Campbell, chemist to the Country Brewers' Society, reports that ales and porters sold to publicans seldom contain more than 7 per cent. of proof spirit; very often considerably less. But, assuming them to have 7 per cent., this would give the amount of alcohol in the two quarts of fourpenny ale or porter as rather more than five ounces and a half, in place of the half-pint, or ten ounces, stated. Further, if the ale or porter has added to it by the publicans sugar, or treacle and water, as stated by the *Sanitary Record*, the quantity of alcohol in the beers would be even less than stated, and somewhat proportionately so to the water added with the sugar or treacle.

That section of society which blindly follows the lead of Mr. Stansfeld and the Rev. G. Butler held its annual conference at Sheffield last week for the purpose of endeavouring to bring about the repeal of the Contagious Diseases Acts. The greater proportion of the gathering, as usual, was composed of women; it may, therefore, very fairly be asked what weight the resolutions of such a meeting could have in considering the bearings of this important question. Nevertheless, Mr. Stansfeld and the organised band of speakers delivered themselves of the stereotyped protests against this highly successful effort of legislation, not forgetting to enunciate their customary disbelief in the amount of good already realised by the working of the Acts. We must not forget to chronicle one novelty in Mr. Stansfeld's oratorical flights on this subject. He does not now desire "that their victory should be too easy or too soon."

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These words must certainly be taken as an omen of this gentleman's ultimate return to common sense. The time may arrive when these Acts are no longer required, and it will not be necessary to stump the country and gather large meetings of the sympathetic and misinformed of the weaker sex to bring about their repeal.

At a meeting of the Bristol Sanitary Authority held last week, an important report was presented by Dr. Davies, the medical officer of health, with respect to the condition of the district inundated on the 14th inst. by the overflowing of the River Froome. Dr. Davies stated that the whole of the houses flooded would be unfit for habitation until next Midsummer, and that the occupiers who remained in them would be subject next summer to diarrhœa, dysentery, and fevers. He condemned the whole of the district as an unhealthy one, and recommended that the power of the Artisans' Dwellings Act should be put in operation. It was stated that the area thus condemned comprised sixty-three acres, and that there had been erected on it between 2000 and 3000 houses, and that the population affected would be about 6000 persons. Part of the land, it was said, had been recently sold for £400 per acre. In the course of the discussion which followed, it was stated that the bricks composing some of the houses in this district were as soft as paste, and would crumble readily between the fingers; and it was added that houses had to be strengthened with iron bands to prevent the walls from falling outwards. It was resolved to call a special meeting to consider the report.

The usual monthly meeting of the Port Sanitary Committee of the Corporation was held last week at Guildhall. This Committee has, during the past two years, increased its sphere of usefulness, and extended the scope of its duties to a considerable extent. No fewer than 1222 vessels have been visited and examined by the Port Medical Officer and his inspectors during the past month, about 10 per cent. of which required cleansing. A detailed report was presented by Mr. Leach on the recent outbreak of typhoid fever on board the school-ship *Cornwall*, which, it is believed, was mainly due to the bad quality of the drinking-water. It appears, however, that a powerful predisposing cause may be found in the foul state of the banks in this part of the river on account of the deposit from the Metropolitan Main Drainage outfalls at Barking and Crossness. With this the Port Sanitary Authority have no power to interfere, as the Metropolitan Board of Works are specially protected by the 336th Section of the last Public Health Act. The district is, in a sanitary sense, one of the most important in the kingdom, and nothing has of late years so much increased the *prestige* and popularity of the Corporation of London as the acceptance and proper organisation of this useful and very responsible work.

The undertaker at Southampton, Stephen Blundell, who with his wife and an assistant was under committal for trial for the concealment of fifteen dead bodies of children on his premises, died at his residence on Sunday last. During his several examinations it was apparent that he was suffering from severe illness, and at the time of his committal it was generally believed that he would not survive till his trial.

A Calcutta newspaper states that, in conformity with orders recently issued by the Government of India, medical arrangements and equipments for the Prince of Wales's staff are now being made by the Medical Department. A subordinate medical establishment has just been organised to accompany the staff during his Royal Highness's tour to the various parts of India. The European apothecary and the native doctor who served the Duke of Edinburgh during his late visit to India, and who are now employed in the Lahore circle, have been appointed to the medical establishment, and have been directed to proceed at once to Bombay to commence their duties.

DISPUTE AS TO THE SALE OF A PRACTICE.

A LAWSUIT of some interest to the profession, respecting the sale of a practice, came before the Judge at the Stone (Staffs.) County Court last week. The plaintiff was Mr. T. E. D. Byrne, M.R.C.S., L.R.C.P. Edin., and the defendant Mr. D. G. Astley, L.F.P.S. Glasg., of Beech Cliff, near Newcastle-under-Lyme. About twelve months ago, the plaintiff having recently returned from Queensland, and being desirous of settling in practice in this country, his attention was attracted by the following advertisement which appeared in the advertising columns of this and other journals:—"In a pleasant town in the Midland district, a practice for transfer upon easy terms, the vendor having accepted a partnership elsewhere. The average receipts have been about £650 a year, and there is great scope for extension, as the practice has not been actively pushed. The connexion has been in the present hands about eighteen years, and is believed to be wholly transferable to a suitable gentleman. There are about 100 cases of midwifery in the year, chiefly at £1 1s. and upwards. The patients are middle-class. A small premium would be accepted from a doubly-qualified man of experience." The plaintiff entered into negotiations with the defendant, and ultimately agreed to purchase the practice thus advertised as for sale. He paid defendant £150 on entering upon the practice, and signed an agreement, by which he had the option of completing the purchase by paying a further sum of £150 within three months of the first payment, or of making a deferred payment over seven years, in which case the purchase-money was to increase to the sum of £500. The plaintiff now alleged that he had been led to purchase the defendant's practice at Newcastle-under-Lyme through misrepresentations, and prayed that the agreement might be declared void and invalid, and that the defendant might be ordered to repay the £150 purchase-money. In support of the allegation that he had been deceived as to the character of the practice, the plaintiff stated that Mr. Astley had driven him to big houses when taking him around Newcastle and neighbourhood to show him the extent of the practice, whereas the patients lived chiefly in the small ones; that he had not five cases out of the whole hundred that were guinea fees in midwifery, and, instead of being a middle-class practice, it was a practice among paupers. On leaving Newcastle, Mr. Astley entered into partnership with Dr. Hayes, of Beechcliff, which is only five miles distant, and it was proved that he continued to attend a number of his old patients in Newcastle. Several persons resident in Newcastle deposed that they had been recently attended by Mr. Astley. On behalf of Mr. Astley it was contended that he informed Mr. Byrne that he intended practising only five miles from Newcastle, and that there was nothing in the agreement limiting his practice. After one witness was called on behalf of the defendant, whose evidence, however, appeared to be more in favour of the plaintiff, a consultation took place between the parties, and the following amicable arrangement was decided upon:—"The agreement to be annulled. The defendant to return plaintiff £100 in discharge of all claims and costs. Each party to be unlimited as to area of practice. All imputations to be withdrawn." The case having been thus satisfactorily settled, it is unnecessary to make any further comment, especially as the lessons to be learnt from it by intending buyers of practices are sufficiently obvious.

MORE CHILDREN KILLED BY ANODYNE CORDIALS.

LAST week we recorded the death of a child at Sheffield through an overdose of an anodyne cordial. We have since heard of two similar cases which have just occurred, the one at Lowestoft, and the other at Wakefield. In the first case the father of a child seven weeks old went to a chemist named

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Rayson, and asked for "something to quiet the child" as it was very restless. The chemist sold him a half-ounce bottle of Godfrey's cordial, "which," the vendor stated, "contained *about* eight drops of tincture of opium." Eight drops of the cordial were given to the child one night at bedtime. About three o'clock in the morning the child was found to be dead. The medical evidence given at the inquest left no doubt that the child died from opium-poisoning, and the jury returned the following verdict—"That the child died from an overdose of opium ignorantly administered." Mr. Rayson stated that he sold 100 pennyworths of Godfrey's cordial in a week, and he was in the habit of recommending it as safe to be given to children.

In the second case, the mother of the child—which was only six days old—went to a Mr. Smith, a chemist in Wakefield, for something to soothe the baby as it had the "belly-ache." She was served with two-pennyworth of a nostrum prepared by Mr. Smith, of which she gave the infant five drops. A few hours afterwards the child became worse, and Dr. Wade was called in, who saw at once that the child was narcotised. At first the mother denied giving the child anything; but, on being pressed, she produced a bottle of cordial, labelled "Smith's Infants' Peace," of which, she said, she had administered five drops. The child died on the next day from the effects of the poison. Mr. Smith admitted that the preparation contained "a small quantity of opium," but that he did not sell it for children under three months of age. At the inquest a verdict of "Accidentally poisoned" was returned. The frequent deaths from anodyne cordials, recklessly sold by chemists, call for some legislative interference to check the practice.

CHEAP DOCTORS.

A MEETING of the members of the Islington Medical Society was held on Tuesday evening last at the residence of Mr. Clifton, Cross-street, for the purpose of discussing the question of cheap doctoring under the so-called "provident dispensary" system. About thirty gentlemen were present, including nearly all the leading practitioners in the North of London. Recently several medical men have established in various parts of Islington and Holloway a number of so-called "provident dispensaries," where patients receive "advice and medicine" for one shilling per week if able to attend at the "dispensary," and two shillings and sixpence per week if home visitation is required. The terms, being so low, naturally attract a large number of patients, and the system is found to interfere very seriously with the private practices of those who refuse to adopt the system. Those who took part in the discussion were unanimous in condemning the private dispensary system, on the ground that it tended to degrade the profession to the level of a very low trade, and that it was impossible to do justice to the patients for the fees charged. Several instances were related where patients suffering from grave organic diseases had been attended by surgeons on the provident dispensary principle for several months, and had never been subjected to a proper examination, and consequently the diseases from which they suffered had not been diagnosed. The advertising of these private dispensaries under names calculated to give the public the impression that they are public charitable institutions, as is done in some instances that were referred to, was condemned as highly reprehensible. The discussion occupied upwards of two hours, and as several other members were desirous of taking part in it, the further consideration of the question was postponed until the next ordinary meeting of the Society.

CONVERSAZIONE AT THE WEST RIDING ASYLUM.

ON Friday last the annual *conversazione* at the West Riding Lunatic Asylum was held, and brought together a large number of the professional men of the district, and a fair representation of gentlemen from a distance engaged in special and general practice. The lecture was given by Dr. W. H. Broadbent, F.R.C.P., Physician to St. Mary's Hospital. The subject chosen was "The Theory of Construction of the Nervous System." Dr. Broadbent, as far as time would permit, entered fully into the functional anatomy of the nervous system, and laid before his audience a lecture which was singularly original and lucid considering the difficulties and obscurities of the study. The meeting was presided over by Mr. W. Spencer Stanhope, M.P., Chairman of the Committee of Visitors, who, in introducing the lecturer, and during the subsequent proceedings, made some shrewd and sensible observations on matters relating to the increase and treatment of lunacy. Around the handsome hall of the Asylum were ranged several stalls for the exhibition of objects of interest to the medical profession. The first, presided over by Dr. Robert Lawson, was for the display of selected specimens from the large pathological museum of the West Riding Asylum. Amongst the most interesting of these objects were specimen of brains from which the membranes had been removed, after submersion in dilute nitric acid, so as to show the precise localisation of the adhesions of the membranes to the grey matter in general paralysis of the insane. Several interesting specimens were contributed to this table by the Leeds School of Medicine. At the second stall, which was under the charge of Dr. John Merson, was a selection from the magnificent collection of photographs of insane patients now or formerly resident in the Asylum. This table was also enriched by a number of drawings by insane patients, lent by ex-Commissioner W. A. F. Browne. Mr. Lennox Browne also supplied the stall with numerous paintings executed by himself, and representing various views at Lemnos and Aix-les-Bains. The table for surgical and other instruments, presided over by Mr. Charles Seymour, M.R.C.S., held instruments in use at the Asylum, and a fine collection lent by Messrs. Salt and Son (Birmingham), Harvey, Reynolds, and Co. (Leeds), Maw and Son (London), and J. C. Elliott and Son (Leeds). The histological table, under the charge of Dr. Herbert C. Major and Dr. Bevan Lewis, was one of great interest as affording good evidence of the special original work done at the West Riding Asylum. Slides illustrative of the minute structure of the brain in health and disease, in fœtal and adult life, were objects of great interest, as also were preparations showing the comparative histology of the cerebrum and cerebellum in man, birds, and batrachia; and sections showing health-structure and pathological changes in the medulla oblongata, spinal cord, and sciatic nerves. Dr. Tempest Anderson and Mr. Clifford Gill contributed valuable material to this stall; and Mr. R. H. Octavius Sankey exhibited some beautiful specimens of cerebellar sections prepared by a new and effective method. The drug-stall was under the charge of Dr. J. H. Arbuckle, and was rich in new medicinal agents. The meeting, which was an exceedingly happy and successful one, was enlivened by the performance by the large and admirable band of the Asylum of a long programme of classical and general music. The whole of the arrangements were perfectly carried out, and in both their conception and execution reflected great credit on Dr. Crichton Browne and his subordinate officers.

ANSTIE MEMORIAL FUND.

THE following is the proposed report of the executive committee of the Anstie Memorial Fund, to be laid before a meeting of the general committee. They beg leave to report to the general committee that the accounts of the fund were closed on the last day of February, although a few contributions have since been received. The total amount collected was £2548 8s., and the total expenses of the collection were £153 8s. 4d. Of this amount the sum of £50 was defrayed by a single donation given for this especial purpose, so that

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only £103 8s. 4d. will rank against the fund, leaving a balance of £2444 19s. 8d. available for the purposes for which it was collected. On this balance dividends to the amount of £60 19s. 10d. have been received, making a total sum of £2505 19s. 6d. The purposes of the fund, as defined by the original circular issued by the executive committee, were to set up a memorial tablet in some proper situation, and to devote the remainder to the education or advancement in life of Dr. Anstie's children. The chapel of King's College naturally suggested itself as the best place for the proposed tablet; and Sir Gilbert Scott kindly undertook to furnish a design in harmony with the decorations of the interior. A considerable time elapsed before this design was prepared, and then an inscription which was approved by the executive committee was found not to be acceptable to the Council of King's College. Further delay and much correspondence were thus occasioned; but ultimately the following inscription, which was written by Mr. John Simon, F.R.S., removed all difficulties:—

"In Memory of
FRANCIS EDMUND ANSTIE,
M.D. Lond., F.R.C.P.,
Physician to the Westminster Hospital,
Honorary Fellow of this College.
Laborious in study, Accomplished in practice,
Ardent in love of truth and justice,
Strenuous in efforts for the poor and friendless,
He was stedfast, gentle, and affectionate
in all personal relations,
and dearest to those who knew him best.
His death, which took place on September
the 12th, 1874, in his forty-first year, was caused
by blood-poisoning incurred in the discharge
of his duty."

Pending the satisfactory settlement of these details, the money in hand had been securely invested; and, as the inscription was not agreed upon until the end of July, the executive committee deemed it inexpedient to convene a general meeting during the autumn vacation. The executive committee think it desirable that the bulk of the fund should be given in trust to Mrs. Anstie, and to Alfred Anstie, Esq., the executors of the late Dr. Anstie, in the terms of a deed of declaration of trust approved by the chairman of the general committee, to be by them held and applied to the purposes indicated. The executive committee therefore recommend that they should be empowered to expend an amount not exceeding £41 13s. upon the memorial tablet, and to pay over the residue of the fund in the manner described.

DUBLIN OBSTETRICAL SOCIETY.

THE inaugural meeting of the thirty-eighth session of this Society took place in the Hall of the College of Physicians, Kildare-street, Dublin, on the evening of Saturday, Nov. 20. Dr. Lombe Atthill, the new Master of the Rotunda Lying-in-Hospital, and President of the Society, occupied the chair. The attendance of members and visitors was very numerous. Dr. J. R. Kirkpatrick, one of the honorary secretaries, read the annual report of the Council. Fifteen papers on subjects connected with obstetrical science had been contributed during last session. The Council had to express their regret at the loss, by death, of five members since their previous inaugural meeting—namely, Sir Charles Locock, hon. member of the Society; Dr. Sawyer, Professor in the College of Surgeons; Dr. M'Keever, Hon. Vice-President; Dr. Thornhill; and Mr. L'Estrange. Seven new members and seven new associates had been elected during the year, leaving 148 ordinary members and thirteen associates. The abstract of accounts showed that the total receipts had been £91 8s. (including balance of £28 18s. 8d. from last session), and the expenditure £67 10s., leaving a balance on hand of £23 18s. 8d. On the motion of Dr. MacSwiney, seconded by Dr. Cranny, the report was adopted. The President then delivered the inaugural address. At its conclusion a cordial vote of thanks was passed to him. A vote of thanks to the visitors was responded to by Dr. Gordon, President of the King and Queen's College of Physicians; Dr. Kidd, Vice-President of the Royal College of Surgeons; Dr. O'Flaherty, Deputy Governor of the Apothecaries' Hall; and Dr. Owens, Lord Mayor-elect of the City of Dublin. The Lord Mayor-elect thanked the Society, not alone for the honour done him individually, but also in his capacity as a member of that much-maligned body, the Corporation of Dublin. He could bear testimony to the zeal and self-sacrifice with which its members devoted themselves to the interests of the public, frequently to the exclusion and neglect of their own interests. The officers for the ensuing year were balloted for, and elected as follows:—*President:* Dr. Lombe Atthill. *Vice-Presidents:* Drs. Cronyn and More Madden. *Treasurer:* Dr. Roe. *Secretary:* Dr. Kirkpatrick. *Council:* Drs. Denham, Johnston, Kidd, M'Clintock, and Ringland.

THE WATER-SUPPLY OF THE METROPOLIS FOR OCTOBER, 1875.

THE report of the examination of the water supplied by the metropolitan water companies during the month of October last does not contain any feature of particular interest. The state of the water in the Thames at the intakes of the different companies was good for the first ten days, but bad for the remainder of the month, when the river was in a state of flood owing to the heavy rains. On the 26th of the month the water rose two inches higher than on any previously recorded occasion of flood. Consequent upon the floods, the water companies drawing their supplies from the Thames had to take in very turbid and much discoloured water, which it was extremely difficult to filter effectually. The Act of 1871 provides power to compel the companies to give constant supply as and when the public authorities may see fit to demand. The companies that are moving in the matter, and giving constant supply under the provisions of the Act in a portion of their districts, are the Kent, New River, and East London. The number of miles of streets which contain mains constantly charged, and upon which hydrants for fire purposes could at once be fixed, in each district of the metropolis are as follows:—Kent, 80 miles; New River, 169; East London, 70; Southwark and Vauxhall, 100; West Middlesex, 67; Grand Junction, 41½; Lambeth, 90; Chelsea, 50; making a total length of 667½ miles; and the water companies are ready to affix hydrants thereon when required by the authorities. The total number of hydrants erected is at present 2596, of which 2051 are for private purposes, 276 for street-watering, and 269 for public use.

THE NORTH STAFFORDSHIRE INFIRMARY.

THE annual meeting of the governors of the North Staffordshire Infirmary was held last week. The auditor's report, which was presented to the meeting, showed that the income for the past year was £8045 as against £7816 in the previous year, whilst the expenditure was only £6650, or £235 less than in the previous year. It was announced that Sir Smith Child has given £1030 to be invested in the names of trustees for the purpose of founding a convalescent endowment in perpetuity, to be used in sending convalescents or other sick poor (whether patients in the Infirmary or not) to the seaside, to Buxton, or to other like places. Sir Smith Child has also given a donation of £100 to the Samaritan Fund, and a further donation of £100 towards the endowment of a children's ward. All the large wards in the Infirmary being occupied, the committee proposed to fit up a detached building, hitherto used by the Staffordshire Nursing Institution, as a children's hospital; but on the motion of one of the governors, the consideration of the subject was postponed until January next. The President of the Infirmary—the Rev. W. Sneyd—stated that he was prepared to hand over to trustees the sum of £1200 for the purpose of erecting a chapel for the ministrations of the Infirmary chaplain, on condition that the governors

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provide a site adjoining the Infirmary. A resolution was passed accepting the gift with hearty thanks, and authorising the committee to select a suitable site for the chapel.

THE HEALTH OF HASTINGS.

The Medical Officer of Health for Hastings has just issued his report for the quarter ending September 30. The total number of deaths during the quarter was 135, being at the rate of eighteen per thousand per annum. This is not a high death-rate when compared with that of large inland towns, but is considerably in excess of that of many seaside towns. Although none of the zymotic diseases assumed an epidemic form, diarrhœa, diphtheria, and enteric fever were sufficiently prevalent to justify some little anxiety on the part of visitors as to the propriety of remaining in the town. During the quarter there were twenty-two deaths from zymotic diseases, thirteen being from diarrhœa, two from croup, three from diphtheria, two from enteric fever, one from whooping-cough, and one from rheumatic fever. Six of the above fatal cases occurred among visitors. The Medical Officer refers with some satisfaction to the fact that the Urban Sanitary Authorities have decided to establish a hospital for infectious diseases, and calculates that the existence of such an asylum will give confidence to the public. Would it not, though, be better to endeavour to gain the confidence of the public by placing the water-supply of the town on a more satisfactory footing? The present supply is notoriously defective, and to the deficiency may undoubtedly be ascribed much of the preventable disease that prevailed in Hastings during last summer.

PAISLEY INFIRMARY.

We are glad to report a thorough re-arrangement of the wards of this institution, whereby the medical and surgical wards will be completely isolated from those set apart for the treatment of fever cases. During a recent epidemic of small-pox, to meet which a temporary hospital was utilised contiguous to the Infirmary, no less than eighteen patients in the Infirmary were attacked with the disease, five of whom died in the Small-pox Hospital. The desirability of completely isolating contagious from non-contagious diseases being thus strikingly demonstrated, the directors have, with praiseworthy promptitude, accomplished the above necessary reform, which will insure the separation of fever patients from those affected with non-contagious medical and surgical diseases. As regards the Small-pox Hospital, the local authority have acquired ground in a suitable locality, upon which they propose to erect an infectious diseases hospital.

THE ARMY MEDICAL SERVICE.

It will be seen, from an advertisement which has recently been generally inserted, that the next examination of candidates for commissions in the Medical Department of the Army has been fixed for February 14, 1876. The most important feature of the advertisement, however, will be found in the concluding portion, which, for the first time, gives the number of vacancies to be filled. With the knowledge that forty appointments are offered for competition, it will be open to the whole of the profession to judge for itself whether the military medical service of the country is popular or not, by the number of candidates who present themselves to compete on the appointed day.

THE BRITISH MEDICAL DEFENCE ASSOCIATION.

We have been requested to direct the attention of our readers to an advertisement which appears in our columns of to-day, inviting medical practitioners to meet the Provisional Committee of the British Medical Defence Association at the rooms of the Medical Society of London, Chandos-street, Cavendish-square, on Tuesday next, at half-past three o'clock. It is hoped that Dr. Alfred Meadows will preside.

CHARGE OF NEGLECT AGAINST A MEDICAL OFFICER.

On Monday, November 22, Mr. Henry Robinson, Inspector of the Local Government Board (Ireland), held an inquiry at one of the Dublin City Dispensaries into a charge of neglect against Dr. C. F. Moore, one of the medical officers of the South Dublin Union. Dr. Moore visited a child ill of measles on October 11 last, and, without any close or minute examination, recognised the case as one of measles. He prescribed for the child, and left word that he should be informed if any change for the worse occurred. The child's mother subsequently obtained medicine at the Dispensary, but did not ask Dr. Moore to revisit her infant. Two other children sickened, and one (a girl) was removed to Cork-street (Fever) Hospital, on a recommendation from Dr. Moore, who is himself one of the Physicians to the Hospital. She died there in a day or two and the child first attacked also died, at home. Dr. Moore had not paid a second visit to the latter, and hence the charge of neglect. The Local Government Board will decide on the evidence taken at the inquiry.

THE SURGEONCY TO THE QUEEN IN IRELAND.

Mr. William Colles, Regius Professor of Surgery in the University of Dublin, and Surgeon to Steevens's Hospital, has been appointed Surgeon-in-Ordinary to her Majesty the Queen in Ireland, *vice* Mr. John Hamilton, deceased. Mr. Colles's appointment has given great satisfaction in Dublin, especially because it shows a desire on the part of the "powers that be" to recognise professional as superior to party claims, Mr. Colles always having been a staunch Liberal in politics. At the same time a feeling prevails that the vacant hereditary honour should be conferred on a leader in the profession who is also a supporter of the present Government, and it is thought that the dignity just granted to Mr. Colles only enhances Mr. Porter's claims to a surgical baronetcy. Were he to receive this mark of royal favour, we believe that it would be regarded as a gracious act by almost the whole profession on the other side of the Irish Channel.

INDUSTRIAL PATHOLOGY.

Dr. Richardson has, we believe, been commissioned by the Council of the Society of Arts to institute an inquiry into the diseases arising from the pursuit of different trades and occupations, or what is technically called industrial pathology. The Council appointed a committee to inquire into the subject twenty years ago, but it does not appear that any report was ever issued; and it is now thought that by entrusting the present inquiry to one sanitarian, the information obtained will be more complete than if it were left in the hands of several gentlemen. Dr. Richardson will deliver his first lecture on the 3rd prox., in the theatre of the Society of Arts, and will devote his first course to the diseases of the industrial classes as distinguished from those to which the professional, domestic, agricultural, and "indefinite" classes are subject.

UPPINGHAM SCHOOL.

We are requested by Mr. Haviland, who is investigating the recent outbreak of enteric fever at the Uppingham School, to say that he will be much assisted in his inquiries if the medical attendants upon boys who have fallen ill shortly after leaving that school will kindly favour him with notes of the facts of illness, and particularly of the dates of the commencement of illness. Letters should be addressed to him at Northampton.

Royal College of Surgeons in Ireland.—At a meeting of the College, held on Saturday, the 20th inst., Dr. George H. Kidd was elected Vice-President, in room of the late deeply lamented John Hamilton. Dr. Kidd having resigned his seat on the Council previously to his election as Vice-President, Dr. John Cronyn was chosen a member of Council of the College at the same meeting.

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MORE NOTES ON WINE.

THE PRAISES OF GOOD SHERRY—THE TESTS FOR IT—THE "PLASTERING" OF WINE—NO SULPHATE OF POTASS TO BE TASTED IN GOOD SHERRY—THE PROCESS OF DEPLASTERING—DOUBTFUL SAFETY OF BARYTA.

I ASK permission to say a few words about wine and spirits, in reference to recent ontroversies. And first of all about sherry. Everybody knows that sherry is not like Bordeaux, a "self-making" wine, as Messrs. Gilbey call it,(a) consisting of the juice of the grape left to ferment and clear itself, but is more or less a manufacture. In very many vineyards they begin by sprinkling the grapes with plaster of Paris; then the grapes are trod; the juice, expressed, fermented wholly or in part, mixed with a certain quantity of spirit, put by to mature, sometimes sweetened with boiled grape-juice, and stored in huge butts, where reserves are kept for scores of years, improving in flavour; then when the time for shipment comes, various proportions of the newer wine, with a share of the older wine, and of sweeter or drier, and perhaps more spirit, are blended together to suit the various tastes and pockets of the consumers. I will not dwell upon this process, which has of late been vividly described by an eye-witness in the columns of the *Pall-mall Gazette*.

What we are concerned with, as medical men, is the wholesomeness of the wine, and the means of distinguishing good from bad.

Sherry may be dark as mahogany, like the old brown sherry of King George IV.; or may be of the palest amber; it may be light and dry, or rich and sweet; but, in any case, good sherry is soft, has no taste of raw spirit; is cordial, yet not hot, and has an agreeable fragrance, and the indescribable heart-and-brain-sustaining, and soul-and-body-comforting flavour of old wine. Such wine is emphatically good and wholesome in the proper cases; no matter whether it is natural or manufactured, whether plastered or not plastered,—if the product is good, the manufacture cannot be blamed.

On the other hand, we may have sherry dry or sweet, pale or dark, but hot, strong, and spirituous; with no grapy taste; perhaps, if pale and dry, it is dosed with nitrous ether to imitate the "amontillado" flavour; if not strong, it is probably flat and flavourless. Now, since "the doctors" are sometimes accused of vilifying sherry, let us turn to what the special correspondent of the *Pall-mall Gazette* writes in the course of his description of Spanish vineyards:—

"Four different classes of dry Jerez wines are shipped to England: natural wines, understood to contain no added spirit; vintage wines, the produce of individual vineyards, and occasionally of specific years; solera wines, such as fino, amontillado, and olorosa; and, finally, blended wines. The natural wines of which I speak are not the wines commonly advertised in England at low rates under that designation. Jerez wines perfectly free from spirit cannot possibly be sold cheap in England, because they require to be at least five years old; whereas the wines offered as natural are generally young, unripe wines, whose fermentation has not yet terminated, and which come far more frequently from Seville or La Mancha than from the Jerez district. Such wines are necessarily unwholesome, for heat revives the fermentative action, which completes itself in that delicate organism, the human stomach."(b)

There are three accusations which "the doctors" bring against bad sherry: one that it will ferment goutily, as the *Pall-mall* correspondent says; next, that some of the specimens are overloaded with brandy; and, thirdly, that many of them are sad flat stuff, not worth drinking. We ask whether the *Pall-mall Gazette* does not endorse the worst accusations of the doctors?

We should advise anyone who purchases sherry not to be led or deterred by the name of the shipper or merchant, nor by the name given to the wine, nor by the price—be it high or low; but to judge by his palate first, according to the hints we have given, and by the stomach afterwards; and if the palate approves and the organs of assimilation give a good report of the wine, then to take it without scruple.

But we must say a few words on the "plastering" of sherry, which has given rise to some most curious incidents in the modern history of wine.

We have said above that the *Pall-mall* correspondent, in describing the manufacture of sherry, avers that the grapes are sprinkled, before they are trod, with a small quantity of "yeso"—that is, gypsum or sulphate of lime, or, as it is commonly called, "plaster of Paris." Now, it is a curious instance of the way in which old-fashioned English wine merchants, though skilled in the actual properties of some wines, yet were utterly ignorant of the process of manufacture, that the use of the word "plaster" is offensive. *Ridley's Circular* of November 12, 1875, the highly respectable organ of orthodox wine merchants, is grievously hurt at the use of the word "plaster." "The very word *plaster*," it says, "should tell the *animus* of these philanthropists" [who have dared to call sherry unwholesome]. "It is, put it how we will, obnoxious, while at the same time it is innocent; for why otherwise should the sprinkling the grapes ere they enter the Lagare with a small quantity of *yeso* or gypsum be called *plastering?* These clever people, we see, were alone referring to a dictionary, or, what is more likely, used the word, apart from its real meaning, in a sensational sense." This quotation shows how little the English wine merchants, who take port and sherry for their standards, know of the history and literature of wine—the real, unmixed, unmanufactured grape-juice.

Now, to an Englishman, the term "plastering" of wines is unintelligible. Not so to the inhabitant of a wine-country. "*Le plâtrage*" is a common, inoffensive word in every French book on wine. Anyone who cares to read about it may consult Maumené, "Travail du Vin," Paris, 1858, p. 343. Plaster seems to be employed for a fourfold purpose—(1) to lessen the quantity of water in the *must*, because burnt plaster is, as is well known, a greedy absorbent of water; (2) in the case of red wines, it heightens the colour (Jules Guyot, "Sur la Viticulture du Sudouest," Paris, 1863, p. 35); (3) it converts the acid tartrates into sulphate of potassa, and so neutralises acidity, aided by the chalk or lime it contains uncombined; and (4) is supposed to check undue fermentation. It is a process of the greatest antiquity; and whilst probably injurious to the hygienic properties of wine as a *beverage*, adds to the qualities which constitute the *cordial or liqueur*. It robs the ordinary wine of its tartaric acid, and renders it less fresh and wholesome.

But a great hubbub has been raised in England by some eminent chemists. Grave importance has been attached to the fact that wine, after plastering, contains sulphate of potass, which is alleged to be a depressant of the heart's action; and so elderly gentlemen have been set against their sherry by the fear lest their heart should be damaged. They may reassure themselves with the certainty that, as good sherry comforts the heart, so it cannot contain more than the merest trace of sulphate of potass. Now, sulphate of potass, once called *sal polychrestum*, is a favourite purgative for children: a child of five may take ten or twenty grains with a little rhubarb, and never hurt its heart. The worst that it can do in very small dose is to give the bitter taste and nauseous flavour that characterise cheap so-called "amontillado" sherries. But if a man chooses to drink bitter, flat sherry, perhaps he likes sulphate of potass! There is no accounting for tastes. This hubbub about sulphate of potass in sherry is grotesque enough, but the most ridiculous part remains. Whether some Samaritan friend wished to take pity on the poor plastered wine, or whether some enemy of the sherry trade wished to damn it by publishing an elaborate process for restoring the wine to a natural state, seemed uncertain from a first perusal of the following advertisement:—

"WINE.—Deplastering and Improvement.—Sherry is always subjected to the operation of plastering, whereby the wholesome tartaric acid is removed, and the aperient sulphate of potass substituted. The advertisers have secured a patent for the restoration of the original tartaric acid, and the removal of the sulphate of potass by a simple process, and are prepared to treat for the sale of the PATENT or for royalties. Wine thus treated is greatly improved.—Address, Medicus, St. Catherine's House, Ventnor."

This advertisement must have been startling enough to those who put their faith in sherry. But it is nothing to the statements in the "provisional specification" of the patent No. 2706, which has been taken out by Arthur Hill Hassall,

(a) Letter on Claret Vintage, *Times*, October 7, 1875.
(b) *Pall-mall Budget*, November 5, 1875, Letter X. on Spanish Vineyards, etc.

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M.D., and Otto Hehner, analytical chemist. In this document it is declared, amongst other things—1, that "many wines contain as much as 500 grains, or over one ounce, of sulphate of potass per gallon"; 2, the process for deplastering and improvement of wine is declared to be the addition of tartrate of baryta to the wine.

Now, it really takes away one's breath to learn that any article of drink contains in the gallon 500 grains of a bitter, nauseous salt. Each bottle (six to the gallon) would, of course, contain, say, eighty grains. But the dose of sulphate of potass as a purgative for an adult is twenty or thirty grains; so that any one who drinks half a bottle of sherry would get a full dose. Moreover, let me say, by way of elucidation, that Carlsbad water, the bitter purgative so popular in liver disease, contains only forty grains of mixed salts in sixteen ounces, equal to about sixty-five grains per wine bottle; further, that the salts in Carlsbad water are mixed soda salts, whereas sulphate of potass is very much more effective in small doses, and in large doses—say an ounce—is poisonous. But our wonder that a wine can be found and drunk more purgative than Carlsbad water, and containing 500 grains of any salt of potass to the gallon, rises into awe when we see the means proposed to "deplaster,"—that is, to convert the sulphate of potass into the tartrate of potass which existed in the original grape-juice.

This is proposed to be effected by adding tartrate of baryta to the wine. Then by a well-understood double decomposition, instead of sulphate of potass and tartrate of baryta, the constituents re-arrange themselves as sulphate of baryta, which falls to the bottom as an insoluble sediment which is filtered off, whilst the tartrate of potass remains, and, say the patentees, soon shows itself in the form of the crystals of tartar which are deposited from all genuine wine.

That this process may answer in the delicate hands of analytical chemists, if they condescend to dirty their fingers with poisonous sherry, is one thing; that it should ever be largely adopted in the trade, is another. With new chemical processes, new forms of poisoning arise. All soluble salts of baryta are poisonous; and who shall say that the tartrate of baryta might not be used in excess by unskilled hands, and some of it be dissolved? What a deplorable picture is drawn of plastered sherry if it needs this resurrectionising process!

As we said before, sherry is a liqueur or cordial, rather than a beverage. If used, it should be good. Any solution of sulphate of potass is bitter. No good wine tastes bitter. Instead of a doubtful light sherry, plastered or deplastered, it is better to drink a natural wine with all its tartaric acid, such as St. Elie, or some white French or Hungarian wine.

(To be continued).

FROM ABROAD.

Professors Bouchardat and Lasègue on Diabetes.

The current number of the *Archives Générales* contains an able *révue critique* from the pen of Prof. Lasègue, on the recently published work of Prof. Bouchardat on "Glycosurie," in which he brings together the results of his almost lifelong investigations concerning diabetes. Prof. Lasègue, confining himself to those portions of the work which relate to the symptomatology and treatment, reproduces certain propositions contained in it, and appends critical comments to these, after the manner so successfully pursued by Van Swieten.

1. "Diabetes is a disease in which the urine contains continuously a notable portion of sugar." The definition may be objected to in not stating what is a "notable" quantity of sugar, and the exact sense of the word "continuously." In fact, it signifies that diabetes does not exist unless much sugar is secreted, and accidental glucosuria is not to be considered as belonging to the disease. The latter of these two assertions especially requires formal announcement, but they complete each other. We may pronounce diabetes as existing when a sufficiency of glucose is excreted even at intervals, while it is not present if only an insignificant portion of sugar is voided continuously. But what becomes of these pseudo-diabetics, whose urine furnishes at most a few decigrammes of sugar, discovered by the chance of an analysis? Are we to consider this as preparatory to an imminent invasion of the durable disease? and is true diabetes preceded by this undecided form? M. Lasègue agrees with his author in disbelieving this, regarding such glucosuria as temporary and symptomatic of other affections. But besides these cases there are examples of glucosuria lasting for weeks or months without ever attaining what can be called notable proportions. But the commencing period of true diabetes almost always escapes observation; the disease only exciting attention when it has become really established. As to the quantity of sugar, this can only be regarded as *notable* when it exceeds ten grammes per litre; and when it keeps below that figure, and never exceeds it, the person can only under reserve, provided he has undergone no treatment, be regarded as diabetic.

2. "The mouth is dry, and the tongue is large and often black at its middle part. The teeth are often in a bad state, carious or breaking off." The state of the mouth is far from being pathognomonic in diabetes, for if in very well marked cases its dryness may be characteristic, in a great number of medium cases it remains quite normal. Some patients are liable to a pharyngeal uneasiness, somewhat analogous to that produced by skin eruptions. There is, in fact, a "diabetic pharyngitis" not dependent alone upon the altered condition of the saliva. On examination, the throat resembles that of an excessive smoker, the pillars of the pharynx being red and thinned, while the posterior wall is glistening. All prolonged vocal effort becomes intolerable; and, in some cases, patients have been compelled to renounce public speaking long before thirst or dryness of the mouth have come on. The state of the dentition is properly brought forward by Prof. Bouchardat, but the origin of its diseased conditions has been so little studied that it is involved in obscurity. No one has adduced modifications of it as occurring in the diabetes in young persons; and in older subjects there are so many causes that may produce these appearances. Again, some diabetic patients have their teeth quite uninfluenced.

3. "The saliva in diabetes is acid, and it becomes alkaline under the influence of food and stimulating sialagogues." In abundance it varies remarkably, being sometimes insufficient, and sometimes at intervals excessive—but in nowise affording a measure of the degree of the disease. Prof. Bouchardat insists upon long and careful mastication, and upon the use of sialagogues—in this way regulating the secretion; but M. Lasègue has not derived advantage from these, the dry fauces and rough tongue remaining unrelieved. Just as belladonna produces a most painful state of dryness easily distinguished from thirst, so the subjects of diabetes suffer from an ill-defined sensation quite independent of thirst, or even at the same time with this, which they compare to the feeling produced by dry dust when this pervades the atmosphere.

4. "Hunger is one of the most characteristic traits of diabetes. Bulimia is more frequent in the poor than in the rich. A great appetite is better than inappetence." The appetite in this disease is manifested under very different forms, for we may have great eaters without excessive appetites, while a very sharp appetite may be very soon satisfied. M. Lasègue believes that the diabetes which succeeds to nervous disorders exerts a less action on the digestive organs. Moreover, all diabetics are not voracious, and in a considerable number the voracity has preceded the appearance of the sugar. With respect to inappetence, it cannot be too strongly stated that when, after having eaten immoderately, a diabetic patient refuses food, the most grave prognosis must be pronounced; and may not as much be stated with regard to the quantity of urine, and even of the sugar, which so often undergoes diminution as the general health declines?

5. "The thirst in diabetes is more urgent than hunger, and is directly proportionate to the amount of saccharine and feculent substances swallowed." Prof. Lasègue would find it difficult to subscribe to the second part of this proposition, his experience showing him that there must be many exceptions to it. Thus, under the influence of alkalies, and especially alkaline mineral water, thirst may disappear for weeks, without any restriction having been placed on regimen. And again, in patients who, for some reason or other, refuse to restrict themselves in their diet, we find most marked alternations of thirst and indifference to drink, which, dependent on different physiological and pathological conditions, cannot be attributed solely to the nature of the aliments.

6. "Most diabetics digest well." It is a fact that during the long period of exaggerated appetite these patients digest with the same facility that is generally met with in great eaters. Still, they are liable to sudden and transitory perturbations, as, for example, sudden diarrhœas, with profuse evacuations, recurring at short intervals. Gastralgia has this

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peculiarity in diabetes, that it occurs prior to, and not after, meals.

7. "The functions of the skin are not in their normal state. The abundance of sweat and the facility of its production are extremely variable." Sweating, like thirst, is liable in the same patient to great oscillations, fat persons being especially liable to profuse sweats. In many cases in which excessive sweating has been attributed to the long duration of the disease, sufficient care has not been taken to ascertain the condition of the individual before the disease began, and during its early stages. Dryness of the skin is met with most at the commencement of the disease, and may yield to the hygienic treatment adopted. M. Bouchardat believes that it is less observed in the diabetes of the well-to-do patients; and throughout his work he draws great distinctions in the disease as observed among rich or poor.

8. "The depression of muscular strength is the general rule." In diabetes the same circumstances are observed as in other chronic affections; while the particular disease, whether it be cancer, tubercle, glucosuria, etc., sometimes pursues its progressive evolution in a quiet manner, without notably compromising the general health. In other cases the general health and the functional activity of the muscular and other systems seem to be disturbed as if by anticipation. The patient had long been already ill before a name could be attributed to his malady. The statement that the depression of muscular power is observed in diabetes is far too limited to express the real condition, moral and physical, of the patient.

9. "Non-traumatic glucosuria left to itself continues for life." Griesinger tried to establish by fantastic statistics that the mean duration of a diabetes is from two to three years. However true this may be, Prof. Bouchardat observes, for patients left to themselves or badly treated, it is quite inexact as regards those which are properly managed. But such a mean duration, in M. Lasègue's opinion, is a pure invention, and in absolute contradiction to the teaching of experience. He has known cases, as have all other practitioners, in which diabetics have refused all treatment whatever, and yet have lived for thirty years and longer. Not that such obstinacy is to be countenanced, for in other cases it has cost its victims dearly. As no one knows when a diabetes commences, so no one can say how long it lasts.

10. "Pulmonary phthisis stands at the head of the redoubtable complications of diabetes." Professor Bouchardat's views have been a good deal modified since he wrote in 1861, when he stated that all patients dying in the hospitals in the condition of diabetic marasmus exhibited tubercles in the lungs, and that tubercles always appeared when the elimination of glucose had been considerable for a tolerably long period. This is tantamount to saying that all subjects of diabetes, who had reached the period of cachexia, and had not been carried off by incidental lesions, died tuberculous. He now says that the termination by tubercle, which is nearly the rule in hospitals, is scarcely constant in private practice, except in very young subjects,—even going so far as to add that adults who have reached the turn of life without pulmonary complication may by treatment be preserved from this. In M. Lasègue's opinion the whole subject requires a careful examination, which is difficult in the present confused state of our knowledge concerning phthisis.

11. "The urine of diabetics often contains albuminoid matters, and sometimes albumen, in chronic glucosuria, which, as a general rule, is an unfortunate complication." M. Lasègue entirely agrees with his author's views on this point. Bright's disease, in its widest acceptation, is rarely found added to diabetes, for when it complicates this the sugar diminishes. This is the gravest of forms. In most cases, as a result of simple fatigue, the secretory apparatus allows of the passage of albumen, and the prognosis of this passive albuminuria is of somewhat less gravity. Nervous affections, in M. Bouchardat's opinion, are for the most part secondary; but M. Lasègue has no doubt of the reality, also, of the existence of primary and causal nervous affections.

12. "Glucosuria is the more redoubtable as the subject is younger." Prof. Bouchardat has been consulted for diabetes at almost every age—after weaning, at two, three, five, ten, or twelve years of age; but M. Lasègue meets with few such cases. Age certainly plays a great part in the disease, but our knowledge of this is almost limited to the law that glucosuria in young subjects terminates almost certainly in tuberculisation. Even this law is open to discussion, and is absolutely rejected by some.

13. "My works on diabetes have but one object—its cure." The opinion of our time, M. Lasègue observes, is more favourable to pathology than to therapeutics, and anyone who makes treatment the dominant object of his researches must be prepared for a sacrifice. Prof. Bouchardat is so certain of success, and cites such a conclusive experience, that one can scarcely avoid joining in his laudable efforts. With him the proportion of sugar excreted indicates as exactly the degree of the disease as the thermometer does that of the temperature. So positive a rule can, however, rarely be employed in medicine, and M. Lasègue cannot accept this one without restriction. Variations of more or less are only of importance on condition of their duration—months, not weeks, being required to pronounce an amelioration as definitive. During the treatment of the disease, the practitioner has still more need than the patient to exercise unceasing watchfulness, and nothing is so wearying as chronic disease. The day the practitioner ceases to be exacting, the patient abandons the effort, and both commence to be contented with the thereabouts. The daily measuring of the quantity of urine, and of the proportion of sugar it contains, maintains regularity of procedure, and with it that powerful element of success—determination. In Prof. Bouchardat's estimation the importance of hygienic treatment far outstrips all other. It consists in exercise (which he regards as the most efficacious of agents), careful attention to the skin, moral influences, and above all in the alimentary regimen. His dietetic formulæ are too well known to need repetition. The first principle consists in varying alimentation in order to prevent disgust; the second is to add fatty aliments in proper proportion to alcoholic aliment, the exaggerated use of the latter acting mischievously on the nervous system; and the third is to suppress or considerably diminish for some time the use of feculents. So distasteful is this suppression that their employment must be again resorted to as soon as it is certain that they can be borne, and it is not always easy to await the period when the feculents are assimilated before allowing their circumspect employment. Thirst persists longer than hunger; and Prof. Bouchardat advises resistance to the drinking large quantities of even inoffensive liquids. While agreeing in this hygienic principle, M. Lasègue feels quite at a loss to found his acquiescence on satisfactory reasons, for the most attentive observation does not explain the relations of the disease to the amounts of fluid taken. So capital is the importance attributed by Prof. Bouchardat to constant exercise, that it is much to be regretted that he has not entered into some details on the subject, generalities in a matter to which so much importance is attached not sufficing. To the employment of the various articles of the materia medica Prof. Bouchardat attaches a very secondary importance.

MEDICAL BENEFIT SOCIETIES IN FRANCE.—In a recent address to the Medical Society of Calvados (*Union Méd.*, November 18), M. Notta, of Lisieux, cautions the members of the medical profession against encouraging the progress of these bodies by consenting to accept the low tariff of fees which they offer. Founded originally for the benefit of working men, and greatly aided by the subscriptions of masters and honorary members, the medical profession contributed to their progress by their co-operation. This was laudable and natural; but of late years these societies have penetrated into classes of society in a very different position, and if medical men still consent to these low terms, they will before long find themselves in a very awkward position. M. Notta read to the meeting a letter which he had addressed in answer to a proposal made to him to accept this low tariff on the part of a schoolmasters' benefit society. In refusing to comply, he stated that he did not see why the usual fees should not be paid, and preferred retaining his power of modifying his charges according to the circumstances of the patient; for while many of these schoolmasters are very badly off, others can well afford to pay. Some of those who accept these lower terms, he says, take care not to render services for more than they are thus paid; but this he could not consent to. The society, to be really useful, should guarantee the patient being diligently treated and the practitioner being adequately paid. His own plan with schoolmasters is to charge them nothing when they call upon him for advice, and to make them pay his usual fee when he calls upon them, he also often not charging for visits when he comes to see other patients in their vicinity.

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REVIEWS.

On Addison's Disease. Being the Croonian Lectures for 1875, delivered before the Royal College of Physicians. Revised, and illustrated by Plates and Reports of Cases. By E. HEADLAM GREENHOW, M.D., F.R.S., F.R.C.P., Physician to, and Lecturer on Medicine at, the Middlesex Hospital. London: Longmans. Pp. 212.

We have here before us the most elaborate monograph, and the most able treatise which has heretofore appeared on the subject of that curious malady still known to us as Addison's disease. Not exactly that Addison himself justly and fully appreciated the mass of symptoms and pathological conditions which go to make up the entity of the disease called after his name, but because he first pointed out the main characteristics of it, thus enabling others to follow out its history more completely and perfectly.

Commencing with a short sketch of Dr. Addison's life, the author goes on to give an account of the clinical history of Addison's disease. He well points out how Dr. Addison himself, in a certain way, offended against his own definition of this malady by mixing up false with true cases of the disease known by his name. We may in passing remark that Dr. Addison seemed to look on the anæmia as the prime factor in the disease; and this, we see, is followed by some at the present day, who would, under the head of "pernicious anæmia," congregate a number of diseases which have little or nothing in common. Addison's disease, as so well pointed out by Dr. Greenhow, is not a mere assemblage of symptoms, but has a distinct pathology which separates and defines it from all others. The sketch given by Dr. Greenhow of the clinical features of this disease strikes us as uncommonly good, clear, and vigorous, and those who are acquainted with the malady will recognise how close it is to nature. The chief points we would allude to are the site and distribution of the pigmentation, the peculiar odour, the paroxysmal nature of the disease, and the peculiar mode of death.

The pathological section of Dr. Greenhow's book is even better than the former. He has long been known as upholding the specificity of this disease, and of its peculiar characteristics. Briefly these might be described as a low form of inflammation, or rather a proliferation of the connective tissue of the supra-renal capsules, ending in caseous or cretaceous degeneration. In most cases the nerves are implicated in the change, especially having their coats thickened and their connective tissue increased. Some of the lymphatic glands may also be found enlarged and tending to caseation. One of the most peculiar, though not characteristic, features of the malady is the enlargement of the tubular glands of the pyloric portion of the stomach, and of the small intestine; this is due to an accumulation of lymphoid elements in the tissues surrounding them, which may sometimes break down.

In his second lecture Dr. Greenhow proceeds to analyse the cases he has collected. These amount to 330—a larger number than any heretofore dealt with. It is impossible in such a notice as this to enter into the details here collated; for these we must refer our readers to the volume itself. Not the least interesting portion of this lecture relates to the bronzing of the skin in other diseases than Addison's, and to maladies of the supra-renal capsules not accompanied by bronzed skin.

In the third lecture the author deals with the connexion of the peculiar lesion with the general symptoms. Here he is inclined to hold that it is not so much the injury or even destruction of the supra-renal capsules themselves which gives rise to the peculiar symptoms, but rather interference with the nerve-trunks in their vicinity; but into this portion of the book we cannot enter. Neither can we do more than point out the great value and importance of the cases fully reported, which, in the form of an appendix, make up a considerable part of the volume. Of no less value is another appendix of cases —a kind of *catalogue raisonné* of reported cases, pure, mixed, and false.

Briefly, then, we would say that in Dr. Greenhow's work we have a model monograph. We have the outcome of the whole subject after years of clinical and pathological study, the cases on which this is mainly founded, a complete guide to all published cases, and a brief indication of their nature. Finally, it is admirably illustrated. A book illustrated by such men as Burdon-Sanderson, Arnott, and Coupland would be worth something but for these alone. Dr. Greenhow is to be congratulated in thus bringing before the world what, altogether apart from its intrinsic merits, great as these are, must, we repeat, be regarded as a model monograph.

The Annual Report of the Sanitary Commissioner of the Central Provinces of India. 1874.

We have received the Annual Report of the Sanitary Commissioner of the Central Provinces of India for the year 1874. The details are of the ordinary kind, and no feature of special interest is recorded. The population under registration is set down at 7,427,608, and the number of deaths registered was 23·49 per mille, while the births recorded amounted to 34·93 per mille. Both birth- and death-rates vary very considerably between different districts. The lowest birth-rate is 20·53 per mille in Manilla, the highest 43·49 in Murwara; the lowest death-rate was 16·78 in Seoni, the highest 32·33 in Jubbulpore. The birth- and death-rates in the different districts bear nothing like a constant proportion to each other. A high birth-rate is often shown in a district which has a low death-rate—a death-rate below the average; and yet it is only reasonable to believe that a proportionately high death-rate must always accompany a high birth-rate, seeing that mortality in early years is greatest. It must therefore be admitted that registration in India is still imperfect, and it of course errs by defect.

Cholera only visited a very small area in the eastern part of the Provinces, and it arose in two separate localities at two different times—the first in August, in Sonpur; the second in November, in a village in the Kolabira Zamindari. Into Sonpur the disease was introduced by pilgrims from Jagganath, while the disease in Kolabira seems to have been traceable to the water-supply of a portion of the village derived from a defective tank. The inhabitants of this village fled in various directions, and carried the disease with them; but, fortunately, circumstances were not favourable to its spread, and it soon died out; nor did the disease show itself in any village which had not had communication with the stricken villages subsequent to the appearance of the disease.

Small-pox was more virulent than for several years past, and chiefly so in the Vindhyan districts: Saugor, Damoh, and the Narbada Valley districts of Narsinghpur and Jubbulpore. Although certain progress had been made in all the districts of the Central Provinces in protecting the population by vaccination from the ravages of small-pox, yet up to the end of 1873-74 systematic efforts had been confined to the districts of Chindwara, Seoni, and Betul, in which special vaccine establishments have been for some years at work. As a consequence of this, the Report adverts to the comparative immunity from the disease which these districts have enjoyed, and instances it as a proof that vigorous attempts to extend vaccination should be made. In most other districts the work has been insufficient and imperfect: system and method were wanting, effective supervision was absent, and unsystematic and spasmodic efforts only extended a very partial and incomplete protection to the population. In 1874, however, the Chief Commissioner sanctioned a scheme by which a regular system is henceforth to be followed in each district. On this subject the Report further remarks "that, in taking the relative mortality from small-pox as a test of the amount of protection conferred by vaccination on different populations, it is necessary to take many circumstances into consideration; that it is necessary to take a series of years for comparison; and that the series should comprise at least five or six years. That the relative mortality from small-pox is not a certain test of the relative prevalence of the disease, because in some localities small-pox is more fatal than in others; and because the fatality of small-pox is a good deal influenced by climatic conditions, being in some seasons much more fatal than in others."

Finally, we gather from the Report that all over the Provinces the conservancy of a proper water-supply, or the preservation of the existing supply from pollution and drainage-matter, have been attended to, as far as funds permitted; and, in villages, the necessity of observing certain simple sanitary rules has been recognised, and is to some extent acted on.

DR. SAMUEL WILKS, F.R.S.—This gentleman has just resigned his seat as one of the Examiners in Medicine of the Royal College of Surgeons, an appointment he has held with so much credit to himself and honour to the College.

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PROVINCIAL CORRESPONDENCE.

LIVERPOOL.

November 9.

SCHEME FOR THE SOCIAL IMPROVEMENT OF LIVERPOOL—PROCEEDINGS OF THE MEDICAL INSTITUTION—UNUSUAL CASE UNDER THE VACCINATION ACT.

As a fitting complement to the Artisans' and Labourers' Dwellings Act (the first proposed application of which to Liverpool was noticed in the *Medical Times and Gazette* of the 6th inst.) is an experiment of a most interesting and important character in social economics, which is in process of trial in this town on a comparatively small scale, and the object of which is to improve the condition of the most densely populated districts, without impairing existing agencies for the benefits of the labouring classes or in any way affecting their independence. The scheme, of which the experiment is the practical application, was originated by Joseph Rayner, Esq., the Town Clerk of Liverpool, and was first publicly enunciated by him in a lecture delivered in the Town Hall of Waterloo on June 23 of the present year. It is thoroughly practical in its aims, and if, as it ought to do, it succeeds, will do very much indeed to lessen the misery, which, in an ever-growing amount, results from the bad sanitary conditions that surround so many thousands of the poorer classes of this town. Briefly its aims and provisions are as follows:— To establish closer bonds of union "between the thousands of well-to-do people who live in the residential parts of the town, or who leave Liverpool every evening, and the tens of thousands of the working classes who are living there in dense masses, with very few of a higher class among them,"—and with this end in view to form a voluntary association for the sanitary and social improvement of one of the most densely populated districts in Liverpool, comprising some 15,000 or 20,000 inhabitants, "with boundaries recognised in the census tables for 1861 and 1871, and for which the mortality statistics are recorded and easily obtainable." To carry out this object, an accurate map of the district is to be prepared, as well as a book of reference, showing the names and addresses of each owner of property, and the assessable value of the houses, so as to indicate which are inhabited by the labouring classes. A careful survey is also to be made, and periodically repeated by small inspection sub-committees, and the attention of the authorities and the owners of property called to the most apparent insanitary conditions. The reason of selecting a limited district is, as given in Mr. Rayner's words, because "it would be quite impossible for any one association satisfactorily to undertake any scheme for the sanitary improvement of the whole town, and that in any such effort the machinery would break down from the very magnitude of the undertaking"; and also because, "in taking one well-defined district of the town, the action of the association, as well as the sympathies of its members, would be more concentrated, and, so to speak, individualised. The interest taken would be greater than if the operations were extended over the whole borough, which would practically be an unlimited area; the results of its labours, if they were beneficial, would soon become perceptible, and be encouraging to the members of the association, and if the scheme did not produce any good result, its failure would be manifested all the sooner." The whole district is to be divided into sub-districts of about fifty houses each, and these again into sections containing seven or eight dwellings each. Every section with its seven or eight dwellings is to be placed under the care of a visitor, or of two visitors working jointly, whose duties, as defined by rules, are to acquaint themselves accurately with the habits, character, history, resources, employment, and means of each family. The six or more visitors of a section constitute a sub-committee of visitors, whose chairman or lady president is *ex officio* a member of the executive committee. The visits, it is suggested, shall in no case be less often than once a fortnight, and one of the earliest duties of the visitor is to satisfy himself, or herself, as to the character of the water-supply, the freedom or otherwise of the house from offensive drain or sewer emanations, the soundness of the roof, the dryness of the walls, etc. He shall endeavour to get defects remedied where they exist, and to that end shall make himself personally acquainted with the landlords. He is also to endeavour to become acquainted with the employers of those whom he visits. Almsgiving is absolutely forbidden, but an arrangement is to be made with the Central Relief and Charity Organisation Society to inquire into any case of distress, and give relief according to their rules. Where property is very defective it is to be reported with a view to its purchase or lease by the Labourers' Dwellings Improvement Company or by the association itself, which has for one of its objects the erection of suitable dwellings, model lodging-houses, etc. And wherever purchase and re-erection or improvement has been effected by the association, the visiter will collect the rent, prevent overcrowding, and otherwise maintain the building in a good sanitary condition. It is hoped also to have the services of one or more salaried and efficient nurses, and to be able, by careful attention to disease at its onset, to prevent the lapse of a whole family into misery and destitution, which the death of its head—accelerated, if not caused, by his prolonged struggle with an acute malady, until compelled by utter exhaustion to seek for parochial or other medical aid—now so often brings about. Though almsgiving is interdicted, a visitor may give to the wife of any occupier an order upon a tradesman for utensils and materials for cleaning, to be supplied at the lowest possible price. Prizes are to be given for window-gardening; and short and simple sanitary tracts are to be printed, which will be read and explained by the visitors, and then left at the houses.

The remarkable success which has attended the Elberfeld system, and the efforts of Miss Octavia Hill and Colonel Gardiner in London, are the best guarantees for the similar success of any scheme which, embodying their principles—and especially that vital one of a house-to-house visitation,—shall be thoroughly worked by judicious and practical agents. By aiming at prevention where, as a prolonged experience has shown, cure is next to impossible, it would do more to ameliorate the social condition of the next generation of poor than most, if not all, other agencies. The scheme is in very able and practical hands, and, it is to be hoped, will fully succeed.

The second meeting of the session of the Medical Institution was held on the 21st ult. Dr. Alexander, Surgeon to the Workhouse Infirmary, sent two calculi—one of oxalate of lime, weighing an ounce and twenty grains, which he had removed by the median operation from a young man aged twenty-nine; and the other, a much smaller one, of uric acid, with a thin exterior layer of phosphate of lime, which had been taken from the bladder of a man sixty years old, who was in so prostrate a condition on his admission as to render it unadvisable to operate. In the first case the patient was admitted for symptoms of stricture only, no suspicion of the existence of stone having been entertained. On an examination having been made, however, the calculus was discovered and removed by operation, the wonder then being that such a really formidable-looking body, nodulated and spiked over its entire surface with long flint-like projections, could have remained in the bladder without exciting any other symptoms than those which seemed to point to stricture. The explanation seems to be that it was prevented from moving by being to a great extent embedded in a pouch behind the prostate. The patient did well, making a rapid recovery after the operation. The calculi had been analysed by Dr. William Carter, and were exhibited by him in Dr. Alexander's unavoidable absence from Liverpool. Mr. Pusey, Surgeon to the Northern Hospital, exhibited an unusually large bursa patellæ, which he had removed from a female patient. Dr. A. T. H. Waters then read the details of a case of rheumatic fever, with high temperature, successfully treated by means of cold baths; and subsequently, a paper was read by Mr. Shadford Walker, Surgeon to the Liverpool Eye and Ear Infirmary, on a new method of operating for partial staphyloma. This consists in shaving off thin slices of the bulged portion, allowing contraction to take place between each two operations; and, if desirable, restoring sight by subsequent iridectomy. Mr. Walker had applied the operation to the treatment of staphyloma in consequence of the success which he had met with from its performance in cases of conical cornea. He cited a number of cases, in all of which the results had been highly satisfactory, while in no case had it failed.

At the third meeting of the Association, held on the 4th inst., Dr. Spratley, of Rock Ferry, related two cases of traumatic tetanus successfully treated by him in the Birkenhead Borough Hospital by means of tincture of gelseminum sempervirens. The symptoms, especially in the second case, which was that of a young man, were very severe, accompanied by pleurothotonos and tight closure of the jaws, but began to yield as soon as the physiological action of the drug, as indicated by

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drowsiness and giddiness, was induced. In order to effect this as much as forty-five minims had to be given for a dose, although from ten to fifteen minims would produce a similar effect in a healthy person.

Mr. Rushton Parker exhibited a boy who had been frightfully injured from a fall into a quarry. One lateral half of the upper jaw had been completely and permanently displaced, and a curious and somewhat vacant expression given to the face in consequence. The lower jaw had sustained a severe compound fracture, which Mr. Parker had treated after the plan recommended and successfully practised by Dr. H. O. Thomas of this town, viz., by drilling a hole through the cheek and jaw on either side of the line of fracture, carrying a silver wire through—one end through one hole, and the other through the other,—and eventually, after of course freeing the wire from the cheek, tightening it, and thus drawing the fragments of the jaw into close apposition, by twisting each extremity into a spiral twist by means of a properly constructed screw. Each spirally twisted extremity rested against the gum, and prevented the stretched wire from being drawn back through the hole. The boy made a rapid recovery.

A somewhat unusual case under the Vaccination Act was heard before the Birkenhead stipendiary magistrate on the 23rd inst. It was that of the refusal of the mother of a child, who had been successfully vaccinated, to allow any lymph to be taken from the arm. The vaccination officer, Dr. Braidwood, explained to the mother, a married woman named Sarah McConnell, that her refusal would subject her to the risk of a penalty. She pleaded, however, that she was not aware that she had broken the law, as she had fulfilled all the instructions contained in the vaccination paper which had been given to her, and did not see why she should go beyond them. The magistrate explained to her that she had subjected herself to a fine of 20s. and costs, but that, as it was a first offence, he would mitigate the penalty. She was therefore fined 5s. and costs.

GENERAL CORRESPONDENCE.

MORTUARIES IN THE METROPOLIS.

LETTER FROM Dr. JOSEPH ROGERS.

[To the Editor of the Medical Times and Gazette.]

SIR,—As I am desirous of making out a complete case for legislative action on the question of the establishment of mortuaries in the metropolis, at the forthcoming deputation of the Strand Board of Works to the President of the Local Government Board, will you permit me to request the medical officers of health, Poor-law medical officers, and others, to forward me any information they possess as to the evils that arise from the want of such accommodation? I am, &c.,

33, Dean-street, Soho, November 22. JOSEPH ROGERS.

THE FORESHORES OF RYDE AND COWES.

LETTER FROM MR. A. PLATT WILKS.

[To the Editor of the Medical Times and Gazette.]

SIR,—I read in your paper of the 6th inst. a letter from Surgeon-Major Black respecting the foreshores of Ryde and Cowes. As regards the latter town, I am not in a position to offer any remarks, but I think it would not be right to allow Mr. Black's statements to pass without some notice on my part as far as Ryde is concerned. I showed the letter to our borough surveyor, and he was kind enough to send me some remarks on it, which I have his permission to enclose for publication in your next issue.

I must contradict one statement in Mr. Black's letter—viz., "that sea-bathing has been almost abandoned by visitors, who now resort to the cleaner shores of Southsea or Shanklin." There are three means of bathing off Ryde—1. A free bathing-stage, of which many thousands availed themselves last season. 2. A bathing-pier, with accommodation for men and women respectively, both men's and women's department being fitted with private dressing-boxes, for admission to which a charge is made. These were crowded throughout the season whenever the weather permitted. 3. Bathing from machines and boats, the number of which it is impossible to estimate.

The floor of the sea consists of a soft, fine, but firm sand, free from shingle, mud, or weeds, and fully equal, if not superior, to Southsea or Shanklin. As regards the sanitary condition of Ryde, I can only say that it will contrast most favourably with other towns of the same size, and especially with other watering-places. Our average annual death-rate is 16 to 17 per 1000 of the population, and we enjoy a remarkable immunity from zymotic disease. During the first half of this year there were registered in a population of 12,000 only four deaths from the whole seven zymotic diseases.

I am, &c.,

A. PLATT WILKS, M.A., M.B. Cantab., etc.,
Medical Officer of Health for the Urban District of Ryde.

Ryde, Isle of Wight, November 16.

"Borough Engineer and Surveyor's Office,
"Town Hall, Ryde, Isle of Wight,
"November 15, 1875.

"My dear Sir,—I have, at your suggestion, read the letter in the *Medical Times and Gazette*, signed 'W. T. Black, Surgeon-Major,' drawing attention to the state of the sea-beach in front of Ryde and Cowes.

"I have no doubt the writer was actuated with the best intentions, but as his statements are incorrect, and are likely to prejudice the towns in question, I think we are bound to contradict them so far as our borough is concerned.

"The letter states, in reference to the foreshores:—'Before these towns rose in population, the foreshores were sandy and pebbly, as may now be seen by going eastward or westward along the beach for about two miles beyond each place, where there is no mud deposit.'

"Had Surgeon-Major Black made the slightest inquiry of those who know anything of our shore, he would have learnt that a marked improvement has taken place of late years in the foreshore here by the deposit of sand brought by the sea from the banks lying to the eastward of Ryde. Personally I know well, that when I made the survey and map of Ryde, twenty-one years since, the surface of the foreshore was much more yielding than at present. You will doubtless remember that in the 'Journal of a Voyage to Lisbon,' written by Fielding in 1754, he alludes to the impracticability of landing at Ryde except at high water, as the surface of the shore consisted of mud which would neither bear a man nor a vehicle. Now nearly the whole of the heavy goods coming to Ryde are discharged into carts from vessels lying some distance from high-water mark, and are carted across the foreshore into the town. I need hardly say such a change is not produced by the deposit of sewage-mud over the shore.

"The statement, too, that none of this mud is to be found two miles to the eastward or westward is equally incorrect. The foreshore two miles to the westward of Ryde is much less sandy than any portion of that in front of the town, and has more the appearance of the mud-banks seen in estuaries.

"The letter goes on to state:—'This deposit of decomposable mud has been accumulating from the former want of comprehensive drainage, when the drains of each street ran down independently to the sea-walls, and emptied themselves there by open mouths. This has been attempted to be rectified in late years at Ryde by two common sewers, one on each side of the pier, taking some of the town sewage to the margin of low water in front. These have now played out their functions, and the mass of sewage has got beyond their carrying and distributing powers, so that it bursts out above, and clings around the outlets, and is driven, therefore, backwards on the flowing in of the tide up to the towns.'

"This is only true so far as the statement that we have two common sewers, one to the eastward, and one to the westward of the pier. But in lieu of their 'taking some of the sewage to the margin of low water, they discharge the *whole* of it sufficiently *beyond* low-water mark to insure a depth of water at the points of discharge of *six feet at low water spring tides*.

"I need hardly add that the sewers being cast-iron and in perfect order, the sewage does not 'burst out and cling round the outlets'; and that, so far from sea-bathing being discontinued at Ryde, it is well known there is not better bathing anywhere on the south coast.

"On these mere assertions that our foreshore is deteriorating, and our outfall sewers are inefficient, Mr. Black apparently relies to justify his opening statement, 'that the present insalubrious state of the sea-beach has attained a sufficiently obnoxious prominence'; but as these assertions are *utterly without foundation*, it appears to me useless to criticise his proposed remedies for evils which do not exist. I would merely observe that the proposal to build *new streets* on part of the land which he suggests should be reclaimed would, if carried

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into effect, destroy the character of the town,—as one great feature in the attractiveness of Ryde is that the site of the town slopes up immediately from the edge of the sea, and thus sea-views are enjoyed from all parts of the town. I need hardly say that a breadth of level land covered with buildings between the foot of such slope and the sea would materially interfere with such views.

"I have no doubt your knowledge of the sanitary condition of the town will enable you to furnish an additional refutation to Mr. Black's statements. I am, &c.,

"Francis Newman, Borough Engineer.

"To Dr. Wilks, Medical Officer of Health."

REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

Friday, November 12.

George W. Callender, F.R.C.S., F.R.S., Vice-President, in the Chair.

Ligature of Femoral Artery with Carbolised Catgut for Popliteal Aneurism.

Mr. Holmes read notes of the case. The patient was a footman, aged thirty-four, who, three weeks before admission into St. George's Hospital, began to experience pain and stiffness in the left ham, followed, four days before admission, by swelling and œdema of the foot and ankle. There was no history of any distinct strain, and he had always enjoyed good health. Upon his admission into the hospital, there was found to be a swelling, about the size of a walnut, in the left popliteal space, pulsating strongly, and with well-marked lateral dilatation. There was neither thrill nor bruit in the tumour, and very slight pressure on the femoral artery caused the pulsation to cease and the swelling to collapse. At first, digital pressure was tried for twenty-two hours. This was attended by a very considerable diminution in the pulsation; the tumour no longer entirely collapsed when the artery was compressed, and the sac appeared to contain a considerable amount of soft coagulum, especially at its outer part. After an interval of twenty-four hours, during which an air-pad was applied to the tumour, digital pressure was resumed, and continued for six hours daily for three days. All pressure was then relaxed, and the following morning the pulsation was as distinct as ever. Various forms of instrumental pressure were now tried—viz., by means of a weight in the groin, and Carter's tourniquet; and a final effort by digital pressure, which was kept up continuously for thirty-one hours. As, however, all these means failed, ligature of the femoral artery was determined upon. Accordingly, on August 12, a stout ligature of carbolised catgut was applied to the artery at the apex of Scarpa's triangle. In the course of the operation, a small vein, lying to the inner side of the sheath, was wounded, and subsequently secured by a ligature. The wound was dressed according to Lister's antiseptic method, and the limb enveloped in cotton-wool. On the following day the patient was found to be going on favourably, except that there was a little tenderness along the course of the saphena vein. On the 14th, two days after the operation, no pulsation could be felt in the tumour or the arteries of the limb. The foot was warm, with the exception of the extremity of the great toe, which was cold and of a slightly dusky hue. The dressings were changed; the wound looked healthy; there was no redness and no appearance of suppuration. There were swelling and tenderness along the course of the saphena vein, but no redness. The man went on well until the evening of the 16th, when the house-surgeon was called to him, and found him suffering from undoubted intoxication; he was talking rapidly and incoherently, at intervals shouting out loudly for drink, and endeavouring to strike those who came near him. It appeared that his friends had smuggled in a quantity of gin, which he had drunk. On the following day he was in a peculiar condition, half-stupid, with a frightened expression of countenance, answering questions very hurriedly and not to the purpose, and tossing about in bed in a restless manner. He continued much in the same state till the 19th, gradually sinking, with muscular twitching of the limb, incoherence of speech, picking at the bed-clothes, a brown furred tongue, and sordes on the teeth. He died quietly at about 1 p.m. Mr. Holmes stated that he had brought forward this case with a view to comparing the relative advantages of silk and catgut ligatures for tying the larger arteries in their continuity. His own experience had not been enough to justify him in expressing a dogmatic opinion, as he had only applied the catgut ligature to four of the large arteries in their continuity—viz., to the subclavian and carotid, which were tied simultaneously for thoracic aneurism, and in which the man died eight weeks afterwards from the result of galvano-puncture; thirdly, to the femoral artery, as above narrated; and, fourthly, to the left carotid, in a case upon which he had operated twenty-two days ago. In the first instance the vessels were found to be closed by a kind of diaphragm of no great extent, and neither of the vessels had been cut through. In the second case, that of the ligature of the femoral, of which the notes had been read *in extenso*, the artery was shown to the members present. The knot of the ligature was visible; but there was nothing to be seen of the rest of the string. The artery was perfectly continuous. In the fourth case there had been free suppuration from the wound; but now, on the twenty-second day, there was no irritation about it, and no part of the ligature had come away. Such, Mr. Holmes stated, was his experience with the carbolised catgut ligature, and the results, though far from conclusive, were quite consistent with the opinion which he entertained that the antiseptic ligature was a most efficient agent in combating the tendency to secondary hæmorrhage, and that it rendered possible that union by first intention which was John Hunter's object in his first operation on the femoral artery.

Mr. Maunder said he had tied some twenty-seven arteries altogether. Of these, nine had been on the antiseptic method, and five with catgut. Of these five operations, two were ligature of the brachial for hæmorrhage of the hand—one suppurated; in the other the patient died of pyæmia. No ligature was found, and no proximal clot. In two cases he had thus tied the femoral for popliteal aneurism. In one man, aged between twenty and thirty, the wound healed in forty-eight hours, but he died of internal aneurism some time afterwards. The other patient was a flabby male of between forty and fifty. Here there was free suppuration; but he ultimately did well. His fifth case was ligature of the subclavian for axillary aneurism. Here the patient died of suppuration passing downwards into the chest. In only one case, therefore, had primary union taken place, and this was probably independent of the catgut ligature. In the other cases he used silk. One patient operated on six years ago was well in a week, though he was the subject of two other aneurisms. In Mr. Holmes's cases he noted that suppuration took place in two instances.

Mr. Barwell considered that the suppuration did not speak against the use of the catgut ligature. He had used it, and had only once seen it come away. He had tied the brachial, the radial, and both facials thus. There was hardly any suppuration. He considered it of great importance to have the catgut quite soft, fresh from the oil, and unexposed to the air.

Mr. Myers had tied in this way the external iliac of a soldier in the Guards. He had tried various methods to arrest the aneurism, and had failed, but in consequence of these endeavours it was not easy to get hold of the vessel when cut down upon. He tied a double ligature, and the patient did well. There was considerable suppuration, but this was due not so much to the ligature as to the patient's bad constitution.

Mr. Gascoyen had used the catgut ligature twice on the femoral artery, once on the brachial. One of the femoral and the brachial cases did well; the other died of hæmorrhage. He had helped Mr. James Lane to tie the iliac of a patient suffering from sloughing bubo; the patient died of gangrene, but no ligature was found. Another case where the common carotid was tied did well. In another case where Mr. J. Lane operated, the femoral was tied for popliteal aneurism; the wound did not close for six weeks. Diffuse inflammation of the thigh followed; finally something came away from the wound, and recovery soon followed. In a similar case a like history had been observed, and he believed that what came away was most probably a portion of the external coat of the artery.

Mr. Marcus Beck said that in performing this operation of tying vessels with carbolised catgut ligatures, most of those who had spoken had done little more than tie the vessel in the ordinary fashion,—certainly it had not been done on Lister's method. A carbolised catgut ligature, if not reinforced with carbolic acid, will not retain its antiseptic properties, and will putrefy, the same as the surrounding tissues. In most cases

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where Lister's method was pursued, healing came by the first intention.

Dr. MURCHISON said that if he remembered right, Professor Syme tied the femoral twenty-five times in succession, and all safely. He only used silk.

A gentleman present said that at Carlisle he had tied the femoral with catgut, but not on Lister's system; free suppuration followed, but the patient did well. When such ligatures were used for stumps they did well, and never came away. He considered the mode of tying a vessel even more important than the material used.

Mr. C. HEATH thought the catgut ligature behaved differently in different hands. Moreover, it was very difficult to tell what force to use. Where hæmorrhage had followed, the walls of the vessel had probably been cut. He had first used this ligature for tying the left carotid in a case of aneurism of the aorta. The patient was well in a week. He had also tied the femoral in Hunter's canal; the patient died from suppuration seven days after, and the ligature was *in situ*; but here the patient was in bad health. Where the patient was in good condition the surgeon might hope for union by the first intention. In yet another case he had tied the left carotid; the circulation was so far interrupted that the patient died the same day. He had tied the femoral in the case of a friend whose health was reduced; there was free suppuration, but the patient did well. At the end of eighty-two days something came away in this case also; he thought it was the ligature.

Mr. MACNAMARA had tied the brachial on Lister's method; the patient did well, and there was no suppuration. He had also tied the subclavian and carotid; the patient did well till the fifteenth day, when hæmorrhage from the carotid set in, and the patient died. Two other cases did well. In performing the operation they should attend to the preparation of the ligature, which was sometimes brittle and apt to split; it kept best in fish-oil. The carbolic acid rendered it brittle.

Mr. HOLMES thought he had made it clear that he was not speaking of Lister's treatment; he had tried to carry it out, but, from the condition of the patients, had failed to do so. He simply brought forward the cases as examples of catgut ligature, the action of which did not depend on the absence of suppuration, but rather on its effects on the vessel. The ligatures might melt away, and pulsation return; but he believed the important thing to be that they did not of necessity divide the vessel.

Mr. CALLENDER said that it was pretty well known that he did not use Lister's antiseptic method, but his own. In three cases where catgut had been applied at St. Bartholomew's, hæmorrhage had followed. In one case a young patient in good health had the femoral thus ligatured, and the wound was drained by keeping in it a piece of catgut. On the tenth day pulsation returned; by-and-by the draining catgut came away in half—the remainder had melted. Next came a gush of blood, and the patient died of hæmorrhage after amputation at the thigh. No ligature was to be seen round the artery. Beneath the site of the knot was the fatal opening, where the walls must have been contused, and sloughing had followed.

Mr. E. HART said Mr. Holmes had mentioned instrumental pressure was that used under chloroform; for even where it might fail without anæsthesia, pressure did well with it.

Mr. HOLMES said that by pressure they had made the aneurism quite pulseless, but he did not expose the patient to the extra risk of chloroform. It was quite easy to produce complete absence of pulsation.

The meeting then adjourned.

PATHOLOGICAL SOCIETY.

TUESDAY, NOVEMBER 16.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

SCIRRHUS OF THE MALE BREAST.

MR. MAUNDER brought forward a patient, a man of forty-four, whose breast had been removed two years ago for scirrhus. The disease had existed for two years, having begun with cracking of the nipple and occasional discharge of a sanious fluid. At the time of operation the growth had reached the size of a small orange. The scar was now perfectly healthy; an enlarged axillary gland remained unaltered. No microscopical examination had been made of the tumour. (It was referred to the Morbid Growths Committee.)

SCLEROSIS OF THE BRAIN AND SPINAL CORD.

Dr. GOODHART exhibited this specimen. A married woman of thirty-eight, not syphilitic, had enjoyed good health until two years and a half before her admission into Guy's Hospital. The first symptoms were in the legs;—gradually increasing weakness, and thereafter rigid spasm. Then came complete paralysis of the legs with rigidity, jerking of the head, nystagmus, staccato speech, and no special sensory symptom. The patient continued under observation since early in 1874. A few days ago her temperature rose; the palate was found to be paralysed; and death followed. Throughout the whole cord patches of grey induration were found, and that so abundantly that hardly a healthy portion remained. Similarly, in every square inch of the brain patches of sclerosis occurred. No very careful investigation of the change had yet been made, but a preliminary microscopical examination showed that it consisted partly of a cellular infiltration and growth of delicate connective tissue, and partly of a granular and pigmentary degeneration.

ULCERATING ENDOCARDITIS AND MITRAL ANEURISM.

Dr. COUPLAND exhibited a heart which presented these conditions. It was taken post-mortem from the body of a man who had been under treatment for six days for dyspnœa and other cardiac symptoms. There was a systolic murmur at the apex and back, and a double murmur at the base. The man had had left pleurisy shortly before, but never rheumatism. His previous health had been good. The present symptoms had existed for a month, commencing with severe præcordial pain. On examination, a pouch was found in the mitral valve projecting into the left auricle; its mouth admitted the little finger. The middle cusp of the aortic valve was much diseased, being ulcerated and covered with vegetations. The mitral disease seemed to be secondary to the aortic. Dr. Coupland inquired whether this was probable. The left ventricle was greatly hypertrophied.

Dr. HILTON FAGGE inquired whether any of the aortic vegetations touched the mitral valve. Dr. Moxon had lately shown that the mitral might become affected in this way. Dr. Fagge added that he had examined the subject himself, and had found that Hodgkin had made the same observation. Even in the days when aortic regurgitation was not recognised, Hodgkin made use of this observation to prove the existence of the lesion.

Dr. COUPLAND replied that, in the present specimen, there were no vegetations long enough to affect the mitral, but there were two ulcerations on the endocardium below. There might have been such vegetations, however,—carried away by the current, as was testified by the presence of a large infarct in the spleen.

UNITED FRACTURE OF THE HUMERUS OF A GORILLA.

Dr. CRISP showed a specimen of this nature, illustrating the small amount of deformity after such an accident in the lower animals.

RICKETS IN PHEASANTS.

Dr. CRISP also showed these specimens. The tibiæ and other bones were affected. Some of the birds had recovered.

EMBOLISM OF THE PULMONARY ARTERY.

Dr. HILTON FAGGE exhibited a specimen of pulmonary embolism from the body of a medical man who died in the course of typhoid fever. The patient was improving, when, on getting out of bed, he was suddenly seized with dyspnœa, tumultuous palpitation, and symptoms of collapse. He died in a few hours. Post-mortem, the intestines presented healed ulcers, corresponding probably to the fourth week of typhoid fever. The lungs were healthy. The heart was flabby; its valves healthy; the right ventricle contained decolorised clots. The bifurcation of the pulmonary artery and its main divisions contained a clot which was not adherent; it was composed of four distinct rounded cords, as large as a lead-pencil, twisted up together. When washed out it proved to be a single clot folded on itself. All the veins were examined, but no clot was found in any of them. Some of the mesenteric glands were suppurating. Dr. Fagge said that the clot in the pulmonary artery could not have been formed *in situ*: from its characters it must have come from a distance. Almost certainly it had been formed in the femoral vein, which was empty; and from this floated to the position where it was found.

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Dr. CRISP referred to the frequent occurrence of clots in the pulmonary artery.

DISTENSION-DIVERTICULA OF THE INTESTINE.

Dr. FAGGE also exhibited a condition of intestines which he believed had not previously been described. During gastrotomy in a woman suffering from acute internal strangulation of the bowel, Dr. Fagge found on the greatly distended intestine and on its mesenteric side a diverticulum of the mucous coat through the muscular. The patient died, and next day, at the necropsy, the appearance described was recognised. The diverticulum was on the jejunum at some distance above the seat of obstruction. The situation —on the mesenteric border—distinguished it from a congenital diverticulum. In a second case—a man brought in dead, with brown atrophy of the myocardium—the intestines were found to be matted together in places, and there diverticula occurred, projecting into the mesentery, as before; they were probably referable to an old attack of obstruction. These diverticula showed no tendency to retract on the pressure being relieved by opening the gut.

TUBERCLE OF THE PANCREAS.

Dr. BARLOW showed a specimen of this, which is said to be a very rare condition. A child of twenty-three months died a quarter of an hour after admission into the Great Ormond-street Hospital. It had suffered for months from "scrofula," and been acutely ill for a fortnight. General acute tuberculosis was found post-mortem, with caseous change in several glands, including the mesenteric. The exterior of the pancreas appeared to be normal, but white nodules were discovered in the head of the gland, six in number, similar to those familiar in the kidney. Microscopically a small-celled growth was discovered between and in the lobules; the gland-elements were granular in the neighbourhood.

OSTEO-SARCOMA OF THE SUPERIOR MAXILLA.

Mr. MARSH exhibited the upper jaw of a boy of fourteen, which was removed by operation for a tumour of six months' growth. The principal sign of the disease was swelling of the face above the bicuspids; there never was pain: the growth encroached somewhat on the cavity of the nose, but neither on the palate nor backwards. It was first punctured, and the bone was then removed entire. The boy rose on the fourth day. The tumour proved to be an osteo-sarcoma. The diagnosis was interesting in the presence of swelling only. Mr. Marsh had had another case somewhat similar lately, where the tumour grew from the antrum, and was removed by simple scooping. It had not returned, although the operation was performed nine months ago.

TUBERCULAR LUPUS OF THE TONGUE AND MOUTH.

Mr. FAIRLIE CLARKE showed this specimen, which was taken post-mortem from the body of a patient of Mr. Teevan's. The disease involved the tongue, soft palate, and gums. A bricklayer of eighteen, without any history of phthisis, cancer, or syphilis, personal or family, had suffered from the disease for five months at least. The whole of the oral mucous membrane was velvety, thickened, and infiltrated. The side of the tongue and the gums were ulcerated, and the whole of the soft palate was gone. Sir James Paget diagnosed the disease tubercular lupus during life. The salivary glands were enlarged, but not the lymphatics. Microscopically, the interstices of the connective tissue were found infiltrated with small round cells. The skin was everywhere sound. Mr. Clarke said that primary lupus of the mucous membranes was rare, and tubercular lupus of the tongue very rare.

The PRESIDENT having inquired whether the soft palate had cicatrised,

Mr. CLARKE replied in the negative.

Dr. HILTON FAGGE said that he had seen very similar ulceration lately in a case post-mortem. It occurred with tubercle of the lungs, etc., and was considered tubercular. In a second case he had found tubercular ulceration of the larynx spreading to the soft palate.

Mr. MARSH said that Sir James Paget had described tubercular lupus of the tongue, and insisted upon its diagnosis. He had himself seen such a case along with Sir James.

Dr. GOODHART inquired whether there was phthisis in the present case.

Mr. SPENCER WATSON agreed with Mr. Fairlie Clarke that primary lupus in an ulcerative form was extremely rare as occurring on mucous membranes. He gave as a rare instance the case of a girl with primary lupus of the conjunctiva who had also lupus of the nose. But he was under the impression that the erythematous form of lupus was not so very uncommon on the mucous membranes of the nose, and that many cases of ozæna are due to the presence of this disease within the nostrils.

Mr. CLARKE replied that the patient in this instance did not die of phthisis, but of extension of the disease backwards.

FATTY TUMOUR.

Mr. MAUNDER showed a fatty tumour removed by operation from the antero-lateral pectoral region of a man of middle age.

HYDATID DISEASE OF THE HEART.

Dr. GOODHART exhibited a specimen of hydatid of the heart, from a man who had never been known to have any disease, and who died suddenly while handling sheep at a market. He had, however, fallen more than once while on the treadmill at Clerkenwell Prison some time before; was found to have been an out-patient of a hospital; and was considered a "heavy sleeper." Post-mortem, the pericardium was found to be adherent; in the septum ventriculorum, and in the anterior wall of both cavities, lay an old hydatid, from which pus escaped on the removal of the pericardium: it bulged as a hard mass on the interior of the left ventricle. The pus contained hooklets. The suppuration was probably recent.

SYPHILITIC GROWTH IN THE CEREBRAL SINUSES.

Dr. DOWSE showed a specimen of syphilitic affection of the posterior cerebral sinuses. A man, aged thirty-nine, presented a depressed cicatrix over the right frontal eminence, from which bone had been discharged. He complained of headache, vomiting, earache and otorrhœa, and double vision. He had double optic neuritis. There was no paralysis. Post-mortem, the sinuses around the torcular were occupied by a growth resembling microscopically young connective tissue: the membranes were mutually adherent posteriorly.

GLIO-SARCOMA OF THE BRAIN.

Dr. DOWSE also showed this specimen. The disease, which lasted two years, had begun with convulsions of the right side. There was no paralysis, but a most peculiar affection of gait indicative of want of confidence, the patient being able to run, while he could not walk without hesitation and difficulty. The optic discs were hazy. Vision was good; the mind unaffected. Death was preceded by fits. Post-mortem, the anterior part of the corpus callosum was represented by a pink soft mass, which also involved in part the corpora striata, and was probably connected in its origin with the choroid plexus. It proved to consist microscopically of round, oval, and spindle cells, in a fine stroma, and was partly degenerated.

Mr. NUNN had seen somewhat similar cases in M. Charcot's wards in Paris.

Dr. GOWERS asked which side of the body was convulsed.

Dr. DOWSE replied that it was the right.

GLIOMA OF THE BRAIN.

Dr. GOWERS exhibited a specimen of glioma of the cerebrum situated beneath the left superior parietal convolutions, and degenerated in the centre. It was composed entirely of the minute cells of glioma. A man had slight right hemiplegia for two months, followed during the two months that preceded his death by complete paralysis of the same side. The first attack was sudden, with some loss of consciousness; the second the same, with unconsciousness for hours. Six weeks before death, there were frequent convulsions, preponderating on the non-paralysed side; and during the last few days of life the left side was paralysed also. Dr. Gowers remarked that hemiplegia was rare in tumour in this situation, but this tumour was large. The onset, also, was peculiar—sudden, without convulsion or evidence of softening. The growth was situated among the fibres from the corpus callosum to the hemispheres; and this might explain the character of the convulsions and the left hemiplegia in the last few days.

CONGENITAL MALFORMATION OF THE ŒSOPHAGUS.

Mr. MARSH showed two specimens of congenital imperfection of the œsophagus, for Dr. Ilott. The œsophagus, traced downwards, ended at a distance, in the two cases, of one inch, and three-quarters of an inch respectively, below the cricoid in a *cul-de-sac*. The lower extremity of the tube, traced upwards, ended in the trachea, a short distance above the bifurcation, and at the bifurcation respectively. One infant lived a week, the other four days; deglutition was impossible, the milk regurgitating; and death resulted from exhaustion. The

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malformation was easily explained by development. Mr. Marsh said that an operation for relief of the condition would manifestly have been impossible.

Mr. THOMAS SMITH inquired whether the two children were of one mother.

Dr. ILOTT replied in the negative, and gave further particulars of the cases. In one the right subclavian artery was abnormal in coming off as the last branch of the aortic arch. In both the lungs were imperfectly expanded.

The PRESIDENT referred to a specimen of diverticulum from the upper part of the pharynx passing down behind the œsophagus, in St. George's Hospital Museum. The subject, an old gentleman, had suffered from dysphagia for years.

Mr. DORAN mentioned a somewhat similar specimen in the Hunterian Museum, and

Mr. WAGSTAFFE described a third.

Dr. ILOTT pointed out the essential difference between these cases and those just described by himself.

PARTS AFTER TRACHEOTOMY.

Mr. CLEMENT LUCAS exhibited the larynx of a child that died after tracheotomy for laryngitis caused by scald. The operation had been performed by a single incision.

Dr. MURCHISON asked whether there was any membranous exudation in the larynx.

Mr. LUCAS replied in the negative. The child died of broncho-pneumonia on the second day. Mr. Lucas also said, in answer to Mr. Thomas Smith, that he had never opened the larynx before by a single incision.

NEW MEMBERS.

The following gentlemen were elected Members of the Society in the course of the evening:—Dr. Ord, Mr. H. Royes Bell, Mr. H. Hugh Clutton, Mr. F. R. Cross, Dr. J. P. Irvine, Mr. F. B. Jessett, Dr. Koch, and Dr. A. Lediard.

MEDICAL NEWS.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent M.B. Examination for Honours:—

MEDICINE.

First Class.—Batterbury, George Henry (Scholarship and Gold Medal), King's College; Verco, Joseph Cooke (Gold Medal), St. Bartholomew's Hospital; Crétin, Eugène, St. Bartholomew's Hospital.

Second Class.—Hetley, Henry, Guy's Hospital; Garlick, George, University College; Moore, George Edward, King's College.

Third Class.—Hobson, Lewis John, University College; Voelcker, George Henry, University College.

OBSTETRIC MEDICINE.

First Class.—Smith, Herbert Alder (Scholarship and Gold Medal), St. Bartholomew's Hospital; Batterbury, George Henry (Gold Medal), King's College; Verco, Joseph Cooke, St. Bartholomew's Hospital.

Second Class.—Garlick, George, University College; Buchanan, Arthur, Guy's Hospital; Hobson, Lewis John, University College; Hullard, Jean Arthur (B.Sc.), University College.

Third Class.—Hetley, Henry, Guy's Hospital; Jameson, Leander Starr, University College; Voelcker, George Henry, University College.

FORENSIC MEDICINE.

First Class.—Verco, Joseph Cooke (Scholarship and Gold Medal), St. Bartholomew's Hospital; Jameson, Leander Starr (Gold Medal), University College; Hullard, Jean Arthur (B.S.), University College; Voelcker, George Henry, University College; Crétin, Eugène, St. Bartholomew's Hospital; Hetley, Henry, Guy's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having undergone the necessary examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 18th inst., viz.:—

Blakiston, Arthur Alexander, L.S.A., Wallington, Surrey, student of University College.
Carcenac, Edward, Mauritius, of St. Bartholomew's Hospital.
Carey, Adrian, Guernsey, of Guy's Hospital.
Cooper, Henry David, L.S.A., Bengal, of University College.
Darker, Frederick William, Peckham, of St. Thomas's Hospital.
Dobbie, Robert John Algernon, L.S.A., Budleigh, Salterton, Devon, of the London Hospital.
Don, Arthur Gorbett, Hammersmith, of University College.
Gairdner, John, Maidenhead, of University College.
Godfrey, Benjamin George, Clapham, of University College.
Harmar, James Raffles, L.S.A., Birmingham, of the Birmingham School.
Hopgood, William Charles, L.R.C.P. Edin. and L.S.A., Chipping Norton, of University College.
Jackson, Philip John, L.S.A., Merton, Surrey, of Guy's Hospital.
Knight, John Tomlinson, L.S.A., Sandiacre, Derbyshire, of Guy's Hospital.
Lewis, Joseph Isaac, L.S.A., Milborne Port, Somerset, of Guy's Hospital.
Lloyd, James Hellings, Milner-street, S.W., of St. George's Hospital.
Mathias, James, L.S.A., Cardigan, of St. Bartholomew's Hospital.
Price, Henry Ethlington, Stamford-hill, of the London Hospital.
Shann, Frederick, B.A. Cantab., Brompton, of St. George's Hospital.
Sherrin, Francis Mark, Gaisford-st., Camden-road, of University College.
Sleddall, Thomas Walter, Pontypridd, of the Liverpool School.
Smith, Stephen Maberly, Surbiton, Surrey, of St. Bartholomew's Hospital.
Tredinnick, Ernest, Camborne, Cornwall, of St. Thomas's Hospital.
Twining, Frank Theed, B.A. and M.B. Cantab., Southport, Lancashire, of St. Thomas's Hospital.
Ward, Charles, Greenstreet, Kent, of the London Hospital.

Thirteen candidates out of the eighty examined having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for six months.

The following analysis of the medical qualifications held by candidates at this examination will perhaps be read with some interest:—There were fourteen holding the L.S.A., two M.B. Edin., two L.K. & Q.C.P. Ire., one L.R.C.P. Edin. and L.S.A. Lond., one L.R.C.P. Lond., one M.B. Cantab., and one M.B. Aber. Forty-seven candidates were examined in Medicine. Of the eighty candidates examined, including one under the old regulations (who was referred to a written examination) thirteen failed to acquit themselves satisfactorily, and were therefore rejected; four were referred in Surgery, but approved in Medicine; three were approved in Surgery, and referred in Medicine; and six who only went in for Surgery were approved, and, when qualified in Medicine, will be admitted Members of the College.

The oral examination was commenced on Tuesday last, when the following gentlemen passed, and, when eligible, will be admitted to the final examination, viz.:—

Barker, William Lewengton, L.R.C.P. Lond., diploma of Membership dated November 17, 1863, of St. George's Hospital.
Buller, Frank, M.D., January 28, 1870, of the Toronto and St. Thomas's Hospitals.
Gardner, Edward Barton, L.S.A., November 12, 1861, of St. Thomas's Hospital.
Jackson, George, L.R.C.P. Lond. and L.S.A., November 15, 1864, of University College.
Prichard, Arthur William, L.S.A., July 21, 1874, of the Bristol School.
Smith, James William, L.R.C.P. Lond., November 15, 1864, of Guy's Hospital.
Chavasse, Thomas Frederick, of the Edinburgh and Birmingham Schools.
Jaquet, John Lewis, of the Westminster Hospital.

The two last-named gentlemen are not Members of the College, but passed the primary examination for it April 8 and 15, 1873, respectively.

The following gentlemen were successful on the 24th inst., viz.:—

Hensman, Arthur, L.R.C.P. Edin. and L.F.P. & S. Glasg., diploma of Membership dated November 14, 1866, of University College.
Roeckel, Waldemar Joseph, January 22, 1873, of St. Bartholomew's Hospital.

Also, the following gentlemen, not Members of the College:

Cottle, Ernest Wyndham, of St. George's Hospital.
Freund, Percy H. E., of St. Thomas's Hospital.
Harsley, William Rosser, of King's College.
Moullin, Charles W. Mansell, of St. Bartholomew's Hospital.
Underwood, Arthur Swayne, of King's College.
Young, Alfred H., of the Edinburgh School.

Of the thirty-four candidates examined, the large number of eighteen failed to acquit themselves to the satisfaction of the Court of Examiners, and were consequently referred to their anatomical and physiological studies for six months. We have heard that as many as fifteen had been previously once or twice rejected, two were again referred for the third time, and five for a second. Perhaps if an additional fee were demanded, as in the case of candidates for the Membership, a more satisfactory result would be obtained from some persons who evidently think slightly of the ordeal.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 18:—

Blakiston, Arthur Alexander, Wallington, Surrey.
Gathergood, Benjamin William, Torrington St. John's, King's Lynn.
Harmar, James Raffles, Newhall-street, Birmingham.
Maples, Reginald, Spalding, Lincolnshire.
Pilkington, Henry, Liverpool.
Williamson, George Edward, North Shields.

The following gentlemen also on the same day passed their primary professional examination:—

Chadwick, John, Manchester Infirmary.
Macintire, John Henry Lee, Middlesex Hospital.
Roberts, Gordon Money, Guy's Hospital.
Sidebotham, George William, Manchester Hospital.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—In accordance with the provisions of her Majesty's Order in Council of February 22, 1870, Fleet-Surgeon William Edward O'Brien has been placed on the retired list from November 18. John S. Y. Adams, Fleet-Surgeon, and John A. M'Adam, Surgeon, to the *Pallas*, when re-commissioned.

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APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

ST. JAMES'S PALACE.—The Queen has been pleased to appoint Wm. Colles, Esq., M.D., Regius Professor of Surgery, Trinity College, Dublin, and Fellow of the Royal College of Surgeons in Ireland, to be Surgeon-in-Ordinary to her Majesty in Ireland, in the room of John Hamilton, Esq., deceased.

BEATTY, JOSEPH, F.R.C.S.I.—Surgeon to the Rathdown Hospital and Dispensary, Monkstown, co. Dublin, *vice* William Plant, M.D., J.P., deceased.

BOODLE, R. MAXWELL, M.R.C.S. and L.S.A.—House-Surgeon to the Infirmary, Rochdale.

SHEWEN, ALFRED, M.D. Lond.—Assistant-Physician to the Metropolitan Free Hospital, City.

BIRTHS.

BOGGS.—On November 21, at Paris, the wife of Alexander Boggs, M.D., late of H.M.'s Indian Army, of a son.

FAUGHT.—On November 20, at Gravesend, the wife of Surgeon-Major F. G. Faught, of a son.

FLOWER.—On November 21, at 39, Lincoln's-inn-fields, the wife of W. H. Flower, F.R.C.S. Eng., F.R.S., of a son.

GRAY.—On October 20, at Cinnamara, Jorehaut, Assam, the wife of Edward Gray, M.B., C.M., of a son.

HOOPER.—On November 20, at Wandsworth, the wife of J. Harward Hooper, M.D., F.R.C.S., of a daughter.

LIDDARD.—On November 16, at 71, Ladbroke-grove-road, North Kensington, the wife of Thomas Liddard, L.R.C.P. Lond., M.R.C.S. Eng., of a son.

POTTINGER.—On November 23, at Melville Hospital, Chatham, the wife of Robert Pottinger, Deputy Inspector-General of Hospitals and Fleets, of a daughter.

MARRIAGES.

HUGHES—DIXON.—On November 20, at the parish church, St. Mary, Andover, Hants, William Picton Hughes, M.D., of H.M.S. *Hamadryad*, Cardiff, to Fanny Jane, widow of Hallam Moore Dixon, M.D., and eldest daughter of Harry Footner, Esq., of Hillside, Andover.

RIGBY—THOMPSON.—On November 23, at Barry-road Chapel, Peckham Rye, James Arthur Rigby, M.B., of 31, Winckley-square, Preston, Lancashire, to Sarah Elizabeth Atherden (Lillie), eldest daughter of Joseph Thompson, of Manor House, Camberwell, Surrey.

DEATHS.

BROWN, JAMES, M.B., C.M., Surgeon P. & O. S.N. Co.'s Service, younger son of Robert Brown, Quartermaster 60th Rifle Brigade Depôt, Hamilton, N.B., on board the ss. *Sumatra*, between Aden and Bombay, on October 27.

BROWN, JOHN HENRY, infant son of John Brown, M.D. Aber., L.R.C.S. Edin., at Fraserburg, Cape of Good Hope, on October 14, aged seven months.

THEOBALDS, FENWICK ROBERT MONTGOMERY, tenderly loved and only surviving son of Surgeon-Major J. R. Theobalds, 16th Regiment Madras Native Infantry.

WEBSTER, GEORGE, M.D., L.R.C.S.E., L.M., F.R.G.S., J.P., at Dulwich, after a few days' illness, on November 19, aged 78.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

AMERSHAM UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, on or before December 6.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

DOVER HOSPITAL AND DISPENSARY.—Resident Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to Mr. Elwin, 13, Castle-street, Dover, before November 30.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 11, Tavern-street, Ipswich, on or before December 8.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to the Secretary, on or before December 9.

LIVERPOOL INFIRMARY FOR CHILDREN.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Hon. Sec., Mr. J. Calder, Liver Chambers, Tithebarn-street, Liverpool.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Blean Union.—The Sturry District is vacant; area 6109; population 1896; salary £30 per annum.

Glanford Brigg Union.—Mr. W. Richardson has resigned the Messingham District; area 18,054; population 3281; salary £40 per annum.

Wells (Somerset) Union.—Mr. T. M. Edwards has resigned the Fourth District; area 16,158; population 5504; salary £30 per annum.

APPOINTMENTS.

Colchester Union.—Wm. A. Maybury, M.D., M.C., M.R.C.S., L.S.A., to the Second Ward District.

Gloucester Union.—Richard M. Cole, M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., to the Workhouse.

Northallerton Union.—John R. Gray, M.B., M.C. Aber., to the Borrowb District.

Penkridge Union.—Samuel Walsh, L.R.C.S. Ire., M.B. Dub., to the Brewood District.

Stoke-upon-Trent Parish.—John W. Greenwood, M.R.C.S. Eng., L.S.A., to the Hanley District.

THE ROYAL ACADEMY.—Professor John Marshall, F.R.S., will commence his annual course of lectures on Anatomy, at Burlington House, on Monday next, the 29th inst.

ANOTHER MEDICAL M.P.—We are glad to announce that Sir J. J. Trevor Lawrence, Bart., has been returned without opposition to represent Mid-Surrey in Parliament. This gentleman, who is the only son of the first baronet, Sir William Lawrence, so long attached to St. Bartholomew's Hospital, and twice elected President of the Royal College of Surgeons, is a member of the same institution, having obtained his diploma in 1853.

THE late Mrs. Carmichael, of St. Stephen's-square, Bayswater, has bequeathed several handsome sums of money to different hospitals. St. George's Hospital is to receive £300; the Royal United Hospital (Bath), the Cancer Hospital (Piccadilly and Brompton), the National Hospital for Diseases of the Heart and Paralysis, King's College Hospital, and the Hospital for Sick Children (Great Ormond-street), £200 each; and the General Hospital (Union-street, Bath), and the Dental Hospital (London), £100 each.

PRESENTATION TO DR. INGLIS.—It is always pleasant to have to notice any acts of appreciation of the services of members of the profession; and this week we have to record the presentation to Dr. Alexander Inglis of a massive silver salver, and an antique cup containing one hundred sovereigns, subscribed for by his numerous friends on the occasion of his leaving Worcester. The presentation was made by Mr. Hastings (son of the late Sir Charles Hastings) in an appropriate speech.

MR. JOHN BIRKETT, F.R.C.S., Consulting Surgeon to Guy's Hospital, has been elected a member of the Dental Board of the Royal College of Surgeons of England, in the vacancy occasioned by the resignation of Mr. Henry Hancock, late President of the College. The following gentlemen were elected Fellows of the College:—Messrs. John Beames Burroughs, Clifton, Bristol, diploma of membership dated January 25, 1828; Thomas Bruges Flower, Bath, July 9, 1841; and John Briscoe, Oxford, August 15, 1842. Seventy-nine candidates are now undergoing examinations for the diploma of membership of the College.

THERE were 2449 births and 1567 deaths registered in London for the week ending the 13th inst. Amongst the latter scarlet fever was answerable for 116 (a slight decrease on the previous week's return, though still exceeding by 33 the corrected average number for the corresponding week in the last ten years), and diseases of the respiratory organs for 349. The deaths referred to this latter cause, which averaged but 152 during the four weeks of September, have rapidly increased during the past five weeks from 194 to the number now given, which, however, is still somewhat below the corrected weekly average. The Asylums District Fever and Small-pox Hospitals at Homerton and Stockwell contained 346 patients on the 13th inst., of which 65 were under treatment for fever, 265 for scarlet fever, but not one for small-pox.

AN AUSTRIAN PROFESSOR AT LIÉGE.—"We have the painful duty to announce to the medical profession of Belgium that the unworthy affront with which it has been for a long time threatened, has now been offered to it by the Minister of the Interior. Herr Dr. Gussenbauer, an Austrian citizen, and assistant to Prof. Billroth, of Vienna, has just been nominated Professor of Clinical Surgery at Liége. Thus the Minister and those who have inspired this deplorable nomination give us to understand that if the Belgian surgeons wish for promotion in their own country, they had better become naturalised Austrians or Germans. This is highly encouraging for them."—*Presse Belge Méd.*, November 14.

THE FELLOWSHIP OF THE COLLEGE.—The half-yearly examination of candidates for the fellowship was commenced on Friday last, when thirty-four candidates offered themselves for the primary or anatomical and physiological examination, in writing, to whom the following questions on these subjects (all four of which were required to be answered) were submitted, viz:—1. Describe the influence which the function of respira-

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tion, including the respiratory movements, has upon the circulation of the blood. 2. State the evidence in support of the current views concerning the functions of the fifth cranial nerve. 3. Describe the course and relations of the arteries which enter the cranial cavity anterior to a transverse line drawn in front of the foramen magnum, limiting the description to the interior of the skull. 4. In a transverse section of the neck through the fourth cervical vertebra, name the parts seen in their order from before backwards.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

Ambitious.—The person respecting whom you inquire is a vendor of "bogus" diplomas. The *Figaro* of Wednesday last has an article on the diploma trade.

Vivian W.—The examiners for the degree of Bachelor of Medicine at Oxford are, in the first examination, George Rolleston, M.D., Merton College; John A. Dale, M.A., Balliol College; William Odling, M.A., Worcester College. In the second examination—Thomas K. Chambers, M.D., Christ Church; Patrick Black, M.D., Christ Church; Thomas P. Teale, M.A. and M.B., Brasenose College.

F.—Dr. Akenside, at the age of twenty-three, wrote the "Pleasures of the Imagination," a poem which even Pope admired and eulogised.

K. K.—The Hospital for Incurables, on Putney-heath, was once the residence of the Duke of Sutherland.

A Student.—Montpellier University, according to some historians, was founded in 1196 by Pope Urban V., but its school of medicine can accurately be traced only as far back as the year 1221.

Inquirer.—The resolution of the Keighley Board of Guardians to make a return to the writ of *mandamus* issued against them by the Court of Queen's Bench was adopted by a majority of six to four. The return, *inter alia*, sets forth that the Local Government Board had power to prosecute people for not obeying the Vaccination Acts, without calling upon the guardians to do so.

B. A.—"In every operation that man undertakes, he must imagine before he executes, as he must observe before he imagines. He can never produce a result which he has not conceived first in his own mind."—*M. Comte.*

Zero.—Dr. Kane, the Arctic voyager, after a journey of eighty or ninety miles over the ice at a mean temperature of *minus* 41·2°, tells us—"We were quite delirious, and had ceased to entertain a sane apprehension of the circumstances about us. Our strength failed us, and we began to lose self-control. We fell half-sleeping on the snow. I could not prevent it. Strange to say, it refreshed us. I ventured upon the experiment myself, making Riley wake me at the end of three minutes, and I felt so much benefited by it that I timed the men in the same way. They sat on the runners of the sledge, fell asleep instantly, and were forced to wakefulness when their three minutes were out."

Sic.—The history of the Welsh fasting-girl is embodied in a work by Dr. Fowler. It contains the depositions before the coroner, and the report of the evidence given at the trial of the parents. The volume is entitled "A Complete History of the Case of the Welsh Fasting-Girl, with Comments," by R. Fowler, M.D. Renshaw, London, 1871.

Amicus.—The number of pupils attending the courses of the Female Medical School of St. Petersburg during the year 1874-5 is given as 171. Of these 102 are noble, seventeen daughters of merchants, twelve daughters of clergymen, and the remaining forty of other social classes.

Old Bailey.—For many years the bodies of all persons hanged for murder at Newgate were handed over to the President of the College of Surgeons, by whom they were distributed in turn to the various anatomical schools in connexion with the metropolitan hospitals; they are now lost to science by being buried within the precincts of the place of execution.

Staff Surgeon R.N.—The Seamen's Hospital-Ship originated from the Committee appointed to manage the funds subscribed in 1817-18 for the temporary relief of distressed seamen, who were at that time to be found in great numbers in the streets of the metropolis. The *Grampus*, a fifty-gun ship, was moored off Greenwich for this purpose, but was replaced by the *Dreadnought*, a 104-gun ship, in 1831. Mr. W. T. Plowman was the apothecary. The last to hold that office was Mr. Harry Leach.

Veterinary Surgeon, Army.—Mr. Edward Coleman, M.R.C.S., was appointed Professor of the Royal Veterinary College, February 17, 1794; he died July 14, 1839. You will see a bust of him in the Hall of the Royal College of Surgeons.

Dr. Tucker.—The body of Pym was opened and examined by the chirurgeon Allen, and Henry Axtall, his servant, in 1643, before the President of the College of Physicians, Dr. Meverell, Sir Theodore Mayerne, and five other doctors.

Associate, King's College.—The painting of Sir William Fergusson, Bart., recently presented by the subscribers to the College of Surgeons, may be seen in the office of the secretary of that institution.

J. B. M.—"It is the great excellence of a writer to put into his book as much as his book will hold."—*S. Johnson.*

Antiquary.—Plutarch refers, in the ninth question of the eighth book of his "Symposiacon," to the statement of Agatharchides of Cnidus, the geographer and philosopher, that "the people on the Arabian side of the Red Sea suffered many strange diseases. Amongst others, worms, like little snakes, came out upon them, which gnawed their legs and arms, and, when touched, retracted themselves, coiled themselves up in the flesh, and gave rise to the most insupportable pains; but that this evil has been found only then, and neither before nor since amongst any other people."

English Medical Fees.—The Paris *Figaro* remarks, on this subject, that, "In that intelligent and practical country, the doctor is not only paid at each visit, but he is also paid *in advance for the next* as a hint that the patient wishes to see him again. If, on the contrary, only one visit is paid for, it signifies that his attention will not be wanted again." This is a charming instance of the perfect knowledge our vivacious friends have of England and English customs.

M.R.C.S.—The Vivisection Commissioners will meet to consider their Report early in December.

T. L. A.—1. Yes. 2. The poor physician is thus portrayed in Cotgrave's "Treasury of Wit and Language," 1655:—

"My name is Pulsefeel, a poor doctor of physick,
That does wear three-pile velvet in his hat,
He paid a quarter's rent of his house beforehand,
And (simple as he stands here) was made doctor beyond the sea.
I vow, as I am right worshipful, the taking of my degree cost me twelve French crowns and
Thirty-five pounds of butter in Upper Germany.
I can make your beauty and preserve it,
Rectifie your body and maintaine it,
Clarifie your blood, surfie your cheeks, perfume your skin, tinct your hair, enliven your eye,
Heighten your appetite; and as for jellies,
Dentifrizes, dyets, minerals, fricasees,
Pomatums, fumes, Italian masks to sleep in,
Either to moisten or dry the superfices,
Faugh! Galen
Was a goose, and Paracelsus a patch,
To Doctor Pulsefeel."

H. H.—M. Valleix ("Mémoires de la Société Médicale de Paris," vol. ii., p. 312) gives as the average frequency of the pulse in thirteen healthy infants from two to twenty-one days old, 87 beats, the maximum being 104, and the minimum 76. Mr. Gorham (*London Medical Gazette*, vol. xxi.) from sixteen observations on sixteen infants less than one day old, found a mean of 123 beats, a maximum of 160, and a minimum of 100; and from forty-two observations on infants from one to seven days old, 128 as the average, 160 as the maximum, and 96 as the minimum.

The "Obstetric Hand."

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—The "obstetric hand" as an heraldic device, which is described by "Archæologius" in the *Medical Times and Gazette* of November 6, 1875, p. 537, is a device as old as the Saxon times in England, but it has not any relation to obstetrics or the "barren wives" of the borough of Honiton. "A right hand, with the little and ring finger doubled down, and the fore and middle fingers extended," is the "Hand of Providence," which is accurately represented on the reverse of a silver penny of Æthelred II. (A.D. 979—1013) engraved in Ruding's "Annals of the Coinage of Britain," plate 22, fig. 15.

I am, &c.,
S.

Archæologius, who sends the following extract, says, "Here is the history of a town for 3000 years, for I suppose the Etruscans flourished at least 1000 years before Christ, at the time of David and Solomon. Population has decreased suddenly of late because of fever, and fever increases because of depopulation. Whither shall we turn for a remedy?"

Progress of Malaria.

"A deep glen encircles the site of the Etruscan fortress of Galeria, afterwards occupied by the mediæval town of Galera. . . . . The whole place is deserted except by bats and serpents, and is one of the most striking of the lost cities of the Campagna. The situation is wonderfully picturesque, the walls rising from the very edge of a steep lava precipice, round which the beautiful rivulet Arrone circles and sparkles through the trees. . . . In the eleventh century Galera belonged to the Counts Tosco, troublesome barons of the Campagna, against whom in 1058 Pope Benedict X. called in the assistance of the Normans, who were only too happy to ravage and plunder the town. In the thirteenth and fourteenth centuries it became an important stronghold of the Orsini, . . . whose deadly enemies, the Colonnas, sacked it in July, 1485. . . . Charles V. slept there April 18, 1536. Only a short time ago Galera had ninety inhabitants; now it has none. There is no one to live in the houses, no one to pray in the churches. Malaria reigns triumphant here, and keeps all human creatures at bay. Even the shepherd who comes down in the day to watch the goats who are scrambling about the broken walls, would pay with his life for passing the night here. All is fast decaying. . . . . The strength of Galera has fallen beneath no human foe, but a more powerful enemy has been found in the mysterious 'scourge of the Campagna.'"—*Hare's "Days near Rome,"* p. 144.

J. A. B.—There is a remarkable calculus of the kind in the Hunterian Museum, belonging to the University of Glasgow. It was taken, after death, from the bladder, which it had completely filled. It was sent to the Museum by Dr. King, of Irvine.

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V. L. M.—"They say it is an ill mason that refuseth any stone; and there is no knowledge but in a skilful hand serves, either positively as it is, or else to illustrate some other knowledge."—*Herbert's Remains.*

Z.—Professor Bain's observation was, "Intense feelings affect the whole of the moving organs, but all organs are not equally moved. The parts first acted on by any feeling are the features and the respiratory and vocal organs, which are therefore, by pre-eminence, the organs of expression, some of them indeed serving hardly any other purpose."

COMMUNICATIONS have been received from—

The Registrar of Apothecaries' Hall, London; Mr. J. C. Kent, Wrotham; Mr. A. Turner, Margate; Dr. Lashmar, Croydon; Dr. R. P. White, Dublin; Mr. H. Sewill, London; Professor Humphry, Cambridge; Mr. G. Sutton, London; Mr. G. Meadows, London; Mr. W. W. Reeves, London; T.; Dr. Aquilla Smith, Dublin; Mr. C. Hasson, Worcester; Mr. W. R. Smith, Winchester; Dr. Sparks, Mentone; Dr. Rogers, London; Mr. W. R. Smith, Aberdeen; Dr. R. Lawson, Wakefield; Mr. R. Brudenell Carter, London; Mr. T. M. Stone, London; Dr. J. W. Moore, London; Mr. Haviland, Northampton; The Registrar-General, Edinburgh; Dr. E. Gray, Jorehaut; Dr. J. Brown, Haddington; Dr. Boggs, Paris; Dr. Wiltshire, London; Mr. W. E. Poole, London; Dr. Thomas Stevenson, London; Dr. Davidson, Liverpool; Mr. J. Knowsley Thornton, London; Mr. Jonathan Hutchinson, London; Mr. J. Chatto, London; Dr. J. M. Bruce, London; Dr. Beatty, Kingstown; Mr. H. L. Mills, London; The Registrar of the University of London; Mr. R. P. White, Dublin; Dr. McCourt, Rathfriland; Dr. Urquhart, Aberdeen.

BOOKS AND PAMPHLETS RECEIVED—

Manitou, Colorado, U.S.A.: its Mineral Waters and Climate, by S. Edwin Solly, M.R.C.S. Eng.—Aveling's Memorials of Harvey—Strange's Report on the Health of Worcester—Boyland on the Treatment of Venereal Disease by Salicylic Acid—Lindsay on the Superannuation of Officers in British Hospitals for the Insane—Holmes's Principles and Practice of Surgery.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Paris Médical—Deutsche Medicinische Wochenschrift—Journal d'Hygiène—Staffordshire Advertiser—Co-operative and Financial Review—Hastings and St. Leonard's Observer—Sheffield Daily Telegraph—New Orleans Medical and Surgical Journal—Canada Medical and Surgical Journal—Worcestershire Chronicle—American Supplement to the Obstetrical Journal—Nordiskt Medicinskt Arkiv—Practitioner.

APPOINTMENTS FOR THE WEEK.

November 27. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

29. ***Monday.***

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Dowse, "External Mitral Stenosis, with remarks." Dr. Crisp, "On a late Epidemic of Scarlatina, Epidemic Sore Throat, and Erysipelas in the South-Western part of Chelsea."

30. ***Tuesday.***

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

December 1. ***Wednesday.***

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Obstetrical Society, 8 p.m. Dr. Heywood Smith, "Notes of a Case of Ruptured Vagina during Labour, with Recovery." Dr. Wiltshire, "Spontaneous Rupture of the Vagina, with Recovery." Dr. Routh, "Case of Extra-Uterine Fibroid successfully treated by Gastrotomy." Dr. John Williams, "On the Mechanical Action of Pessaries." Dr. Oswald, "On Cæsarian Section." And other Communications.

Royal Microscopical Society, 8 p.m. Prof. Rupert Jones, "Remarks on the Foraminifera, with special reference to their Variability of Form, illustrated by the Cristellarians."

2. ***Thursday.***

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. Dr. Sibson, "On Bright's Disease and its Treatment, considered mainly in relation with Arterial Tension from Blood Contamination."

3. ***Friday.***

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 20.

BIRTHS.

Births of Boys, 1222; Girls, 1240; Total, 2462.
Average of 10 corresponding years 1865-74, 2192·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	825	778	1603
Average of the ten years 1865-74	786·7	777·7	1564·4
Average corrected to increased population ...	...	...	1674
Deaths of people aged 80 and upwards ...	...	...	56

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	1	9	10	2	6	...	3	1	5
North	751729	...	8	31	1	14	...	4	...	6
Central ...	334369	...	9	8	2	8	...	2	1	1
East	639111	...	11	19	2	15	1	4	3	5
South	967692	...	14	28	7	20	1	5	2	11
Total	3254260	1	51	96	14	63	2	18	7	30

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·727 in.
Mean temperature	45·8°
Highest point of thermometer	58·4°
Lowest point of thermometer	33·5°
Mean dew-point temperature	39·6°
General direction of wind	S.W.
Whole amount of rain in the week	0·32 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 20, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Nov. 20.	Deaths Registered during the week ending Nov. 20.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2462	1603	58·4	33·5	45·8	7·67	0·32	0·81
Portsmouth ...	122632	27·3	65	45	...	...	...	...	...	...
Norwich	82842	11·1	48	28	57·5	34·0	44·8	7·12	1·22	3·10
Bristol	196186	44·1	139	101	56·0	32·5	45·3	7·39	0·97	2·46
Wolverhampton ...	71718	21·1	57	24	57·3	33·2	43·7	6·50	0·49	1·24
Birmingham ...	366325	43·6	322	169	58·0	33·5	44·4	6·89	0·97	2·46
Leicester	109830	34·3	86	59	59·2	33·5	45·2	7·33	0·46	1·17
Nottingham ...	92251	46·2	58	47	58·4	30·2	43·9	6·61	1·25	3·17
Liverpool	516063	99·1	357	212	56·2	37·0	45·2	7·33	0·68	1·73
Manchester ...	356626	83·1	251	176	56·3	27·0	41·8	5·45	1·07	2·72
Salford	135720	26·3	138	92	57·1	29·4	43·2	6·22	1·10	2·79
Oldham	87437	18·7	59	58	...	...	...	...	...	...
Bradford	168305	23·3	113	95	55·4	33·8	45·0	7·22	2·65	6·73
Leeds	285118	13·2	189	139	56·0	34·0	44·8	7·12	2·15	5·46
Sheffield	267881	13·6	231	118	56·0	34·0	43·8	6·56	1·00	2·54
Hull	133932	36·8	109	52	57·0	32·0	42·9	6·05	1·33	3·38
Sunderland ...	106342	32·2	78	32	58·0	32·0	45·1	7·28	3·00	7·62
Newcastle-on-Tyne	137665	25·6	108	76	54·0	29·0	38·5	3·61	2·73	6·93
Edinburgh	211626	50·5	147	113	56·5	30·0	43·1	6·17	...	...
Glasgow	534564	88·6	380	273	...	...	...	...	...	...
Dublin	314666	31·3	160	184	58·3	29·4	45·1	7·28	0·46	1·17
Total of 21 Towns in United Kingdm	7742889	37·0	5557	3696	59·2	27·0	44·0	6·67	1·29	3·28

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·73 in. The highest was 30·09 in. on Monday evening, and the lowest 28·87 in. on Sunday morning, 14th inst.

* The figures for the English and Scottish towns are the number enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

ON THE DIAGNOSIS AND TREATMENT OF NEURALGIA,

ESPECIALLY BY HYPODERMIC INJECTION OF MORPHIA; FOUNDED ON PERSONAL EXPERIENCE.

By HOFRATH PROFESSOR VON PITHA.

(*Concluded from page 592.*)

HAVING dwelt upon the great dangers that may ensue upon a careless or unfortunate employment of hypodermic injections, I must not pass over some other ill effects to which they may not infrequently give rise, even under the most correct manipulation, and which, if not of the same serious character, are yet disappointing and troublesome. Among the most frequent of these are:—

1. The action on the stomach, which is soon excited through irritation of the vagus, and which manifests itself by nausea, by a most enduring and troublesome disgust at food, or by vomiting; this last having at least the advantage of being attended with immediate relief. I suffered severely from this torment, and especially during my first injections of small doses, the disgust at all kinds of food lasting for hours, vomiting always seeming to be near at hand without ever actually occurring. Sometimes the disposition to this terminated with a kind of ptyalism. At others the injections were rapidly followed by vomiting, with complete relief, but succeeded by long-continued loss of appetite. The continued employment of this remedy in such cases induces great disturbance of the digestive organs, with obstinate and persistent constipation. The liver is especially affected, as shown by the bitter taste, tenderness in the hypochondrium, and pale, clayey stools. It is interesting to observe that in many persons the morphia injections produce quite opposite effects—viz., an increase of appetite, or even a feeling of hunger, and normal evacuations—constipation that had lasted for years yielding. As a general rule, the gastric disturbances disappear of themselves after the injections have been continued for some time. If, however, they become very considerable and too persistent, they may be relieved by giving quinine internally, or by adding some extract of belladonna to the solution of morphia. Muriate of quinia, given in black coffee immediately after the injection, exerts a remarkable effect in counteracting the morphia-sickness and in restoring the appetite. The observations already narrated on the reciprocal action of belladonna and chloroform, and of this last and morphia, exerting effects which were in part antidotical and in part corrective of each other, led me to try the combination. I added first from a quarter to a third of the tincture of belladonna to the morphia solution, then the extract, and finally minute quantities (about one-hundredth of a grain) of the sulphate of atropia. The extract answered best, for the alcoholic tincture rendered the injection painful, and the atropia induced, even in the minutest doses, an intense dryness of the mouth and fauces, which lasted for hours. The results of these combined injections were surprising—the pale, clay-coloured stools being immediately replaced by normal evacuations. At a later period, when I had reached large doses of morphia, the addition of belladonna became superfluous, all the symptoms of gastric disturbance and the constipation disappearing.

2. The brain as well as the vagus is especially affected by the morphia. As a general rule, a slight stupor, drowsiness, or actual sleep follows the injection; but in some instances the contrary is the case, when there may be present an inordinate wakefulness, keeping off sleep for twelve or twenty-four hours. I suffered greatly at first from this disagreeable occurrence as long as I continued to employ small doses—under one-third of a grain; and during the winter of 1872-73 I passed seven months in a sleepless condition, first on account of the pains and then from the injections. The first kept me forcibly awake, notwithstanding my great want of sleep, and the latter dissipated both my pains and my sleepiness by inducing quite a special wakefulness. Without any excitement, and without the slightest unpleasant sensation, and with the sensorium in its complete integrity, the very idea of sleep entirely disappeared. I had only a choice between painful and painless sleeplessness, and that was not a very difficult one. In April my condition first became somewhat more favourable, this artificial wakefulness only lasting from six to eight hours; so that, employing the injection in the morning, I became free of it by night, and could enjoy several hours' sleep. This morphia-wakefulness gradually diminished, and the duration of my sleep increased, so that by the summer of 1874 I slept pretty much as in ordinary. Such a condition of wakefulness as this is a very rare occurrence, for it is much more common to observe slight stupor—a kind of opium-intoxication,—which is always of a fugitive character, and is all the less a cause of uneasiness, as it becomes gradually shorter and slighter as the injections are more frequently repeated. The fear of producing the conditions observed in opium smokers or eaters by means of properly conducted hypodermic injections is quite unfounded. Between the two there is a vast difference, and only a great abuse of the injections with respect to dose and frequency would give reason to any fears of this kind.

3. In their traumatic aspect, considered as an operation, the hypodermic injections require consideration. As a general rule they are trifling enough, but in exceptional cases there is inflammatory action produced, and in some unfortunate persons every needle-prick is converted into a pustule, or degenerates into a more or less considerable furuncle or even anthrax, while deep-seated abscess may also be produced. I have met with several instances in which the unfortunate patients had become true martyrs. So that this trifling operation requires some important cautions. Above all things, the injection must be projected into the subcutaneous tissue, and not into the skin itself. This may be secured by raising a large fold of skin, care being taken not to make a double perforation. A sudden cessation of resistance indicates that the needle has taken the right direction into the cellular tissue, amidst the meshes of which it penetrates without causing pain. To facilitate the ingress of the fluid it is desirable that the needle should penetrate two or three centimetres. Whenever possible, we should choose portions of the skin that are easily movable, so as to admit of a large, thick fold being taken up. Places where the skin is thin, without fat, and tightly stretched over the parts, as, *e.g.*, around the projections of the joints, are not suitable for injections.

It is obvious that well-known or visible vessels or nerves must be avoided; but even the smallest veins should be carefully respected. This precept cannot be too forcibly insisted upon, for the injection of even a minute quantity of a solution of morphia into a small vein may be attended with fearful consequences. And yet this accident may easily occur, as I a short time since experienced in my own person. Having a very sensitive skin, I always employ a very fine injection-needle, and in the dusk one evening I inserted this into the linea alba, about two inches above the symphysis, without having carefully examined whether there was any vessel that might be easily avoided. Immediately after the injection I became sensible of very sharp pains, which shot with the rapidity of lightning through the forehead, eyes, arms, fingers, and, finally, the toes. I instantly withdrew the needle, and saw with alarm dark blood flowing from the aperture, which explained the nature of the occurrence. The needle must have pierced a large subcutaneous vein, which could never have been suspected at this spot. The pains, which passed like lightning into the head, and thence to all the limbs, were of extraordinary violence, and accompanied by sensations of glowing heat spreading in streams from the forehead and orbits, giving rise to feelings that never can be forgotten. There was no disturbance of consciousness, and the pulse was small and somewhat slow. I retained my self-command; but my situation was not an enviable one, for there was no servant within call, and the bell-pull was at a distance from the sofa upon which I lay immovable; but whether I was really unable to stand, or was kept motionless from fear, I cannot say. Fortunately, a glass of water stood near me, and I bathed my forehead, glowing with heat, and sought to displace my pains by speculations upon their origin and diffusion. Never had the wonderful rapidity of the circulation been so impressed upon my mind before. From the period of making the puncture in the hypochondrium until the occurrence of the glowing pain in the forehead, not more than two or three seconds could have elapsed, while in another second the morphia had penetrated to the toes. This perception excited in me so high a degree of physiological interest, that my physical sufferings were thereby much abated. I derived also great comfort as to the ultimate termination of my case from the recollection of Nussbaum's experience under similar circumstances. Yet I continued to suffer considerably during

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three days from consecutive pains, together with giddiness, nausea, vomiting, loss of appetite, etc. At last, after profuse sweating, all unpleasant symptoms disappeared.

4. The places most eligible for the injections are the external parts of the arm and thigh, the back, and the integument of the abdomen and nates. The face and neck should be avoided, the former on account of the possible inflammation of the punctures, and the latter because of its great vascularity. My experience on my own body induces me to warn against puncturing painful regions—that is, the portions of skin where the neuralgia prevails. It is a mere prejudice to suppose that the injection will act more effectually the nearer it is brought to the affected nerves—as, indeed, the simple consideration of the rapidity of the circulation sufficiently proves. Not only is injecting the affected region unnecessary, but it is very improper, for it adds to the pain; so that the little operation becomes true torture, and a much larger dose of morphia is required to subdue the pain caused by the needle. This observation, which applies to all neuralgias, does so especially to those that are centric, in which the seat or source of the pain can never be reached by the needle, while the subcutaneous injection, in whatever place it is made, rapidly circulates the morphia through every organ—a fact that places the wonderful beneficence of these injections in the clearest light. I am well aware that I shall provoke many contradictions to this statement, as several experienced and trustworthy practitioners steadily believe that injections made near the painful parts act more rapidly and more effectually than when made in distant places—as, *e.g.*, in the region of the stomach for cardialgia, in the perineum for spasm of the bladder, and in the forehead, or even the eyelids, for frontal neuralgia. I can assure these colleagues that they are adhering to a deception, often at the cost of their patients, or at least of their own comfort. I have many times proved, both in patients and in my own person, that the place of injection, as regards rapidity and intensity of effect, exerts no influence whatever—the near or the distant being here of no account. I have proved this in the most marked manner in lithotripsy, in which morphia exerts so valuable an influence on the intolerant bladder; and here the effect of the morphia is precisely the same, whether injected into the hypogastrium, the perineum, or the arm. Its influence entirely depends upon its dose and upon its purity.

5. With respect to the preparation to be employed, it may be stated that the acetate and hydrochlorate may be used indifferently. Only in cases in which very large doses are given, as above a grain, need the acetate be preferred on account of its greater solubility. It will form a clear solution in six parts of water, whereas the hydrochlorate requires twenty parts. Hot water will dissolve it in ten parts, but, on cooling, half of the alkaloid is precipitated; so that if a concentrated solution is wanted, it has to be prepared only just before using it. On the other hand, the acetate requires great care in keeping it in a cool place, and shielded from the light. The solution should always consist of morphia and distilled water, without any addition whatever. The favourite addition of glycerine has the disadvantage of causing white flocculi to be precipitated from the originally clear liquid. Belladonna, however, may be added, for the reasons already stated, with great advantage; and although the solution is rendered somewhat turbid, its efficacy is not diminished. It is very desirable that similar combinations with different other substances, and especially other narcotic alkaloids, should be thoroughly investigated.

6. Finally, we have to consider the apparatus and the mode of procedure. At the present time such fine, delicate needles are obtainable, that their puncture, with proper manipulation, is attended with so slight a wound that this heals immediately without any reaction. When with such needles there follows inflammation, with pustules, or even furuncles, this is to be attributed on the part of the patient to an unfortunate special predisposition, a so-called purulent dyscrasia, or to faulty manipulation conducted with bad or neglected needles or with dirty fingers. Indeed, the cleanliness of the instruments and the hands must be most scrupulously attended to. The cavities of the needles may easily become obstructed, or their delicate points be injured; and immediately after using a needle we should several times syringe it out well with water and thoroughly dry it. It should then be passed to and fro between two fingers around which a soft napkin has been wound; and in this way it may be kept sharp and bright. With the delicate injection-needles now in use, it seems almost superfluous to speak of the pain caused by their punctures; but experience teaches us that there are many persons who dread or complain of this. It will not do for us practitioners to affect superiority to these excessive individual sensibilities. We know how sensitive an organ the skin is in general, and how greatly its sensibility may be increased under the influence of the slightest abnormal conditions, as, *e.g.*, in catarrhal or rheumatic ailments. Under such circumstances, the strongest man, to say nothing of a delicate woman, may become very sensitive even to the prick of a needle, and especially in cases of neuralgia, in which the injections have to be repeated several times a day. In such persons, too, the sensibility of their skin is considerably increased by the neuralgia, as I have myself only too often experienced. For such persons to desire a painless method of injection seems quite justifiable; and I feel very thankful that Herr Leiter has been able to completely meet this wish. He has devised an apparatus by which injections can be rendered entirely painless. So rapidly does the puncture take place, that there is not time to perceive it. One cannot trust one's senses or believe that the injection has been executed, when neither the puncture nor the entrance of the injected fluid were felt in the slightest degree. I must confess that I, who am usually very incredulous concerning the first trials of ingenious instruments, was quite amazed. The apparatus is further recommended by its elegant appearance, and especially on account of a very simple arrangement by which the direct passage of the needle into the subcutaneous tissue is secured and facilitated without the necessity of forming a fold of the skin. Its employment, however, requires knowledge, and lay hands cannot be entrusted with it—which is rather to be considered an advantage than a defect. For practitioners who are also sufferers, it possesses the advantage that an injection of the arm may be performed without the aid of a second person. I have been astonished at finding that persons of weight have objected to this new apparatus, but my own experience prevents my agreeing with them. It must not be forgotten that it was designed for persons having an intense degree of cutaneous sensibility, and that its aim of securing entire painlessness has been indisputably realised. Certain it is that many patients will be very thankful to us for it, and this sufficiently compensates for its higher, though relatively moderate price, and its unavoidable complexity. There is only one slight fault that I have to find with it, and that is the noise which attends the loosening of the spiral spring. Trifling as this seems, it may alarm a nervous patient; and doubtless it will be easily remedied.

PARACENTESIS OF THE PERICARDIUM. — In the *Bulletin de l'Académie de Médecine* for October 19 and November 2 will be found a very elaborate report upon this subject by Prof. H. Roger (abstracts of which were also published in the French weeklies), founded on a fatal case which was communicated to the Academy. Prof. Roger enters minutely into the question of the advisability of this operation, the mode of its performance, and the difficulties in diagnosing exactly the condition justifying it. He comes to the conclusion that in cases in which there is excessive effusion inducing dyspnœa that threatens asphyxia, the operation may be performed, although even with Dieulafoy's improved instrument it must still be regarded as very hazardous.

STRAPPING THE BREASTS.—Dr. Munsen speaks highly of this procedure as a means of preventing or arresting lactation. "Strapping will be of no use unless it is well done. Let the first strip be put on so as to hold the breast well up by itself alone, whichever direction it is made to take. I usually commence by placing a strip laterally beneath the breast, about half-way between the nipple and the lower margin, draw the gland well up, and attach one end high up over the sternum, and the other end high up under the arm. The next strip is placed at right angles to the first, close to the nipple. Apply it first to the breast, draw it well up, and fasten the upper end, letting it pass over the shoulder, and then draw down the lower end firmly, and fasten it. Don't skip the nipple or cover it, but cut holes through the strips that pass over it, and let it project through. This is to allow the milk which may ooze out for the first few hours to escape without burrowing beneath the plaster, pushing it off, and making a hot, disagreeable, irritating poultice. Several thicknesses of soft cloth should be placed over the nipple (when pervious) to absorb the milk that escapes. A timely application of this strapping I have found almost sure to arrest commencing mammary abscess."—*New York Journal*, November.

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ORIGINAL COMMUNICATIONS.

CHOLERAIC COLLAPSE: ITS ANALOGY TO STOKERS' COLLAPSE.

WITH REMARKS ON THE ETIOLOGY OF MALIGNANT CHOLERA, AND ON SOME OF THE THEORIES OF CHOLERAIC COLLAPSE, ETC.

By J. TEMPERLEY GRAY, L.R.C.P. Lond.

(*Concluded from page 597.*)

I NEED only shortly allude to the theory that denudation of the intestinal villi plays an important part in the production of choleraic collapse. The researches of Dr. T. Lewis and of Dr. Douglas Cunningham have conclusively shown that detachment of the intestinal epithelium is a rare concomitant of cholera; the presence of epithelium in the dejecta being detected by Dr. Cunningham in only one instance to a noteworthy amount, and in small quantity in three others, out of one hundred cholera evacuations. Their observations confirm those of Dr. Parkes, who affirmed that "the stools of cholera contain no epithelium, or a quantity not more considerable than is present in common diarrhœa." Such being the case, it is obvious that denudation of the villi can have little or no connexion with the development of collapse. The occasional presence of epithelium in some quantity in the intestinal fluids, after death from cholera, is probably due to post-mortem maceration and detachment (Goodeve). Further, seeing that epithelium is rarely present in the evacuations of cholera, it is to be noted that it is constantly met with in those of dysentery, and may be found in considerable quantity in evacuations excited by using drastic purgatives,—in either case without being necessarily associated with collapse or any special tendency thereto. A collation of all the evidence on this disputed question clearly shows that evacuations containing epithelium are neither frequently met with in cholera, nor are they at all characteristic of this disease.

With King's College for my *Alma Mater*, I may be supposed to have had every reason to be biased in favour of Dr. Johnson's opinions regarding cholera; yet, although he has gained the venerable support of Sir Thomas Watson in England, and the ardent partisanship of Mr. Fitzgerald in India —the latter having lauded his views as something more than a theory—I must confess that, in so far as the views are peculiar, they seem to me not even to meet the logical requirements of a hypothesis—if, as an exact logician affirms, "we must never imagine any hypotheses which *are not by nature susceptible of a positive verification.*" I presume no one dreams, even in these days of vivisection, of being able to verify a spasm of the minute pulmonary arteries! It may exist, but it must, from its very nature, ever belong to the domain of conjecture —an unprovable and unprofitable speculation; it is a conceivable possibility, but, none the less, a mere metaphysical assumption, as incapable of *proof* as the existence of a vital principle. At the same time, I think with Parkes, Johnson, and others, that there is abundant evidence that the circulation through the lungs is more or less impeded during choleraic collapse.

For the purpose of explaining, or accounting for, this impeded circulation in the collapse of cholera, I venture to bring forward a theory—subsidiary to that of Snow—which disposes of some of the difficulties connected with other theories, and is, at least, capable of verification or of disproval. The constancy, and degree, of viscidity of the blood in cholera is a disputed point; if, as a rule, its existence be conceded, still, by many it is not considered in itself to be always sufficient to prevent fluxion. Further, the experiments of Poiseuille appear in some measure to be subversive of the general rule, that the more viscid a fluid is, the less is its fluency—since, according to his observations, a certain amount of viscidity favours the circulation of fluids through capillary tubes. How are these difficulties, which confront a theory of pulmonary obstruction, based upon dehydration of the blood, to be overcome? I think in this way. In the dehydrated blood of cholera there is another obstructing element besides mere increase of viscidity, namely, the approximation of its blood corpuscles. It has been shown by Ludwig that, when blood corpuscles are brought into contact, they are apt to adhere permanently together, and can so form a plug. In blood deprived of its water, as in choleraic or in stokers' collapse, the corpuscles are necessarily brought closer together, so that, if the impeded circulation is not sufficiently accounted for by virtue of increased viscidity *per se*, we have in the associated corpuscular approximation and cohesion, which is equally an effect of dehydration, a satisfactory explanation of its occurrence, and that irrespective of its viscidity. This explanation, moreover, would not be an inconsistent one, if it were proved—contrary, I think, to all probability—that Dr. Parkes's "liquefied blood" is sometimes an ante-mortem condition. That corpuscular cohesion is probably a chief cause of obstruction is supported in a degree approaching to proof, by the fact that after death during choleraic reaction, when the lateral pressure increases, hæmorrhagic infarctions are not infrequently met with in the lungs, of which Ludwig's views afford the recognised explanation under other circumstances (Niemeyer, ii. 632).

Reasoning back from these hæmorrhagic infarctions, which are positive facts of death during reaction, it is a safe conjecture to hazard that their usual cause—obstructive corpuscular masses—will be found on careful examination of the lungs of those who have died during collapse; for the existence of hæmorrhagic infarctions in the lungs implies that the circulation must have been obstructed many hours before (Cohnheim). The white blood-corpuscles are stated to be increased in number in the blood of cholera patients, and it may be previsedthat the obstructive masses will be found to consist chiefly of white corpuscles—like certain embolic masses found in the brain under other conditions by Dr. Charlton Bastian. I have not been able to find that anyone has actually observed such masses in the pulmonary arterioles of patients who have died during choleraic collapse, unless the "soft gelatinous or mucus-like matter" described by Dr. Thudichum(a) were partly or wholly corpuscular in its constitution. I may not rightly understand Dr. Thudichum's account, but he describes this matter as "loosened and softened epithelium, or secondary growth of nuclei in process of swelling into *pus corpuscles*," and he attributes no small amount of the stagnation in the capillaries to this intravascular substance. It seems to me also probable that Dr. Thudichum's nuclei swelling into pus corpuscles correspond to the active bioplastic bodies observed in choleraic blood by Dr. Lewis and Dr. Cunningham, and which are said ultimately to form cells. And the conjecture seems not unwarranted, in the present state of knowledge, that these bioplastic bodies are nothing else than white blood-corpuscles in various stages of growth and decay. At least, this much is certain: that what one observer describes as pus corpuscles, another describes as bioplasts, and a third as white blood-corpuscles. Whether these bodies be identical or not, it evidently would be a venial error on the part of a microscopist to mistake the one for the other; and the latter—*i.e.*, white blood-corpuscles—are what I should expect to find agglomerated together in the minute vessels of cholera patients, if my premises are the facts they are stated and believed to be. Why should the circulation of the blood be first obstructed in its passage through the lungs? It may be due to the combined operation of four factors. First, both in cholera and in stokers' collapse the density of the blood entering the right heart is necessarily greatly diminished by dehydration; and though in cholera this also applies to the portal blood entering the liver, it is not markedly arrested there, owing to the large size of the intermediate capillaries. Second, the blood derived from the hepatic vein is even normally much denser than that of the portal vein, and contains from five to ten times as many white corpuscles—the supposed obstructing elements—as the portal vein. Third, the pulmonary capillaries are small, and though not the smallest in the body, they are the first encountered by the dense, white-corpuscular blood derived from the hepatic vein, under the circumstances doubly dense from dehydration. Fourth, the right heart, having only half the propulsatory power of the left, is less able to cope with *impedimenta*. These positions appear to me more reasonable than an assumption that a morbid poison exists in the blood, which has such peculiar and contradictory properties—and, shall I say, such mysterious elective affinities—as to induce spasm of the minute arteries of the lungs and paralysis of those of the intestines, whilst it produces no manifest effect upon those of the rest of the body! The vaso-motor vagaries involved in such assumptions are not, it must be admitted, by any means unparalleled—in theory; but as yet only a verdict of "not proven" can be passed upon them. The fact that cramps, considered an effect of impeded

(a) Ninth Report of the Medical Officer of the Privy Council, p. 481.

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circulation, commonly occur in the muscles of the feet and legs before there is any evidence of interrupted pulmonary circulation, does not prove priority of occurrence of impediment to the systemic circulation; but that, just as pneumonia may be latent, giving rise to no marked symptoms, so may partial pulmonary obstruction exist without causing noteworthy sensations. The systemic circulation is weakened and the quantity of flowing blood diminished—in part, at least—as a direct effect of the pulmonary obstruction, but the cramps induced by a want of blood may be noted, on account of their painfulness, before the lung symptoms. Cramps sometimes cease in the latest stage of collapse, when the lung symptoms may be most manifest: this cessation is probably due to a quasi-paralysis, which may be presumed to bear a similar relation to the preceding cramps that hemiplegia from a large cerebral lesion bears to convulsions from a smaller cerebral lesion. Although any mode of obstruction to the pulmonary circulation may inferentially be supposed to be capable of producing similar effects, it may be mentioned in this connexion that embolism of the pulmonary artery, unassociated with cholera, has been known to give rise to symptoms resembling those of the collapse of cholera. The analogy between embolism and the obstructive corpuscular masses of Ludwig is sufficiently striking, and though it has been brought forward as supporting Dr. Johnson's theory, it is equally, or more, in favour of the one I have ventured to enunciate.

If the existence of corpuscular pulmonary obstruction in collapse be conceded, it obviously provides substantive ground for the opinion that arrest of the circulation through the lungs is the most usual cause of death in cholera. It must, however, be clearly comprehended that it is one thing to be the cause of death in collapse, and another to be the cause of the collapse. The most exact post-mortem examinations appear to prove that in the majority of these cases the blood is *finally* completely arrested in its course through the lungs. The blood is found dammed back in the pulmonary artery, the right heart, and cavæ; whilst there is no such damming back in the systemic arteries. Evidently in these cases the complete stoppage of the pulmonary circulation is the immediate cause of death. Impeded circulation through the lungs is truly one of the most dangerous features of choleraic collapse—it might be said from its importance to constitute the state of collapse; it is not the cause of the condition, but rather the condition itself. This condition—of which the attendant phenomena are those of collapse—is brought about independent at once of any local vascular spasm specifically induced by a blood poison, or of any peculiar "precipitative action" of the morbid poison on the blood itself. According to my views, it is due to corpuscular agglomeration at, or near the commencement, but not *in* the lung capillaries, this being a direct effect of dehydration of the blood, which, in turn, is the result of the watery evacuations. Hence it follows, I think, that the first or evacuative stage—the stage of so-called "non-essential" phenomena—is, in accordance with Snow's theory, the primary cause of the collapse.

Dr. Snow's theory has often been assailed, and latterly has been somewhat neglected; yet, in its broadness and consistency, it would be difficult to find another medical theory that so nearly deserves the name of a finality. To the exudation of a watery fluid, chiefly by the alimentary tract, Dr. Snow attributed all the symptoms of the advanced stage of cholera; and if it be true, as I have attempted to show, that similar symptoms may be produced by the excessive transudation of a watery fluid through the skin, the truth of this position—the "first element" of Snow's theory—is corroborated, the induction being confirmed by the extension of the "law of causation." With reference to the other elements of the theory I have little to say, except that, perhaps, the "third element," viz., that the poison of cholera "is solely contained in the intestinal excreta," may be too exclusive. Further, I object to the evacuative stage being called "eliminative," as liable to misconstruction unless a distinction be drawn between elimination *by*, and elimination *with* the evacuations. The poison may be thrown out with the excreta, but that the purging is set up and kept up for that purpose, is a perfectly gratuitous assumption. The passage of the morbid poison in the evacuations of cholera is not necessarily more than a coincidence, a concurrence, so to speak, of cause and effect; and for anyone that has seen cases of cholera to be able to look upon this purging as a grand example of a *vis medicatrix*, is simply marvellous. To speak of an excessive emeto-catharsis as likely to prevent, diminish, or cure a collapsed condition, involves a complete inversion of terms; if there be a force at all, it is murderous—a very "*vis delatrix*." Such inversions of terms are indeed to be expected as long as we rest satisfied with unverifiable hypotheses, or have minds so constituted as to be able to believe that the occasional phenomena of a disease constitute its characteristic features; or, in other words, that the occasional effects and mode of termination of a disease constitute the disease itself. Instead of considering watery diarrhœa as a non-essential phenomenon of cholera, we may surely accept, with but slight reservation, the dictum of Niemeyer, that it is "not only in all cases the *first* symptom,—it is often *the only one* that shows itself." To this I would add, if we fortunately succeed in arresting this first symptom of the disease, the after-effect—the collapse—is prevented, and the morbid poison is quietly eliminated, metamorphosed, or destroyed,—the disease being as radically cured as any disease is cured, and that by frustrating the alleged remedial measures of a hypothetic Dame Nature!

Though, perhaps, somewhat irrelevant, I cannot forbear remarking in this connexion upon two points of treatment:—First, I have no hesitation in stating my belief, based on experience, that the supposed danger of locking up the poison in the system, by checking the purging in the early stage of specific cholera, is a delusion; the difficulty is to do it in time. The error, I imagine, has arisen partly from confounding simple with specific cholera, but mainly from confounding the spontaneous cessation of purging during collapse—which is so significant of danger—with the early and curative arrest, by remedial measures, of the disease before the accession of collapse. In the latter case the cessation of the purging may not unreasonably be attributed to an antidotal action of the drug upon the morbid poison itself, rather than to an influence upon the disease it has produced—*i.e.*, the morbid poison being antagonised, its effects (the disease) are nullified; the drug, so to say, acting as an antagonistic force, not to the purging, but to the purger: the wolf, instead of being shut up in the sheepfold, is, in fact, slain. This opinion in its essence is ancient enough, and is all the better for being so. Second, the recommendation of venesection as a remedy in collapse, though supported by revered authorities, is to me utterly incomprehensible. "It is the veins that require emptying, not the arteries" (Watson), and bleeding from the arm is believed to be capable of lessening the overdistension of the right cavities of the heart, and thus increase their contractile power. Surely, the elementary fact that bleeding at the bend of the elbow only empties the distal veins, and perhaps the proximal part of the vein opened up to the first valve, is incontrovertible. It can, therefore, only have an indirect, and, with an already empty arterial system, an infinitesimal, effect upon an engorged right heart. Venesection, to be of any service in such a condition, must be performed in a vein nearer the heart (as in Reid's experiments), where there are few or no valves, and where a venous reflux might be possible. In the arm a backward current is prevented anatomically by numerous valves, as well as by the traditional bandage, and any alleged beneficial influence of bleeding in this situation, during collapse, must be purely imaginary. No doubt, if the left heart were propelling vigorously a large quantity of blood, a bleeding from the arm would diminish the *vis a tergo*, and might so prevent further distension of the right heart, and thus afford relief; but this condition does not prevail in cholera. If, on attempting to bleed a patient in choleraic collapse, you are able to draw a few ounces of blood, the fact of your doing so is a proof of the restoration of the circulation, not the cause; and it would have been better if you had saved your patient the loss.

Stokers' collapse has not, so far as I know, been described before. This, I think, may be accounted for in various ways, but is chiefly to be attributed to the fact that the circumstances under which it occurs are uncommon, and the opportunities for observation have consequently been limited. Continuous exposure to a temperature of 150° or 160° Fahr. for several hours (a watch) can hardly be a necessity to anyone but a stoker on board a small, ill-ventilated steamship in the tropics; and even there this temperature is only likely to be maintained occasionally at certain seasons of the year. The circumstances being uncommon, the cases are of infrequent occurrence; though I had unusual opportunities for observation, I only met with three cases. Although, however, there have been no recorders of such cases, I have conversed with those who have observed precisely similar ones; and I have no doubt that many of the older officers and surgeons of the

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Peninsular and Oriental Company will recollect having seen examples on board some of the ancient "fire-eaters" of the service, when ploughing their blazing way through the deep blue waters of the Red Sea.

Bombay.

CASE OF GUNSHOT INJURY.

By WILLIAM W. SQUIRES, M.D., M.R.C.S.

Shortly before nine o'clock on Tuesday morning, July 11, 1871, and before breakfast, Mr. M. S. was practising with a five-chambered breach-loading revolver (having a projecting spring behind the trigger, and inside the guard, the slightest pressure on which, even at half-cock, would set the pistol off), when, having fired off three balls, the fourth charge would not explode; in trying to ascertain the cause, "the pistol went off," and struck him "in the stomach," knocking him down. Getting up, he took the pistol with him into the house, and not feeling any pain, thought there could not have been a ball in the charge. He told his mother not to be alarmed, the pistol had gone off and struck him, but as he felt no pain, he did not think he was much hurt. Having had a drink of water, he went to his bedroom and lay down, when he was seized with great pain, and began vomiting blood in large quantities. I was sent for, but, being away, my partner Dr. Sealy went, and found him in a state of great exhaustion, and vomiting blood freely.

On examination, he found a small circular wound one inch and a half below the ensiform cartilage, and one inch and a half to the left of the linea alba. Dr. Sealy then sent for Mr. Williams, and on his arrival they gave him an opiate enema, and applied a freezing mixture in a bladder over the wound. As the pain continued, two drops of a solution of morphia (equal to one-third of a grain) were injected into the right arm, which afforded him speedy relief.

When I arrived, at 3 p.m., I found him much exhausted, with a hard pulse of 150; tongue furred in the centre, but clean round the edges and tip. He complained of pain in the site of the wound, and over the abdomen; also in the tenth left rib, about the centre. At times he was troubled with retching, but only brought up some wind. I drew off his water, which relieved him, and then dressed the wound with carbolic oil, continuing the freezing mixture over it. To have beef-tea enemata, with brandy and turpentine, every four hours, and a teaspoonful of water or brandy-and-water occasionally by mouth. At 10 p.m. the pulse was 108; the flatulence troubled him very much, and that was always relieved by the enemata. Three drops of the solution of morphia were injected, which secured him a good night's rest.

Wednesday, July 12.—8 a.m.: Pulse 108. Tongue as before. Slight pain on pressure over the abdomen, particularly the left side and hypogastric region, which was relieved by using the catheter. Injection of morphia repeated. At 11.30 a.m. Dr. Sealy and I found him sitting up in bed, retching violently, and vomiting bile and some curdled milk which had unfortunately been given him, but no blood. While supporting him, we found the bullet between the eighth and ninth ribs, four inches and a half from the spine. In extracting it some difficulty was experienced, owing to it having become jagged and so catching in the tissues. A small piece of bone was removed from the wound, and carbolic oil dressing was applied, some being injected into the sinus. There was no more pain or vomiting, so the freezing mixture was discontinued.

From this time he seemed to be progressing favourably, the only inconvenience being his inability to pass water on his back, which necessitated catheterism. The morphia injection was continued night and morning.

Friday, 14th.—The front wound was dressed, and showed a healthy red margin. To have a teaspoonful of beef-tea occasionally.

Saturday, 15th.—Pulse 96. Tongue as before. No pain in abdomen. On dressing the wound in the back it was perfectly healthy, and without discharge.

Sunday, 16th.—Having passed his motions into a folded sheet (not being able to use a bed-pan), the bed had become wet, and on calling in the forenoon I found that his attendants had put him on a night-stool (which he made use of) while the bed was remade. On being put to bed again, he suffered no inconvenience or pain, but was a little exhausted. Before he was covered, one of the attendants, who had been sprinkling lavender-water about the room, threw some on him without his seeing her, which startled and upset him very much, and it took some time for him to recover. When I left, at 12.45, he showed no bad symptom, except that his pulse had risen to 112. Shortly after 1 p.m. I was sent for, as he was complaining of great pain from the bullet-wound up the front of the chest to the back of the left shoulder; pulse 144. The wound had become dark, and lost the healthy appearance it bore at my first visit. A linseed-meal poultice with mustard was applied to the chest, which slightly relieved the pain. At first, on auscultation, the respiratory murmur was quite natural over the whole of the left lung, but it gradually became lost at the lower part. One-eighth of a grain of tartar emetic was given, succeeded by one-sixteenth of a grain in an hour, and then every two hours. This, with dry cupping, relieved him considerably. Towards 10 p.m. he became delirious, and it was almost impossible to keep him in bed. Four minims of the solution of morphia were injected, which quieted him for a time; his breath became fetid and cold, respiratory murmur was rapidly lost over the left chest, and he died quietly at 4.51 a.m. on Monday, the 17th,—140 hours from the time of his meeting with the injury.

Post-mortem, eight hours and a half after Death.—M. S., aged twenty-six years; height 6 ft. 2 in.; weight about 14 st. 7 lb.; well nourished.(a) The wound in abdomen had turned quite black. On opening the abdomen and thorax, the bullet was found to have perforated the left lobe of the liver, which extended to more than two inches to the left of the umbilicus. It had then passed through the stomach, entering at a point five inches from the pyloric, and passing out two inches and a half from the cardiac orifice, through the spleen and diaphragm, fracturing the tenth rib, and passing upwards had lodged between the eighth and ninth ribs. The left lung was uninjured but completely gangrenous, and pressed up to its root by a very offensive greenish fluid, which completely filled up the remainder of the pleural cavity. The liver, stomach, and spleen, where perforated by the ball, were quite black and gangrenous.

This case bears a great resemblance to one mentioned by Mr. Heath in a clinical lecture delivered by him at University College Hospital, and published in the *Medical Times and Gazette* for January 3, 1874. In both cases the injuries were inflicted when fasting, and the stomach, liver, and spleen were injured. In Mr. M. S.'s case the diaphragm was perforated and the lung uninjured. After the 12th, Mr. M. S. appeared to progress favourably and to have no bad symptoms, till he was unfortunately startled on the Sunday morning, which apparently gave him such a shock as to reduce him below all power of rallying. Though there is no case of recovery recorded after injuries so severe as those of Mr. M. S., still I think that, considering everything appeared to be progressing favourably till he received the shock on the Sunday morning, there is fair reason for believing that had he not been so startled, even if he had not recovered, he would most likely have lived some time longer.

Nelson, N.Z.

The Paris Foundlings.—According to the report of the "Assistance Publique" for 1874, the number of *enfants assistés* now under the charge of the Département de la Seine amounts to about 27,000, occasioning an expense in round numbers of four million francs. In the course of 1874 there were 3200 new-born infants, or infants abandoned by their parents, placed under the care of the Assistance.—*Gaz. Méd.*, November 27.

Progress of Insanity in France.—M. Broca, on the occasion of presenting the new volume of the "Statistique de la France," referred to the chapter which related to the progress of insanity, and quoted from it the following table:—

Census.	Population.	Lunatics at home.	Lunatics in asylums.	Total.	Per 10,000 inhabitants.
1861	37,383,313	53,160	31,054	84,214	22·5
1866	38,067,064	54,707	35,972	90,679	23·8
1872	36,102,921	51,004	36,964	87,968	24·4

M. Broca observed that the increase may seem to be greater than it really is, as, in consequence of their greater vigilance and experience, the mayors return several persons as lunatics who formerly might not be recognised as such."—*Bulletin de l'Académie*, November 16.

(a) The deceased had been weighed and measured only a few days before the accident happened.

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REPORTS OF HOSPITAL PRACTICE
IN
MEDICINE AND SURGERY.

LONDON HOSPITAL.

A CASE OF VERY SEVERE PEMPHIGUS IN WHICH ARSENIC APPEARED TO PREVENT THE PATIENT'S DEATH.

(Under the care of Mr. HUTCHINSON.)

[From notes by Mr. MERCIER.]

THE following case, which is briefly mentioned in Mr. Hutchinson's clinical lecture "Can Arsenic cure Pemphigus?" is worthy of detailed description on account of the peculiarity which the eruption presented. On account of this, much hesitation was at first felt as to the diagnosis, and thus the case was allowed to advance to a state of extreme severity before the specific was ordered. It is valuable also because it was carefully observed from its earliest stage.

George W., aged forty-four, a portmanteau-maker, sallow, fair, and thin; never strong. At the age of five he had rheumatic fever. Two or three years afterwards he had brain fever, which lasted for three or four months. At the age of thirty-three he had scarlet fever, and after this he had for two years severe rheumatic pains in the legs. Since that time he has been continually ailing.

He has never had syphilis, nor herpes labialis or preputialis; he has had asthma. There is no history of skin disease in the family.

In May last he was at work on his bench, when he dropped his knife. On stooping to pick it up he says that he found he had lost the use of his left side. It soon returned, but in half an hour the same feeling of paralysis recurred. He had then no twitching in his limbs.

In September last he fell ill. First he had impairment of power on the left side, partial and intermittent. Then he had convulsions in his left arm and leg, and at the same time lost consciousness. Sometimes he had as many as a dozen attacks in the course of a day. In five or six weeks he got well enough to go to work, but a fortnight after this a rash began to come out, and he had what appears from his description to have been urticaria on the hands and face.

December 4, 1873.—He has on admission several patches which look like herpes on the face, especially on the upper and lower lips and on the eyelids, and the whole region over the orbicularis is red. The herpes patches are in all stages; some show patches of circumscribed redness, others have vesicles of all degrees of advance, from perfect pellucidness to thick purulence; others, again, show the thick, honey-like crusts of herpes. There are some patches on the hard palate in every respect similar to those on the face. The peculiarity of the eruption is that it is symmetrical: both orbital regions are equally affected; the spots on the lips, chin, and cheeks correspond fairly, so do those on the palate.

3rd Day.—There are fresh groups of vesicles around the eyes and the mouth; others on the cheeks, forehead, and ears. There are also vesicles, identical in character with the others, on the palms of the hands and fingers, and on the palmar surfaces of the wrists. They are still quite symmetrical everywhere. The vesicles are of sizes from pins' heads to peas; they have a great tendency to run together, forming by their confluence not one large vesicle, but a group of small ones whose outlines are marked by furrows on the surface.

6th Day.—The eruption is now no longer confined to the face and hands; large patches of well-defined redness appear on various parts of the body, followed quickly by crops of vesicles which run the usual course.

9th Day.—There is now a most profuse rash on the face, neck, arms, legs, and penis, having the following distribution:—On the face it forms a complete circle around the mouth, and others around the eyes, corresponding pretty well with the orbicularis muscles, and continuous across the middle-line. It does not follow the distribution of any nerve. It is markedly symmetrical. On the neck there are large patches on and behind the pinnæ, both at the places supplied by the great auricular and at those supplied by the auriculo-temporal nerve. On each side there is a broad streak of redness about two inches and a half wide which extends from the middle of the anterior margin of the trapezius, across the posterior triangle, obliquely downwards and forwards across the root of the sterno-mastoid to the interclavicular notch, where the two join together and form a broad tongue which descends over the sternum. The surrounding parts are free. There is a patch or two on the front of each shoulder; none on the back. With regard to the upper extremities, there is very little on the upper arms, and little on the front of the elbows. At the backs of the elbows there is a brilliant red patch, extending for three inches above and the same distance below the joint. It extends over the outer and inner aspects of the arm, leaving the front quite free, and terminating everywhere by a pretty well-defined edge. This tract is covered with vesicles, clear and yellow, the majority of the size of small shot, but some half an inch long; the latter being evidently formed by the confluence of many small ones. The lower half of the anterior surface of the forearm is also quite covered by redness, which in both arms runs up to a point near the elbow. Between it and the elbow are several small bullæ. On the palms vesicles exist, but they are nearly hidden by the thick skin. The backs of the arms are nearly free, as are the centres of the dorsal aspects of the hands, but extending from the margins of the hands inwards and downwards are streaks of redness which pass towards the roots of the fingers. These follow pretty accurately the course of the ulnar and radial nerves. The backs and inner and outer surfaces of the first phalanges are covered with large bullæ. The other phalanges are not affected. On each thigh there are one or two small isolated spots; a few on each knee; and very large bullæ on the soles of the feet. There are other patches of the eruption over both buttocks, and several on the penis and prepuce.

Character.—The vesicles on the face are in every respect exactly the same as those of herpes. Each patch begins as an erythematous spot, on which there soon appear a number of vesicles, almost invisible at first from their small size and perfect transparency. These vesicles then enlarge and coalesce, forming small oval spots covered by a tuberculated group of bullæ filled with transparent serum. Soon the contained fluid becomes milky, then purulent; then a scab results—dry, yellow, sticky, and like "dried honey." On the hands the vesicles are similar, but larger. At this position they are large, raised, circumscribed bullæ; tense, surrounded by a slight redness for a line or two when isolated, or on a large red base when multiple. Both on the hands, or over the rest of the body, the circumjacent inflammation appears to be inversely as the size, and directly as the number of the vesicles—that is, a large isolated bulla has but little inflammation around, while a patch of small confluent vesicles are seated on a very inflamed base. When they are opened, the base is found to be like normal abraded skin. The contained fluid is almost clear, and when placed under the microscope shows a number of colourless granular nucleated cells, which appear in a few cases to show amœboid movements. There are no fibrinous flocculi in the interior of the large bullæ. On the thighs the isolated blebs are quite like those of pemphigus, large, semi-transparent, having at first little inflammation around, and as they increase in size, overtaking, as it were, the inflammatory area, which increases more slowly, so that at last they are surrounded by normal skin. On the soles of the feet the thick cuticle is raised over about a quarter of the sole into a large bleb.

11th Day.—The eruption gets daily more extensive; it appears on the legs below the knees, on the shoulders and upper arms. In those places the characters of the eruption are the same as they are over the rest of the body, the vesicles or bullæ being large or small apparently without order or reason.

13th Day.—There is redness now on the knees and buttocks. A few of the blebs are of a dark purple colour from effusion of blood.

14th Day.—The red patches on the buttocks and knees are now covered with vesicles. Those on the hands and arms are fast disappearing. The smallest have dried up, leaving a little discoloured spot like a freckle; those next in size have become absorbed, leaving a little flake of horny-looking desquamating cuticle, some being stained dark by blood. Others, again, have become pustular, and left the thick rough scabs seen in herpes, either yellow or darkly stained; and some are so prominent as to be quite rupia-like.

19th Day.—On the arms and face the rash is departing, leaving thick, dark-brown rugged crusts. On the thighs the rash assumes a new aspect. It occurs in most definite rings, isolated or confluent, roundish or oval, and from one to three

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inches in diameter. They do not begin as a spot which spreads towards the circumference, but as rings. In some cases one part of the ring begins before another, and in most the different parts of the same circle are in different stages. In some there is a vesicle or scab in the centre; in others the centre is quite healthy skin. Then comes a streak of inflammatory redness, and in the middle of this a row of herpes-like vesicles, sometimes very small, sometimes very large—the size of the vesicle being independent of that of the ring, but always inversely as the degree of adjoining inflammation. The smaller vesicles are filled with clear serum, confluent, and irregular in outline. The larger ones contain purulent fluid, which separates into two strata—a lower one of corpuscles, and an upper one of liquor puris. There is a complete horseshoe around the upper part of each patella; and on the outer side of the left and the inner side of the right knee are numerous bullæ, three inches long by one and a half wide. From the various large blebs half a porringerful of fluid was collected; it presented the appearances before noticed.

21st Day.—A diffuse redness is spread over the whole surface of the abdomen and chest, omitting that portion over the sternum which was affected before. There is no eruption on the soft palate now, nor has there been any on the conjunctiva. The patient is extremely emaciated and weak, and almost covered with sores. His appetite has been good, and his tongue clean throughout.

22nd Day.—The red blotch over the abdomen is covered with little vesicles. The places over the rest of the body are going through the stages before noticed. The rings on the legs, however, instead of scabbing over, leave large superficial ulcers, each with numbers of small spots of lighter colour, indicating the former positions of the vesicles. The larger blebs also leave raw places behind them.

23rd Day.—Hitherto the patient has been taking quinine and iron ever since his first entrance into the Hospital. To-day Mr. Hutchinson ordered him to have liq. arsenicalis ℳiv. t. d.

Up to the last date the treatment had been by tonics and liberal diet, and the man had become weaker and weaker. He was emaciated to an extreme, and covered with large superficial sores, from which drained great quantities of serous fluid. He was almost enveloped in lint covered with zinc dressing. Mr. Hutchinson had often commented on the case, and directed attention to the points in which it differed from ordinary pemphigus. These features of difference had, he said, got less and less every day—that is, the herpetic-like grouping of the vesicles, and large erythematous areas at their bases, had become less conspicuous, and the size of the bullæ had increased. Hitherto, having regard to the doubtful diagnosis, he had abstained from prescribing the specific for pemphigus; but now, as the man's life seemed in serious jeopardy, it was time to try it. A prescription for four minims of Fowler's solution three times a day was accordingly dictated, no other change being made in the local treatment or diet.

The effect of this change of treatment from quinine and iron to arsenic was marvellous. From the day the arsenic was ordered no fresh blebs appeared, until one day, a few weeks later, when he was nearly well and able to leave his bed; on which occasion, suddenly a few fresh ones showed themselves on the face. On inquiry, it was found that he had been three days without his medicine, and on its being again resumed they immediately receded. With the disappearance of the rash the man's health steadily improved, and he began to gain flesh and strength. On March 12, six weeks from the beginning of the arsenic-treatment, the notes state that he was in unusually good health and spirits, and wholly free from eruption with the exception of a single small dried bulla on one finger.(a)

The man left the Hospital early in March. By inquiries made subsequently, it was ascertained that he remained well until June, when, in consequence (as he thought) of cold, fresh blebs appeared around his ankles. From this date until January 11, 1875, he was never wholly free, and at times on the face and extremities the blebs were numerous. They affected also the palms. During this period he was living at a distance from the Hospital, and under the advice of his own medical attendant he was taking steel only.

In commenting upon this case Mr. Hutchinson remarked that he had rarely seen a case in which a drug so definitely and rapidly effected a cure and saved the patient from impending death. The man had been getting worse up to the day that the arsenic was ordered, and he improved immediately afterwards. His relapse after leaving the Hospital, and the continuance of the eruption in a mild chronic form for some months while under a non-arsenical treatment, quite confirmed him in the inference that it was really the drug which cured. It was also quite in keeping with what we know of the course of pemphigus cases, in which, although relapses after arsenic-cures are very common, yet they rarely reach the severity of the first attack. As regards the differences from common pemphigus which the case displayed, we must, he added, be prepared to expect considerable deviations from the ordinary type, the disease still being essentially the same. Differences as to size of vesicles and their grouping, and as to the extent of erythematous area about the base, must be held as minor points. The symmetry of the eruption, its generally bullous character, and its tendency to attack first the face and extremities, must be held to be its most essential features, and to these may perhaps be added its specific curability by arsenic.

The following additional comments are appended by Mr. Mercier to his narrative of the case:—

The man's urine was high-coloured and rather scanty throughout his illness, but had no abnormal constituent that could be detected. There was no diarrhœa, the bowels were regular throughout, nor was there any other evidence of disturbance of the vaso-motor system. The patient had been living in Limehouse; his dwelling was not damp, nor was he exposed to malaria. He had not been taking extra fatigue nor had he been subject to anxiety or worry, but he had recently had an illness. He never shivered throughout the course of the disease.

"There is a form of disease which seems to stand midway between herpes and pemphigus, the features of which ally it now to herpes, now to pemphigus" (Tilbury Fox, "Skin Diseases," page 221). It would appear that the foregoing is one of these cases. A chief feature of interest in it is, that the skin disease, believed to be due to disturbance of the nervous system, occurred in a man who had previously and recently been the subject of nervous disorder of another kind—epilepsy. The skin eruption may be another manifestation of the same affection—an epilepsy, or discharging lesion, of the vaso-motor nervous centres; or of the trophic centres, if there be such.

The affection resembled herpes in the character of a large portion of the eruption, which also went through the same stages, but it differed from that affection in the absence of pain before the outbreak of the rash, and in its eruption being entirely indifferent to the course of the nerves, except in the case of the hands. Other portions of the eruption were exactly like pemphigus; and there were all stages and degrees between this and the last.

(a) If there is any exception to the literal truth of the statement that no bullæ showed themselves after the arsenic was begun, it would concern the occasional threatening of a few small and abortive spots on the legs. They never, however, lasted more than a few hours.

ROYAL ACADEMY.—Professor Marshall, F.R.S., commenced his course of lectures on Monday last, at Burlington House, before several Royal Academicians and distinguished visitors.

NEW BOARD OF EXAMINERS.—It will be seen from the following list of candidates, twenty-one in number, that the Council of the College has an opportunity of selecting nine good members for that Board, all of whom, of course, are Fellows of the College. Taking them in seniority, we have Messrs. R. Barwell, of the Charing-cross Hospital, Fellow 1853; J. Wood, of King's College, 1854; T. W. Nunn, of the Middlesex, 1857; G. G. Gascoyen, of St. Mary's, 1858; A. E. Durham, of Guy's, 1860; C. Heath, of University College, 1860; F. Mason, of St. Thomas's, 1862; W. Rivington, of the London, 1863; W. M. Baker, of St. Bartholomew's, 1864; J. Langton, of St. Bartholomew's, 1865; E. Bellamy, of the Charing-cross, 1867; A. T. Norton, of St. Mary's, 1867; H. G. House, of Guy's, 1868; W. W. Wagstaffe, of St. Thomas's, 1868; J. E. Adams, of the London, 1869; J. N. C. Davies-Colley, of Guy's, 1870; T. H. Bartleet, of the General Hospital, Birmingham, 1871; U. Pritchard, of King's College, 1872; B. T. Lowne, of the Middlesex, 1873; J. McCarthy, of the London, 1873; and H. Morris, of the Middlesex, 1873. It will thus be seen that Guy's, the London, and Middlesex Hospitals send each three candidates; St. Bartholomew's, St. Thomas's, St. Mary's, King's College, and Charing-cross Hospitals two each, University College one, and Birmingham one. The only metropolitan hospitals not sending candidates are St. George's and the Westminster.

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The Medical Times and Gazette *is published on Friday morning, Advertisements must therefore be sent to the Publishing Office not later than One o'clock on Thursday.*

Medical Times and Gazette.

SATURDAY, DECEMBER 4, 1875.

THE WHITECHAPEL MURDER.

We have now reached the end of a case which has excited more public attention than any other of recent times, and which, had it been properly managed, could not have failed to add considerably to our stock of knowledge. Unfortunately, the medical evidence has been such as rather to be cited as an example of what to avoid than anything else. It so painfully exhibits an incapacity to appreciate the position of a medical witness as to demand from us some comment.

In such a case it was apparent from the very beginning that the identification of the body was, beyond dispute, of prime importance. To this end, therefore, it would be the duty of the medical inspectors to proceed at the earliest possible moment to a full, complete, and exhaustive examination of the body submitted to them. Instead of that, we hear of as many as twelve separate examinations. But the most extraordinary story was that told by Mr. Bond at the coroner's inquest. In the *Times* he is made to say on that occasion—"I was in the [police] court on Tuesday, and heard the questions put to the father about the scald or burn mark on the leg. I have since examined the legs. On the right leg, rather over two inches below the point of the knee, I found a deep cicatrix of a scar, about the size of a shilling, with a considerable puckering of the sound skin all round. The scar was thick and fibrous—at least one-eighth of an inch in thickness, and was raised above the level of the skin. I formed an opinion of the cause of that—that it was caused by a burn and not a scald. A seton would cause such a scar, but it is more like what would be caused by a burn. The skin was greatly shrivelled and contracted." Now, according to his opening statement, he was first called to see the body on September 16. But it is not till after hearing the father of Harriet Lane, on the 21st, speak to a scar on her leg, that he sets about looking for any such mark, and then finds, according to his own account, an object altogether unmistakable.

When examined in court on the final trial, he says it was impossible, in the state in which the body then was, to discover the scar referred to; but, on scraping, it was found on the 21st. Why was not scraping or any other needful cleansing process had recourse to on the first occasion? We say again, most emphatically, that such a plan of examining a body in even the simplest medico-legal case is to be avoided as likely to frustrate the ends of justice, and that a medico-legal examination once undertaken should be, without any unnecessary delay, carried out to completion.

Again, Mr. Larkin says, "I put the viscera (except the brain) into a jar which had been cleaned out and filled with distilled water, for any subsequent examination." Will anybody say that distilled water is the best preservative fluid to use on such occasions?—for we suppose that is the meaning of the sentence. Neither should it be forgotten that where such a thing is possible, as it certainly was in this case, *new* vessels, and not those simply "cleaned out," should be used.

One cannot fail to remark, throughout the whole examination of the medical witnesses, the continual abuse of that cardinal doctrine laid down by so many jurists—that, in giving evidence before a jury (particularly a coroner's jury) it is the duty of the medical witness to use plain language. We have little to say to Mr. Larkin; he was forced into a position which he never sought, and if his evidence was not such as would have been given by a skilled medical jurist, it must be remembered that he never pretended to be such. This cannot be said of Mr. Bond, the whole of whose evidence bristles with terms, many of them utterly unintelligible to any jury, and, we make bold to say, to most coroners and barristers. In the *Times* report of his evidence on various occasions, we have this witness talking of "spinulæ" of bone (probably he had said "spiculæ"). Dura mater we find over and over again; cerebellum, cervical vertebræ, depressed fracture, punctured wound; molar, bicuspid, and canine teeth; larynx, fibula, cicatrix of a scar, and so on;—some of them so combined as to seem sheer nonsense. We are, indeed, by the use of such terms, put much in mind of the old story of the gentleman who began talking about a suspensory ligament, which the witty counsel on the opposite side cleverly translated as a hangman's noose. Here is a sentence which will, we think, puzzle anyone: speaking of the hair found in various situations, the witness is made to say, "All the hair corresponded, examined under the microscope, in colour, texture, brittleness, and coating of inorganic, or, rather, I should say, granular material." We should be glad to know how to estimate brittleness under the microscope, or to get some knowledge of this newly discovered inorganic or granular material on the outside of hairs. Nor was the mode in which the evidence was given, especially before the coroner, less worthy of animadversion. We were glad to see a decided improvement in this respect in the trial at the Old Bailey; still, even that left something to be desired.

These are great and patent evils, and go far to justify the action of the prosecution in deposing Mr. Bond from the honourable position of leading medical witness into a position altogether secondary; and in this opinion we are strengthened by the extraordinary statement in the *Times* of Monday of what he would have said had a certain question been asked of him. Certainly such a mode of giving unsworn evidence is not to be commended.

THE REMUNERATION OF GENERAL PRACTITIONERS.

A question of very great, indeed in many instances of vital, importance to the general practitioners of this country, is that as to the remuneration which they receive for the services

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they render to the community. It may perhaps be said by some that a question of pounds, shillings, and pence should not be allowed to trouble the minds of the members of a noble and learned profession, whose mission should be, not to make money or to amass fortunes, but to alleviate suffering and to preserve life. But as the majority of our professional brethren, like the members of the other learned professions, depend for their means of livelihood on the income they receive for the practice of their profession, it is neither remarkable nor unseemly that they should consider how best they may insure the receipt of "a fair day's pay for a fair day's work." The dignity of the profession is in its way a very excellent thing, but that dignity cannot be in any way lowered by steps being taken for insuring to every medical man a fair and certain remuneration for his professional labour.

We have been led to consider this subject from the perusal, in the pages of our lively contemporary the *Figaro*, of some very sensible remarks on doctors' fees and doctors' physic.

Under the system of remuneration for professional services which is at present in vogue, we have no hesitation in affirming our belief that the general practitioners of this country are, in respect to the value—often incalculable—of the services rendered by them to the community, worse paid than any other class of persons in the kingdom. In almost every walk of life, except our own, the scale of remuneration for work done has, within the last twenty years, greatly increased; and it is only right that it should have done so, as the price of all the necessaries and comforts of life, the value of house property, etc., have similarly been raised, so that what was sufficient for a man, a generation ago, to live upon in ease and comfort, is now barely enough to provide him with the simple necessaries of life. Therefore, in most professions, as expenses increased, remuneration also increased. Not so in our profession, however: the medical man's fee has remained almost unchanged. He cannot charge more now for a visit than he did some years ago, though his butcher has probably added sixpence a pound to the price of his meat, his landlord has raised his rent by £20 a year, and the cost of all other articles of use or consumption has risen in a like proportion.

We propose now, however, to speak not so much of the propriety of an increased amount of remuneration as of the importance of an increased certainty of obtaining that remuneration in a reasonable time, or even of getting it at all. The number of bad debts contracted by medical practitioners is notorious. When people are taken ill, they rush at once for the nearest doctor, who is expected immediately to respond to the call, at whatever risk or inconvenience to himself, and to bring all his skill and energy to bear upon the case. While in attendance, he is, for the nonce, the patient's best friend and most welcome visitor. His knock at the door brings a flutter of hope into the sufferer's breast, and his cheery voice and reassuring smile carry comfort and happiness to the friends. So far all is well. But when the patient has recovered, the value of the doctor's services quickly sinks into oblivion, and his bill, when he sends it, is looked upon with disfavour, and laid aside to be settled at that remote and convenient period known as "some day."

Thus the poor doctor, who has given the best of his services cheerfully and willingly, is compelled to wait weeks, and perhaps months, for the money which he has fairly earned, and to which he is fairly entitled; while, at the same time, he is subjected to constant reminders from his tradesmen and other creditors, whose demands, however, he is unable to satisfy, because his clients, either wilfully or forgetfully (more often, we hope, the latter, though we cannot help sometimes thinking the former), neglect to pay him his just dues.

Our contemporary speaks of the doctor's bill as a serious charge upon the incomes of the middle classes. As he says, the rich can afford to pay, the working classes escape, and it is people of limited means who suffer. True, the working classes do escape, and very often on false pretences. There is many a so-called "working man" who is far better off, in regard to his position in the social scale, than the poor clerks or others of the middle classes, who, on a paltry income, are compelled to keep up the appearance of gentlemen. Yet the working man can command his medical advice for nothing—aye, and takes it too, not as a charity, but as a right,—while the poor gentleman is obliged out of his slender purse to pay the doctor's bill. This is no doubt hard, but it is no argument against paying a medical man for his services. The absurd and reprehensible pandering to the "working classes," which has marked all recent reforms, social and political, is beginning to bear fruit, and doctors, as well as other classes of the community, must not be surprised to find themselves ridden over rough-shod by the triumphant hero in fustian and corduroy.

The *Figaro* also deals with the waste of money involved in the prescribing of medicines, only a portion of which is taken, and the remainder wasted by a change being made in the treatment. We fear this is, to a considerable extent, unavoidable. Those who know anything of disease, know also the uncertainty of its course, and the almost impossibility in many instances of predicating the patient's condition from day to day. Symptoms and complications have to be treated as they arise, and to do this we are of course compelled to change the medicines in accordance with the development of each new phase of the disease. We think, however, that in many cases medicines might be prescribed in smaller quantities. It cannot be always necessary to order a six-ounce or eight-ounce mixture, particularly when, as is often the case, the prescription is wholly or partly tentative. In the case of patients of small means, it would be well for the medical man to consider this point when prescribing or dispensing his remedies.

These, however, are minor points. Our principal object in the present article is to heartily endorse the recommendation of our contemporary, that it should be the rule for medical men to be paid in ready money at the time of the visit. We believe that this plan possesses incalculable advantages for both the practitioner and the patient. The former is enabled to charge less for his visit, on the fundamental maxim that the "nimble ninepence is better than the slow shilling," and the latter would feel the payment much less in small sums than in one large amount. We can, however, scarcely do better than quote our contemporary's words—"We have often urged the abolition of doctors' bills, and in lieu thereof payment by moderate ready-money fees. General practitioners would realise large fortunes if they did not make bad debts, but the amount of their bad debts is exceedingly heavy. A gentleman who has been in practice for nearly twenty-five years lately said, 'If all the bad debts on my ledgers were paid, I should have a handsome fortune.' One reason for the bad debts is the long credit. Those who pay for most things from week to week, or from month to month, do not provide for a six-months account, and when it comes in they have not the means to pay it. We are confident that if the general practitioner charged a fee of five shillings, or even three shillings per visit, to be paid at the time of the visit, he would make more money; and yet those who honestly pay the doctor would pay less. The doctor would get more, because all patients would pay; the head of a family would pay less to the doctor, because, the visit having to be paid for in cash, the doctor would not be sent for unless there was need for advice. We doubt, under the doctor's-bill system, whether the general practitioner realises a clear two shillings per visit."

As we have said, with these remarks we most cordially agree, and we are firmly of opinion that the public would find themselves greatly benefited by the adoption of this system, while the general practitioners would also reap great

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advantage from it. Nor can we see any valid reason against its adoption, except the difficulty of breaking through old-established custom and usage.

It would be far more in accordance with the dignity befitting a profession, and would tend much more to remove it further from the category of a trade, if the present "bill" system were abolished. The custom of sending in quarterly or half-yearly accounts is very trade-like, and to many professional men is a very distasteful task. All such disagreeableness would be removed if the ready-money system, which already obtains on the Continent, where each visit is paid for when made, were universally adopted in this country.

It can, however, scarcely, we fear, be possible to make so wholesale a reform in the habits and customs of the profession until medical men are more united. At present the medical profession is too much of a collection of Ishmaels, each struggling for practice against the other; and not only are they struggling against each other, but against the army of quacks, prescribing chemists, Philadelphia "doctors," and other unqualified practitioners who swarm unchecked about the country, taking the bread from the mouths, and the fees from the pockets, of those who have spent a large amount of money, time, and brains in procuring legal status as medical men.

It is union amongst ourselves that is wanted before any wholesome or beneficial reform can be inaugurated which will touch the whole profession; and until there is more of that union we fear that things must go on in the same unsatisfactory state they are in at present.

In conclusion, our contemporary has done well in drawing public attention to this matter, and we would entreat our readers to use their efforts to hasten the time when we shall have some certainty that the self-denial, energy, skill, and anxiety which we expend in the practice of an arduous and harassing profession, will meet with its due meed of reward in this world, as well as, according to Mr. Richard Davy, it will in the next.

DR. SCHIFF, OF FLORENCE, AND THE VIVISECTION QUESTION.

Of all the individuals who have borne the brunt of the accusations made against the practice of vivisection, Dr. Maurice Schiff, the distinguished Professor of Practical Physiology at Florence, has been by far the most conspicuous. Against the practice itself, as is well known, a loud outcry has lately been raised, and charges of a general nature have been abundantly brought forward; but, as to the laboratory at Florence, details have been published, in the newspapers and elsewhere, of the most harrowing nature, and, indeed, in that city itself it appears that a lawsuit was commenced against the Professor, on the alleged ground of the noises caused by the howling of the dogs which were exposed to continuous torture in the cause of science. This lawsuit, however, was abandoned on an explanation being made of the real circumstances of the case. It appears, in fact, that the cries of pain supposed to proceed from the tortured animals, were, in reality, only the barkings of healthy dogs excited by jealousy at seeing one of their fraternity more favoured than themselves by the experimenter.

As a general reply, however, both to his accusers at home and to those abroad (among the latter especially the English), Dr. Schiff has lately written a pamphlet entitled "Sopra il Metodo seguito negli Esperimenti sugli Animali Viventi nel Laboratorio di Fisiologia di Firenze." This is a second edition, for the first appeared in the columns of a journal called *La Nazione* in 1864, and was written in answer to complaints then made as to the cruelties said to be perpetrated in the Physiological Laboratory of Florence. Dr. Schiff believed that the explanation he then gave as to the nature and mode of conducting his researches had allayed the agitation excited by some popular journalists, but he has recently found that some definite allegations of cruelty have been levelled against him, which are more serious than the mere general outcry formerly raised, and he therefore thinks himself called upon to issue a new edition of his former work, and to add some further particulars in explanation of his proceedings. Dr. Schiff dismisses some of the accusations made against him as being almost ridiculous, and he asks whether it is likely that after his refusal for twenty-five years, in his travels, even to be present at any painful operation conducted without the use of anæsthetics, he would find amusement in his own laboratory by collecting around him a number of poor animals in a state of suffering, and by hearing continually their cries of torture. He also points out the absurdity of supposing (as some of his accusers alleged) that operations on the lower animals, principally dogs, were performed all day and night, and especially at night, the facts being that the dogs referred to did not howl at all, that the laboratory at night was perfectly quiet, and that the noises proceeded from the numerous dogs in the vicinity.

It is almost unnecessary to address medical readers upon the question of the propriety of performing experiments for scientific objects on living animals under certain circumstances, for it is generally admitted that without such experiments many of the most important problems in physiology, in surgery, and in medicine must have remained unsolved, and much human suffering must have continued to exist which has actually been spared. Nor is it necessary, except when answering popular charges as to the *amusement* afforded to physiologists in the practice of vivisection, to advert to the tortures which are really inflicted on living animals in the so-called sports of all countries, civilised and uncivilised, to say nothing of the wanton cruelties often inflicted by one brute animal upon another. Illustrative instances in abundance might be adduced, but this part of the subject may be dismissed with the remark that to regard vivisection, as practised by physiologists, in the light of an amusement, is to libel some of the most illustrious followers of science in the civilised world, whose lives and works have shed a lustre upon human nature, and whose discoveries have diminished and are daily diminishing the aggregate amount of human suffering. It is therefore superfluous, in a medical journal, to follow Dr. Schiff in his eloquent arguments in proof of the necessity of vivisection, and it is more to the purpose to reproduce his statements as to the modes which he and others have adopted to prevent suffering in the lower animals which are subjected to experimental investigations when in the living state.

In the first place, however, it may be well to mention that Dr. Schiff makes no experiments on any animals except those which, as he says, are "*abbandonati dalla società*," or, in other words, are condemned as useless or noxious; and with reference to dogs, which, not unreasonably, are regarded especially as the friends and companions of man, he distinctly tells us that he has never bought one of these animals from its owner unless he was unable to persuade the latter not to get rid of it, and that he has only accepted it when he was assured that the animal would be destroyed in case of his refusal. With regard to cats and rats he admits that he has not been so scrupulous.

He proceeds to state that many of his experiments are wholly unattended with pain to the animals, such as some of those made with reference to the function of digestion, and it was the amusement (if such it may be called) afforded to the dogs in the necessary manipulations, which excited the jealousy of the other healthy dogs, and caused the barkings which gave so much alarm to the kind-hearted though mistaken friends of the brute creation. But Dr. Schiff also distinctly declares that no pain is ever inflicted upon any of the

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animals, for they are all either subjected to the influence of anæsthetics when any painful operation is performed, or their life is extinguished before the experiments begin. To explain the reason of this latter proceeding it is only necessary to observe that many of the phenomena of organic life continue after the abolition of sensation and consciousness, and therefore may be studied after death; but Dr. Schiff's arguments and explanations on this point are superfluous to medical readers.

After alluding to the cruelties daily perpetrated on the lower animals, not only for the purpose of using them for food, but also to gratify some peculiar tastes (as for instance the lopping of dog's ears, the knicking of horses' tails, etc.), Dr. Schiff claims for himself the credit of performing his useful and necessary experiments without any suffering to the lower animals, for he states that it is a general rule adopted in his laboratory, not to perform any operation which might be painful without having first etherised the animal up to a state of complete insensibility; and this rule applies not only to the higher classes of animals, but even to frogs.

Ether is preferred to chloroform as an anæsthetic in the Laboratory of Florence, because a very extensive experience has convinced Dr. Schiff that etherisation carried to the last grade of insensibility never becomes dangerous to life as long as the movements of respiration are maintained. But even if the inhalation of ether be still further continued until the respiratory movements cease, or, in other words, the appearance of death is complete, death does not actually follow if only, at the moment when the thoracic walls are paralysed, the inhalation is interrupted in order to begin suddenly a kind of artificial respiration by interrupted compression of the thoracic walls themselves. By this measure, the air impregnated with ether passes out of the lungs at every compression, and atmospheric air enters every time that the compression is relaxed, and the air so entering takes up more ether, which is again expelled at the subsequent compression. Thus the quantity of ether in the blood is diminished to such a degree as to be no longer sufficient to embarrass the action of the nervous centre of respiration, and thus breathing begins anew. Chloroform has been often popularly preferred to ether because it acts more rapidly, and its application is more agreeable to the patient who dislikes the smell of ether. But according to Dr. Schiff (whose views in this respect seem to be gaining ground in the present day) chloroform has a much more extensively paralysing action than ether, and has, moreover—at least in man and other mammiferous animals,—a special influence on the nerves of the heart. Thus it happens that when chloroform is carried to such a degree as to weaken considerably the respiratory movements, it is sometimes impossible to restore them, in consequence of the weakness of the heart's action. Dr. Schiff goes so far as to state emphatically that a medical man is responsible for every case of death caused by the use of ether—by which he means that a careful watching of the respiration during the employment of this agent may always prevent death; while the effects of chloroform depend partly on individual predisposition, which medical science cannot always detect.

Want of space forbids us from entering more at length into Dr. Schiff's defence of vivisection in general, and of his own proceedings in particular; but we are bound to state that he has made out his case to the satisfaction of any reasonable persons. It is generally admitted that vivisection, with certain limitations, is necessary for the advancement of science, but it is fully granted by its advocates that no pain should be inflicted, if possible, upon the animals subjected to experiment. Dr. Schiff has shown that his experiments are conducted without pain, and that he is as humane in his feelings towards the lower animals as any of those who have joined in raising an outcry against him.

THE WEEK.

TOPICS OF THE DAY.

The recent Excise prosecutions at the Wandsworth Police-court, against medical men for selling methylated spirit without a licence, will be a sufficient warning to all those of the profession whom it may concern. The particulars are briefly as follows:—Mr. W. H. Kempster, a surgeon of Battersea, was summoned for selling methylated spirit without a licence. In his defence this gentleman said he was not in the habit of selling the spirit. He held it to be a case of A inducing B to commit a crime, and C being called upon to answer it; in proof of which assertion he called his dispenser, who deposed that the officer asked him if he sold methylated spirit, and on his replying in the negative he continued to press him to sell some, adding that if the doctor were there he would let him have some. Witness accordingly obliged him by selling him some spirit for lamps, but he denied ever having sold any before. The magistrate thought that the evidence exonerated Mr. Kempster, and dismissed the summons. Mr. Oakman, of the same neighbourhood, did not, however, fare so well. He similarly denied that he was in the habit of selling the spirit, and he complained of the persecution to which he had been subjected. He had told the officer he was not sure whether a licence was necessary, and if the applicant were an exciseman he had better go away without it. It would have been more manly, he contended, if the officer had cautioned him instead of taking the spirit. In this case a penalty of £12 10s. was inflicted, but the magistrate suggested that, under the circumstances, the Board of Inland Revenue should reduce it to the nominal sum of £1.

The Australian correspondent of our contemporary the *Globe*, in a recent communication to that journal, publishes some remarks which may be of use to invalids in this country. He says that the number of persons suffering from pulmonic complaints who are continually arriving in the colony is incalculable. Most of them come out with an idea that all parts of Australia and Tasmania have pretty much the same climate, and that all alike are equally good for consumption. This, he proceeds to state, is a great mistake. The winter of Melbourne is frequently almost English in its severity and in its damp; the spring and autumn are pleasant; the summer intolerable and unhealthy, from the dust storms impregnated with the noxious powder which arises from the decaying matter in the open drains of the town. His concluding piece of advice to those who contemplate a visit to Australia in search of health, is to inform themselves accurately of the mean temperature of the chief towns there before leaving their own country.

The demand on the part of unprincipled and ignorant persons for diplomas of medicine must still be extensive, and since the recent exposure of the American trade in these much-coveted documents, the attention of the speculators who provide them for a consideration has been turned to another method of obtaining them for their clients. Thus we learn that in Paris a most impudent plan for obtaining genuine vouchers has unfortunately been set in motion with a successful result. An advertisement was inserted in several of the leading journals of France to the following effect:—"1000 fr. to 2000 fr. lent to every doctor in medicine, or health officer, on the simple presentation of his diploma." As a consequence, several Parisian doctors—for the most part young men who had just taken their degrees, and whose practice was not equal to their wants—were entrapped by this tempting bait, and hastened to the address given. They were most politely received, and asked to leave their diplomas for verification by the gentleman who was so willing to make the loan, one week being required for this purpose. It is almost needless to say that on re-visiting the house at the end of the period specified, the victims found that the money-lender and their papers had

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disappeared together; and doubtless at the present time the original entries on these documents have been carefully erased, to be replaced by the names of impudent quacks, who will thus appear to be practising as regular licentiates of the Sorbonne. It is a great pity that the law cannot succeed in tracing out the concocters of this cleverly devised but nefarious plot.

The Vivisection Commissioners, having now received the evidence of a large number of witnesses, will not meet again for some weeks. They will then assemble to examine a few more witnesses, after which it is announced they will at once proceed to consider their report.

It is stated that Dr. John Charles Bucknill, F.R.S., has, owing to failing health, placed the resignation of his office as Visitor in Lunacy in the hands of the Lord Chancellor. The salary of the vacant office is £1500 a year, with travelling expenses. The insane wards of the Court of Chancery are under the visitation of three visitors—two medical and one legal: Dr. J. C. Bucknill (now resigning), Dr. Lockhart Robertson, F.R.C.P., and Mr. W. N. Nicholson.

An important Parliamentary return of "ships' surgeons," dated June 16 last, has just appeared, which does not show that much care is taken by owners to insure competent medical treatment for their men afloat. The return states that fifteen ships have lately sailed from ports in the United Kingdom with "surgeons" under twenty-one years of age, and therefore without any qualification to practise. Of these ships, eleven were whalers, one a first-class passenger-ship from London to Melbourne, one a steamship of the same class from Liverpool to New York, one from Cardiff to Naples, and one from Glasgow to Gibraltar. This return is a continuation of one published in the middle of last session, and which contained the names of 224 unregistered or unqualified surgeons who have sailed in British ships during the last two years. The Merchant Shipping Act of 1864 enacts in effect that every foreign-going ship, having 100 persons or upwards on board, shall carry a surgeon, who, in accordance with the provisions of the Medical Registration Act, 1858, must be a registered medical practitioner. An Order in Council, dated August 9, 1866, enacts that every passenger-ship with more than fifty passengers shall carry a surgeon, whatever the duration of the voyage. An official circular on this subject has recently been issued by the Board of Trade, recommending that no surgeons should be carried under any circumstances unless they are duly registered. "This," the circular states, "applies more especially to vessels that are about to proceed to Egyptian ports, as it is possible that the Egyptian Board of Health may shortly place vessels carrying properly qualified surgeons, who are able to produce their diplomas and certificates of registration, on a more favoured footing than other vessels in regard to quarantine." This is, commercially speaking, an important item of information for the owners of large steamships going through the Canal, where any detention indicates great loss. It would appear advisable that the Board of Trade should appoint a supervising surgeon at all chief ports, whose duty it should be to satisfy himself as to the qualifications of surgeons before signing articles for ships other than emigrant-vessels. The travelling public would then be assured that the vessel in which they sail really has a competent medical man on board.

In the face of all the predictions as to the severe winter we are to expect, it is some comfort to find that the *Gardeners' Magazine* takes just an opposite view. This latter authority is not, as he asserts, without the means of forecasting the winter in some vague sort of way, and, from an observation of meteorological phenomena, he is of opinion that it will be a mild one. The heavy rainfall is admitted to be to some extent indicative of a severe season, but the next really severe winter is to be looked for in 1879 or 1880. We sincerely trust that the organ of horticulturists may prove correct when it asserts that it sees no signs whatever of a coming hard winter, the large quantity of scarlet berries which the autumn has produced notwithstanding.

We learn from a contemporary that Dr. F. J. Beatson, Officiating Surgeon-General of the Indian Medical Department, will most probably be confirmed in that appointment when the term of office of Sir J. C. Brown expires, as it will do almost directly.

THE ROYAL VISIT TO INDIA.

Our readers will be interested to know that we have had the pleasure of again hearing from our Special Correspondent in H.R.H. the Prince of Wales's suite. His Royal Highness, his suite, and attendants were all in excellent health, and had greatly enjoyed their journey. It had been much cooler since they had got out of the Red Sea, and they were all much refreshed and invigorated by the north-east breezes. Our correspondent's letter is dated from Bombay on November 8, and so far, he says, the voyage had been most propitious.

PATHOLOGICAL SOCIETY OF DUBLIN.

The opening meeting of the thirty-eighth session of this Society took place in the anatomical lecture theatre of the School of Physic, Trinity College, on the afternoon of Saturday, November 27. The chair was taken at 4 p.m. by the outgoing President, Dr. Robert McDonnell, F.R.S. Professor William Moore showed the ileum of a child aged ten years, who had been admitted to Sir P. Dun's Hospital on October 27, 1875. The most prominent symptom was continued screaming. There were also rose spots, tympanites, and diarrhœa. The temperature ranged between 102° and 103·9° (fifteenth day). Death was caused by perforation of the intestine. Peyer's patches were extensively diseased, and a perforation capable of admitting a small goose-quill existed a short way above the ileo-cæcal valve. Mr. Frank T. Porter exhibited two gall-stones, each of which weighed 120 grains. The patient from whose body they were taken after death was very fat, and at the same time the subject of great muscular development. Dr. McClintock presented a specimen of fibroid polypus of the uterus. Its presence had caused extreme anæmia from repeated hæmorrhages. Mr. H. G. Croly showed an example of transverse fracture of the left patella dating back twenty-one years. There was firm ligamentous union, and ossific deposits had also occurred. Professor Stokes, jun., laid on the table a cluster of calculi which he had removed shortly before from the bladder of a man aged forty-five, by the median operation (Allarton's). The stones consisted of the urates of ammonium, sodium, and potassium, with triple phosphate. The President announced that the subject chosen by the Council for the prize essay, to be awarded at the end of the session, was—"Bursitis and its Pathology." The following officers for the session 1875-76 were then elected:—*President:* Henry Kennedy, M.B. *Vice-Presidents:* Samuel Gordon, M.B.; Edward Hamilton, M.D.; Sir Dominic Corrigan, Bart., M.D.; George H. Porter, M.D.; John Denham, M.D.; William Moore, M.D. *Council:* John T. Banks, M.D.; Anthony H. Corley, M.D.; A. Wynne Foot, M.D.; George H. Kidd, M.D.; James Little, M.D.; Thomas Evelyn Little, M.D.; Alfred H. McClintock, M.D.; Thomas Hayden, F.K.Q.C.P.; Robert McDonnell, M.D.; Benjamin George McDowell, M.D.; John M. Purser, M.D.; William Stokes, jun., M.D. *Honorary Secretary:* William Stokes, M.D. *Secretary and Treasurer:* Edward H. Bennett, M.D. *Secretary for Foreign Correspondence:* Robert D. Lyons, M.D. Dr. McDonnell, in resigning the chair to the incoming President, expressed his grateful sense of the honour done him by the Society in electing him President, and returned thanks for the kindness he had met with during his term of office. He also alluded to the deaths of two members of old standing, Mr.

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Robert Adams and Mr. John Hamilton. Dr. Kennedy having taken the chair, Mr. Porter moved, and Mr. Tufnell seconded, a vote of thanks to Dr. McDonnell. This was carried by acclamation, and Dr. McDonnell briefly expressed his acknowledgments. A resolution was moved by Dr. Kidd, and carried, to the effect "That in future the Vice-Presidents shall be elected by ballot, as the ordinary members of the Council are elected at present." The Society then adjourned.

NEW SMALL-POX HOSPITAL FOR GLASGOW.

THE close proximity of the present Small-pox Hospital to dwelling-houses has been the subject of much animated discussion amongst the inhabitants of the district for some time back. The building was erected several years ago, at the instance of the sanitary authorities, as a receptacle for fever cases, but since the erection of the new Fever Hospital at Belvidere, about five years ago, its use as a fever hospital has been discontinued. During the last five years it has been devoted to the treatment of cases of small-pox, scarlet fever and other mild fevers being also treated in it as occasion required. An opinion is very prevalent amongst the inhabitants of the district that the health of the locality is injuriously affected by the close proximity of the Hospital to their dwelling-houses. The authorities accordingly resolved some time ago to erect a new Small-pox Hospital upon land possessed by them at Belvidere, near the Fever Hospital, and the operations in connexion with that building are now making rapid progress. Thus there is no immediate call for any small-pox hospital in Glasgow at the present time, as no fresh case has occurred within the last two months. The new Hospital occupies a site close to the banks of the River Clyde, and far removed from smoke and noise. The lodge gate will stand about fifty yards off the main highway. The building itself consists of five pavilions, which run north and south, with frontages to the east, and with open spaces intervening, each pavilion being divided into four wards, two for acute cases, and two for convalescent. The acute wards occupy the centre, and do not communicate except from the outside. The convalescent wards are placed one on each side of the acute wards. Each acute ward is calculated to accommodate eleven patients, and each convalescent ward contains five beds. The total accommodation of the Hospital will be 110 beds for acute cases, and fifty beds for convalescents. Ventilation is fully provided for by means of ventilating appliances which rise from the centre of the ceiling of each ward, and in addition an iron ventilator, with movable spaces, is placed near the apex of the ward roof, and by means of this the impure air can be drawn into the chimney. Accommodation for the medical superintendent, matron, and nurses will be provided in a separate part of the grounds. It is estimated that the entire buildings will cost £22,400.

DR. RUSSELL'S REPORT ON THE LATE OUTBREAK OF ENTERIC FEVER AT GLASGOW.

DR. JAMES RUSSELL, Medical Officer of Health for Glasgow, has recently presented a report containing the results of his investigations into the origin of the three recent outbreaks of enteric fever in Glasgow—viz., the Washington-street epidemic, the Pollokshaws-road and the Kingston epidemics,—and he demonstrates clearly that the real cause in each case was infected milk. Up to the end of August last the health of the inhabitants of Washington-street had been good. Early in September, enteric fever suddenly became very prevalent in this street, most of the cases being mild, but some well-marked and severe. Out of a population of 625 persons, forty-two were seized with undoubted enteric fever, and twenty-seven with a milder form of fever. Every house in the street has been visited, and the milk-supply of each family ascertained, and it was found that all the families, except one, were supplied with milk either regularly or occasionally from one particular dairy. This dairy derived most of its supply from a farm where enteric fever was prevalent. Many of the families in the Pollokshaws-road and Kingston districts also derived their milk-supply from the same source, and here also the fever was almost wholly confined to those families. Dr. Russell says that he has repeatedly suspected milk to be the active agent in establishing minor outbreaks of enteric fever in Glasgow, and has never failed in finding actual cases of fever at the source of milk-supply, but has generally been unable to prove the connexion in a manner approaching a scientific demonstration, from the complicating circumstances under which the business of a milk agent is conducted in large cities. He urges the absolute necessity of jealously watching and preventing all relationship between articles of food, especially milk, and cases of enteric fever, and suggests that rural authorities throughout the country should make special inspection of the sanitary arrangements of all dairy farms, and enforce all necessary sanitary precautions. In this way, he believes, more would be done to prevent epidemic outbreaks of enteric fever, both in the country and in large cities, than by any other procedure which could be adopted.

WHARFEDALE CONVALESCENT HOME, ILKLEY.

THE Committee of Management of this institution has issued cards to the members of the medical profession, announcing that the Home will be opened for the reception of convalescents during the whole winter months, and that the arrangements for heating and ventilation are of such a nature as to insure the most perfect warmth and comfort to the inmates. This determination has been arrived at through the strong wish of the founder, Mr. Charles Semon, to extend to middle- and working-class convalescents, and also to those amongst the working class who, from depressing mental and bodily causes, require change of air and scene during the winter months, the same benefit as those which can be obtained by their richer brethren at the health establishments throughout the country. The Committee announce that the charge per week will be the same during the winter as the summer—namely, 10s. 6d. We doubt not that the Committee, in thus privately making known to the medical men this decision of Mr. Semon's, is taking the best and most judicious method of reaching the very class which he intended to benefit. The Home itself is situated in one of the most picturesque, bracing, and splendidly watered localities in Yorkshire.

CONIA NOT A BRAIN-POISON.

DR. HARLEY'S conclusions on the subject of the action of conium have been called in question by a recent American explorer, Dr. Lautenbach, who has contributed a paper to the Academy of Natural Sciences of Philadelphia, in which he records about a hundred experiments made to test the operation of this drug. This paper, which is not concluded in the number of the *Proceedings* which has reached us, is one of extreme length—covering more than thirty pages of large octavo,—and deals with the entire subject in a masterly manner. Dr. Lautenbach expresses extreme surprise at the conclusion formulated by Dr. Harley, that conium has a peculiar action on the corpora striata. He gives at full length the case on which Dr. Harley bases his view, and he then remarks:—"After studying this experiment again and again, one cannot help being struck with the circumstance of so eminent a physiologist and therapeutist drawing such an unwarrantable conclusion. He must either have been totally ignorant of, or he entirely ignores, the investigation of Kölliker, Gultman, and Verigo. Had he attempted to galvanise one of the sciatic nerves of the paralysed animal, he would—nay, could—never have made such a mistake." (The experiment in

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question will be found related in full in Dr. Harley's book, "The Old Vegetable Neurotics," page 9.) Dr. Lautenbach then goes on to say that, admitting four conceivable modes in which conium may operate—*i.e.*, (1) by a direct action on the motor centres in the brain; (2) by spinal paralysis; (3) by a direct action on the muscles; and (4) by paralysis of the peripheral ends of the efferent or motor nerves,—the last is the mode in which conium generally operates. In proof of this view he cites many experiments, of which the following one will be sufficient to give in this place:—"Experiment 41.—Killed a cat with chloroform, and then cut off both posterior extremities of the hip-joint. Into the left femoral artery I injected a one-grain solution of conia, while into the right, ordinary water was injected. In thirty seconds the application of the galvanic current to the left sciatic nerve caused no response, while its application to the right sciatic caused contractions in its tributary muscles." This experiment, we think, shows very fully the truth of the author's views, which are further borne out by numerous other investigations. The operation of conium on the circulatory, respiratory, and gastro-intestinal systems is pursued at some length, and the subject is of great interest, but as our space is limited we have merely called attention to a question of much interest to both the practical physiologist and the therapeutist.

SURGICAL SOCIETY OF IRELAND.

The inaugural meeting of the session of 1875-76 took place on Friday week, November 26, in the Albert Hall of the Royal College of Surgeons, Stephen's-green. The meeting was very largely attended by members and visitors. At half-past eight o'clock the chair was taken by Mr. Edward Hamilton, President of the Society, who delivered the inaugural address. Having alluded to the recent deaths of members of the Society, he discussed at length the bearings of modern scientific research on the progress of surgery and medicine. His remarks were warmly applauded. Subsequently, communications were made by Mr. H. Gray Croly, on the "Treatment of Fractured Patella by Position"; by Professor Stokes, on "Excision of the Shoulder-Joint"; and by Mr. Wheeler, who exhibited a specimen of Elephantiasis Arabum of the leg.

THE FREE MEDICAL SCHOLARS OF EPSOM.

These scholarships, to which we directed attention in a recent number, still require further contributions to complete the necessary amount—£7000. Dr. Carr, the acting treasurer, in order to bring their claims before the profession and the public, has been on a mission to Liverpool and Manchester, and, we are glad to learn, has been well and successfully received. Feeling sure that our readers will sympathise with this endeavour to help the orphan in order that in due time he may provide for himself, we venture to recommend all who have not yet done so to forward contributions to complete the fund, for which nearly £2000 is still required.

THE MEDICAL DEFENCE ASSOCIATION.

The promoters of the Medical Defence Association are to be congratulated upon the success of their meeting on Tuesday last, a full report of which will be found in another column. The attendance was considerably larger than we expected to see, and the greatest unanimity—we might almost say enthusiasm—prevailed. Dr. Richardson made a very happy speech; and the report of the Provisional Committee was well received. If they are able to carry out only one-half of the programme they have laid down, they will deserve the lasting gratitude of the profession and the public.

The Glasgow University Court have resolved to recognise the lectures on Surgery delivered by Dr. James Dunlop in Anderson's University as qualifying for graduation in medicine in the Glasgow University.

THE BRITISH MEDICAL DEFENCE ASSOCIATION.

On Tuesday afternoon a meeting of medical practitioners, convened by the Provisional Committee of the recently founded Medical Defence Association, was held at the rooms of the Medical Society of London, Chandos-street, for the purpose of discussing the objects of the Association. About seventy or eighty gentlemen were present, the majority being general practitioners. Letters and telegrams were received from Dr. Alfred Meadows, Dr. C. J. White (Snodland); Dr. Stanley Haynes (Malvern); Mr. W. C. Heane (Cinderford); Mr. Wotton (Bingham, Notts); Dr. Croucher (St. Leonard's-on-Sea); and others, expressing regret at being unable to attend the meeting. Dr. B. W. Richardson, F.R.S., having been voted to the chair, said he had always felt that the reform of the abuses of the medical body lay in scientific reform. He had noticed that there were no quacks in anatomy, astronomy, geology, chemistry, and other sciences. At the same time he was obliged to admit that it would be a long while before that condition of things was reached in the medical world, and in the meantime the public suffered; and at no former time, in his opinion, had there been so much quackery as there was at present. The advance of science seemed to give to evil-disposed men weapons which they could not use, and even the Medical Act seemed to suggest the protection of quacks through registered men. The desire of the public for literature fostered quack literature of the worst kind, and the increased power of the press advertised quackery the more. From a conversation which he had had with the honorary secretary, he understood the promoters of this movement to feel that the tares were becoming indistinguishable from the wheat, and that if a clearance was not made, both would one day be burnt together as unprofitable. He understood that they aimed at the suppression of unqualified practice, secret quack medicines, indecent medical publications, bogus diplomas, and improper alliances of qualified and unqualified men. They also wished to protect medical men from vexatious prosecutions; to prevent the registration of "non-certified" deaths; to correct the abuse of out-practice at hospitals; to devise a fair tariff of medical fees; and to give medicine a firmer political basis in the House of Commons. This was a startling, but not a formidable programme. The work concerned the public; it would enlist their sympathy and support if the public interests rather than those of the profession—which were, however, identical—were studied, and if it were begun well he had no doubt but that a great success would be achieved. He was told that the Society now numbered 150 members, and he believed that it would soon number thousands. There was certainly a good opening for such an association as that proposed, as it would not interfere in its operations with any existing society. He would suggest the desirability of a change of name; its title should not too closely resemble that of any existing medical body, and the word "Defence" would to many be objectionable. He would now call upon the secretary, Mr. George Brown, to read the report of the Provisional Committee.

The report stated that the Society was first started on May 21 last, and since that time advertisements had appeared in the medical papers, and circular letters had been sent to nearly every general practitioner in London, and to many in the provinces, soliciting support. In response to the appeal letters had been received from a large number of medical men, all approving of the scheme. One of the first to respond to the appeal of the Committee was Dr. Carpenter, of Commercial-road East, through whose energy a branch association has been formed in the East-end of London, which now numbers thirty members. This branch has already prosecuted in three cases of unqualified practice, and a penalty of £20 has been recovered in each instance. The success of this branch will, the Committee hope, encourage medical men in other districts to employ similar means to put down that which not only injuriously affects the profession, but does even greater injustice to the public. In addition to the East London Branch, branches had also been formed in North and West London, in Durham, the Forest of Dean, and in West Cornwall. Other members in large towns are only waiting instructions from the Council to form branches in their

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immediate neighbourhoods. Some of the branches are in active working order, and legal proceedings are being taken in several cases of unqualified practice. The members of the South London Medico-Ethical Society have unanimously resolved to become a branch of the Defence Association, and to hand over its funds to the parent society. It has also been proposed to amalgamate the Out-Patient Hospital Reform Association with the Defence Association, as the objects of the former influential Society will come within the province of the latter. It has been urged against the Association that it partakes somewhat of the character of a trades union, and therefore is unworthy of the support of professional men. Whilst admitting that it is open to this remark, the Committee have yet to learn that there is anything derogatory in the principle of united action, as long as the just rights of others are not assailed. In the present instance the interests of the public and those of the Association are identical, and the Committee feel sure that they will receive the sympathy of the public in carrying out their programme. After expressing the opinion that the General Medical Council ought to assume the functions of a prosecuting body, the Committee state that the Medical Act of 1858 is defective in several particulars. Although it prevents unqualified persons from assuming the titles "physician," "surgeon," etc., the penal clauses of the Act are systematically evaded by unqualified persons; as, instead of personally assuming medical titles, they now open shops and designate them "medical halls," "provident dispensaries," or by other similar titles. Through the efforts of the Association several coroners' inquests have been held on the bodies of persons who were attended in their last illnesses by unqualified persons who were practising in this manner, and it has been shown that these persons were grossly ignorant of the elements of medical knowledge. In some instances qualified medical men have allowed such persons to use their names, so as to avoid prosecution by the Association. After referring to the various questions with which it is proposed to deal, the Committee closed their report by inviting an expression of opinion as to the desirability of founding the Association on a permanent basis.

After reading the report, Mr. Brown said that neither the Committee nor himself had any personal object to serve in endeavouring to establish such an Association as the one they were now met together to discuss. Their only desire was to promote the general welfare of the profession and the public. Few but those who had specially studied the subject could form any idea as to the extent to which the public suffered through unqualified practice. He then narrated several cases of unqualified practice which had been communicated to him by country correspondents, in all of which men who had had no professional education, and were grossly ignorant on medical subjects, were performing the duties of medical men. He trusted that the result of the meeting would be the establishment of a strong society to put a stop to such scandals. With respect to the name of the Association, the members could change it at any time if thought desirable.

Mr. Aubin (Commercial-road) moved the first resolution, as follows:—"That this meeting, having heard the report of the Provisional Committee, is of opinion that the British Medical Defence Association is worthy of the support of the entire medical profession." This was seconded by Dr. Allen (St. John's-wood), and carried unanimously.

The second resolution, proposed by Dr. Carpenter (Commercial-road), and seconded by Dr. Royston (Bayswater), was as follows:—"That this meeting, having heard that, in the cases already prosecuted, qualified medical men have come forward to screen the offenders, considers such conduct most reprehensible, and unworthy of members of the medical profession."

This resolution was carried unanimously.

The third resolution, which was moved by Dr. Duncan Turner (Islington), and seconded by Dr. Leslie (Westminster), gave rise to a good deal of discussion. Ultimately it was passed in the following form:—"That this meeting is of opinion that the existing Medical Acts do not sufficiently protect the public from the quackery and deception of unqualified practitioners; and that this meeting approves of the establishment of an association to protect alike the public and the profession against such unqualified practitioners."

Dr. Drew (Kentish-town) moved—"That the best thanks of this meeting are due, and are hereby given, to the editors of the London medical papers, for their favourable comments on the Association." The proposition was seconded by Dr. J. E. Brooks (Kensal-green), and carried unanimously.

Votes of thanks to the Provisional Committee, to the Honorary Secretary, and to Dr. Richardson for his kindness in presiding, terminated a very successful meeting.

MENTONE.

(*From our own Correspondent.*)

As those who have sent patients out here may like to have some idea of the kind of weather which we have encountered in the South while gales and floods of unusual magnitude have been causing so much distress in England, I cannot do better than commence this letter with the cheering report of the fine days and bright sunshine which we have hitherto enjoyed. True, there are signs to-day (November 23) that the heavy rains which usually fall in these parts towards the end of November are likely to be upon us before long; but since I arrived here on the 11th ult. until yesterday the sky has been almost uninterruptedly cloudless, the sun has blazed with sometimes almost a too scorching fierceness, and the shade temperature has been mild, ranging between 55° and 60° Fahr. There have been no violent winds—only on the 11th the north-west wind or mistral blew for a few hours. On two or three days there has been a fresh breeze from the eastward, but owing to the sheltered position of the town, under the lee of a great mountain-wall on the east, this wind is very little felt, except close to the seashore. On the whole, the weather in the last fortnight or three weeks has been very mild for the season, and exceedingly favourable to the invalids who, in the beginning of November, come down from less favoured latitudes to take up their winter abode along the shores of the Mediterranean. There are a goodly number of such invalids already here—mostly, as far as one can judge by casual observation, chest patients. The English element at present is not largely represented, and there are apparently far more Germans here than any other foreigners. Probably there has been little inducement lately for English people, sick or healthy, to leave their firesides in search of sunshine. In the interest of any invalids who may be coming south later on, either this season or next, I should like, in the remaining part of this letter, to say a few words with regard to the journey from England to Cannes, or any of the health-resorts which lie eastward of it, founded on my recent experience of it as an invalid. It seems a light thing to tell a patient to spend the winter, say at Mentone, or San Remo; to order him or her some medicine, and to wish them a pleasant journey. It *would* be a light thing if you could predict that the patient would arrive at his destination no worse than when you banished him from England. But, unless more care is exercised than that which non-professional persons generally think sufficient; unless most explicit directions are given by the medical man and conscientiously followed; or, lastly, unless the patient himself, from previous experience, knows the dangers he has to contend with in travelling, and turns his former errors to good account, the chances are he will reach his journey's end in a worn-out and exhausted condition. As a friend, whose experience ranges over several winters on the Riviera, said to me a few days back: "The journey (from England) is like a great blow, and you don't feel all the harm it has done you till you have settled down for several days after it." The two dangers which require most carefully to be guarded against, are (1) travelling too far on any one day, and (2) sight-seeing at the places where a halt is made. Persons, in their eagerness to get south, rush on night and day till they reach their goal, jaded and out of spirits; others, indeed, rest at night, and only travel during the day, but they start early and arrive late, spending too many hours in the far from healthy atmosphere of the dusty, jolting railway-carriage. On the other hand, when invalids travel by so-called "easy stages," and stay a day, perhaps two or three days, at the more notable towns or cities on their route, their own enthusiasm, or their friends' neglect of care, tempts them to see churches and picture-galleries, to drive about exposed in open carriages, and in other ways to tax the strength which is all too little for the mere journey, and to run risks the consequences of which may be irretrievable. There are other minor

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dangers for the invalid, against which it is especially needful to offer a word of warning. One of these is the length of time which travellers must spend at the railway-stations to see after the registration of their luggage, to get their tickets, and, lastly, to wait, cooped up in a stuffy room, until allowed to get into the train. This can be partly obviated by allowing a friend to manage the luggage, while the invalid goes at once to the waiting-room—for, after all, it is better to rest there than to stand about in the draughty vestibule of the station; and even without a ticket an invalid will have little difficulty in entering the waiting-room. Here let me advise everyone to furnish themselves with Messrs. Cook's *through* tickets from London to Cannes, Nice, or Mentone, by which all further trouble about taking tickets at different stations is saved, and the journey is, in that respect, made easier. These tickets allow you to stop at Dover, Calais, Amiens, Paris, Fontainebleau, Macon, Dijon, Lyons, Avignon, and Marseilles, and on the east of Marseilles, at Toulon, Cannes, Nice, and Mentone, and they are good for a month. I can personally testify to the advantage of taking them. Another danger to the invalid is that of going too long without food, or, what is nearly as bad, of not getting it at the right time—when the appetite is most keen. That this is a real danger will be manifest when I say that between London and Paris (an eleven hours' journey) only about forty minutes are allowed at Calais for refreshment, and a few minutes at Amiens; and that between Paris and Lyons, supposing one travels by the 11 a.m. express (the best train for invalids to choose), which involves breakfasting at nine and leaving the hotel at ten o'clock, not more than five minutes are allowed at any station until Dijon is reached at half-past five, so that the fast will be a very long one unless foresight be exercised. I should advise persons, therefore, unless they are going to stay several days in Paris, to bring from London with them some provision for the journey in a basket. A well-cured ox-tongue is (*experto credite*) both easy to handle and palatable, and has the advantage of keeping well, so as to come in nicely for the Paris-Lyons journey. Between London and Paris, a chicken or pheasant, or any kind of meat which is fancied by the patient, can be eaten. A plain cake, and some grapes or pears, and a small bottle of claret or sherry and water, will not be found unacceptable. A supply of rolls can always be taken from the hotel. These particulars, which may appear trifling to healthy people, are, I am convinced, of the greatest importance for invalids to attend to. The following plan will, I think, render the journey to Mentone as easy as it can be made, until the introduction of saloon carriages and Pullman's sleeping cars. The invalid should go quietly down to Dover the night before crossing the Channel, and sleep at the "Lord Warden," or the very comfortable "Dover Castle Hotel," so that he need not rise so early as if he made the journey through from London in one day, and he can get himself and luggage comfortably on board the steamer before the mail train is in and the rush begins. Of course, if the sea is rough, he can wait until it is smoother; or he can go by the *Castalia*, about whose sailing qualities I can say nothing, having crossed on a smooth day, when vessels on the old and new systems were alike steady in their habits.

Those who go by the *Castalia* have to leave half an hour or more before the mail, and their luggage is visited at the Custom-house at Calais, instead of at Paris, which curtails the period for refreshment very considerably. Most people prefer to reach Paris the same night they cross; but if the invalid is very weak, I strongly advise stopping at Amiens, and proceeding leisurely the next day, so as to get into Paris in the daylight. There the sick man should be at once despatched to the hotel in a carriage (the Hôtel du Louvre is as good as any), and the tedious business of waiting for and examining luggage left to a friend. One clear day in Paris quietly spent (but not in sight-seeing) is most advisable; and on the third day, leaving Paris by the 11 a.m. train, as previously mentioned, Dijon should be the halting-place for the night, and the invalid should not attempt to reach Lyons in one day. I may mention, as a warning to those who think such a precaution superfluous, that, by neglecting it, a lady, now at Mentone, was laid up for four days at Lyons, too ill from fatigue to go further; and that another friend, whose temperature had previously been for several days normal, had a rise of it to 101° Fahr., accompanied with shivering, anorexia, and increase of cough and expectoration, after similarly overtaxing his strength. From Dijon it is possible to get to Lyons in good time, and without travelling very early or very late. Lyons is a bad place for chest patients to stay at; it is draughty and damp. It is better to sleep at one of the hotels near the station (Hôtel de l'Univers), leaving heavy luggage at the depôt, than to go to the low-lying hotels in the city. I advise invalids not to stay a moment longer at Lyons than they can help. According to the patient's strength he may either go direct to Marseilles, or, what is better, stay a night at Avignon (Hôtel de l'Europe), unless the weather is at all wet or windy, when Marseilles should be the stopping-place. Here the warm clothes of the North will be found almost too warm, and it will be expedient to lighten them a little; but the invalid must always remember to carry some kind of wrap to throw over him in passing from the hot sun into the cold shade. From Avignon the trains are convenient for getting to Marseilles before evening has well set in, and the distance is not long enough to be fatiguing. The Grand Hôtel de Marseilles and the Grand Hôtel du Louvre are both good, and, in consequence of having "lifts," are well suited for invalids, to whom many flights of stairs are necessarily trying. A day at Marseilles is advisable, and then Mentone may be reached the next day; or, better still, a night may be passed at Cannes, where the hotels are, in my experience, more suited for English travellers, and especially invalids, than at Toulon, which, *à priori*, would seem the better place. From Cannes a train, which reaches Mentone by daylight, should be selected. In this letter I shall say nothing about the choice of situation or hotels, but only say that, in choosing rooms, a southern aspect is indispensable, and that for some reasons, if the patient's strength permits, the higher floors are preferable to the lower.

P.S. November 26.—The weather has become much colder, and for the last two days there has been some snow on the mountains behind Mentone. On the 24th we had rather heavy rain in the night, and also throughout the day, and the air was very raw and chilly. On the 25th it was dull and cloudy all day, but milder and quite calm, so that one could sit out of doors. To-day has been magnificent, with clear bright sky and warm sun. In the shade, however, it is decidedly cold. Warm clothes and overcoats cannot be dispensed with.

FROM ABROAD.

The Paris Faculty of Medicine.

The Paris medical journals were, it seems, premature in stating that the new Dean and his assessors had been chosen by the Faculty, and approved by the Minister of Public Instruction. In fact, nothing has yet been done, and it is even not known whether the Minister will accept the proposals of the Faculty as to the mode of choosing these functionaries by its own selection, subject to his approval. M. Wallon, who, before he became Minister, was the author of the new French Constitution, is probably too much occupied in watching the throes of his bantling during the present crisis to be able to give much attention to the affairs of the Faculty.

However, the Faculty seems in a flourishing state, thronged by pupils willing to expand its curriculum, and having promises of ample funds for the purpose of reconstructing its buildings and providing new courses of lectures. The Government comes to its aid with a new Bill, which will be presented to the Assembly before its dissolution. It is intended to propose a vote of 2,370,000 fr. to be paid over to the city of Paris in three annual instalments for rebuilding the École Pratique and Cliniques. For these a new site is to be acquired 3000 metres in extent, and formerly the nursery-ground of the Luxembourg. The Municipality is to engage to have these buildings ready within three years of their commencement, to devote them to the purposes of the Faculty in perpetuity, and to provide for their due maintenance. The Municipal Court and the General Council of the Department of the Seine also have proposed an addition to the Budget of the city of Paris for 1876 of 500,000 fr., thus distributed:—75,000 fr. to the École de Droit, 200,000 fr. to the Faculté de Médecine, 100,000 fr. to the Faculté des Sciences, 100,000 fr. to the École de Pharmacie, and 25,000 fr. to the École Pratique des Hautes Études. Of the sum voted to the Faculté de Médecine, 56,000 fr. are to be employed in the establishment of twenty bursaries in Paris, and four for travelling bursaries. These last will be of the value of 4000 fr. each, and tenable

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for four years, while the Paris bursaries will be 2000 fr. each, and renewable for the whole period of study. The surplus will be devoted to the expenses incident to the additional material and assistance required for the contemplated extension of lectures and practical study. One of the improvements of teaching will be to raise the present almost dormant corps of *agregés* into auxiliary professors (somewhat analogous to the German privat-docenten and extraordinary professors); and the appointment of "monitors" to assist the commencing students.

The Committee of Hospital Officials and Professors recently appointed by the Minister of Public Instruction to consider the best means of improving and extending the clinical instruction of the Faculty of Medicine, has just delivered in its report prepared by Prof. Chauffard. The *Gazette Hebdomadaire* (November 26) has obtained a copy of this document, the purport of which we will state. Prof. Chauffard observes that the general medical and surgical clinics in France have long ceased to supply the necessary teaching of special subjects, and yet the Faculty has resisted the appointment of separate professorships for this purpose, under the idea that this would be to encourage specialism; but as the elaborate manner in which these specialities are now cultivated place them far beyond the domain of the general clinical teachers, unless such teaching is supplied by the Faculty itself, it will be, and, indeed, has been, provided beyond its walls. Prof. Rayer, when Dean of the Faculty several years since, instituted what he termed *Cours Cliniques Complémentaires*, which is a very just appellation, as these courses really constituted a complement to the general clinical lectures. The courses he endeavoured to establish were six in number—namely, for diseases of the skin, syphilitic diseases, diseases of children, ophthalmology, diseases of the urinary organs, and mental and nervous diseases. The lectures were to be delivered by the *agregés* of the Faculty. The working out of this plan has proved quite impracticable, owing to the Faculty not having at its disposal the hospital services necessary for clinical instruction, and which are under the management of the Assistance Publique. It has thus happened that sometimes these courses could, and at others could not, be delivered, and that they are now in the most uncertain and precarious position. Moreover, the courses when given are far too short and incomplete. The Reporter believes that it is essential that these hospital services should be made over to the Faculty, and that it should have the duty of nominating the professors to these special courses, which are to become regular and permanent. The selection of these special professors should not be confined to the *agregés* of the Faculty, the physicians and surgeons of all the hospitals that are unconnected with the Faculty being also eligible. The nomination should be for ten years, with power of re-appointment, and the payment should be at least 5000 fr. per annum, half of this being paid by him to an *agregé*, if called upon to supply the place of the professor. Besides these six special clinics, the Reporter also recommends the establishment at the Hôtel-Dieu or Charité of an odontological clinic for outdoor patients, all doctors of medicine being eligible for the post.

All these professorships being still only in the stage of proposal, exhibits the truth of a previous remark of the Reporter, that, as regards special teaching, France is far behind both England and Germany.

That there may be some difficulty in carrying out some of these recommendations may be expected, from what has just occurred with respect to the failure of the attempts at reviving the clinical lectures on insanity. Our readers are aware that a year or two since, M. Ferdinand Duval, Préfet of the Seine, exerting the arbitrary power with which French préfets are invested, peremptorily stopped the clinical lectures on insanity which were in course of delivery at the St. Anne Asylum. The Faculty, and other members of the profession, having sought in vain to induce him to withdraw his prohibition, the subject was brought before the Conseil-Général du Département de la Seine, at their meeting on November 20, when, according to the *Gazette Médicale*, November 27, several members, in the name of the committee charged with the management of the insane, strongly recommended the re-establishment of the clinical lectures. M. Duval refused to agree to their wishes on the following extraordinary ground. He declared that, on principle, he could only comprehend the sanctioning clinical instruction on one condition, namely, that the patient gave his consent to it. The lunatic being incapable of giving such consent, and the lunatics in the various asylums of the Seine being in a measure placed under the guardianship of the Préfet, he could not take upon himself to authorise their being made a kind of exhibition of, which might act painfully on the mind of the patients, and compromise instead of furthering their care. In vain did M. Béclard insist that medical instruction cannot exist in the absence of clinical lectures, and that the interests of science are here identical with those of humanity, and that the cause of the insane themselves is in question. The Conseil voted in favour of the lectures, as recommended by its committee; but the Préfet remained obdurate.

Violation of Medical Secrecy.

A case that was decided a few days since in the Paris Palais de Justice will probably act as a warning to impudent advertisers that some limit must be placed to the publicity with which they announce their cures. The defendant here happened to be a homœopath, but this did not influence the legal points at issue. It seems that the doctor was called in to the plaintiff's wife on account of an obstinate affection of the respiratory organs, which had resisted all treatment. He put her under a course of *silphium cyrenaicum*, and so satisfied was he with the result he had obtained from the use of the specific that he advertised an account of the case, in which he set forth its great gravity, stating, also, that the disease might be transmitted to the patient's children. Unfortunately, the lady was designated with such precision that numerous visitors called upon her to satisfy themselves of the reality of so remarkable a cure. Everything seemed to be proceeding in the most favourable way for the doctor, when the husband interfered in a most ungrateful (after the manner of patients and their friends) and disagreeable manner by bringing an action against the *soi-disant* benefactor. Not only did he deny that any amelioration had ensued on the use of the *silphium*, but he insisted that the publicity given to the case, by enlightening the patient as to the nature of her disease, might prove highly detrimental to her, while the future career of his children might be damaged by the public being made aware of their hereditary liabilities. In short, he maintained that this unfortunate announcement of the case, which the doctor had regarded merely as an innocent and profitable advertisement, was in reality an illegal violation of the law on medical secrecy. The Court also took this view of the case, and condemned the defendant to a fine of 500 fr. and costs. The plaintiff also, somewhat inconsistently with one of his pleas, obtained an order for the insertion of the judgment in four newspapers of his choice—contributing thus to the still wider diffusion of the knowledge of the existence of the hereditary liabilities of his family. "It is to be hoped," observes the *Gazette Hebdomadaire*, "that this judgment will teach the authors of these flaming advertisements a little more prudence in indicating the names and addresses of persons said to have been benefited by their remedies. Many persons are not best pleased at being paraded before their contemporaries with an aureola of more or less disgusting infirmities and diseases."

An Epidemic of Measles and Whooping-Cough.

In the *Berliner Klinische Wochenschrift* (Nov. 8), Dr. Königer gives an account of an epidemic which he witnessed in the vicinity of Oldenburg in 1868. In January of that year the measles appeared epidemically in the school district of Westerstede, imported apparently from Oldenburg, no case having occurred in the locality for months before. It traversed the district with exceptional mildness, although all the school-children, as well as the younger children at home, who had not had the disease, were attacked during January and February. At the beginning of March the first cases of pertussis appeared, and the whole of the children who were convalescent from measles soon became the subjects of this enigmatical companion-disease. The course of the latter was, however, highly favourable, no pulmonary complications of consequence occurring. Favourable as matters had been in the school district of Westerstede, far otherwise was it with two neighbouring school-districts, which became the seats of a co-existing whooping-cough and measles. In the districts of Halsbeck, five kilometres, and of Mansie, three kilometres only from Westerstede, pertussis and measles broke out at the same time, and during March and April, and the beginning of May, caused the deaths of fifty-two children. Almost without exception the two diseases attacked the school-children and their younger relatives at the same time, the pneumonic complications being very numerous, and, as a general rule, fatal. But during this same March and April the measles spread to two other school districts—Westerley and Hollwegg

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—without any accompaniment of pertussis; and in these two districts, as in Westerstede, the course of the disease was exceedingly favourable. Even the laity were able to see that the difference in the severity of the diseases in two school-districts, as compared with others wherein they had prevailed, was due to the school itself. The state of the weather and winds and the mode of treatment were identical in all these places, and the localities that suffered most were just as well off as those that suffered least. The schoolrooms in all the localities were over-crowded and ill-ventilated, and those of Mansie and Halsbeck were not exceptional in these respects. It was a matter of accident that the two infections of measles and pertussis, which succeeded each other at Westerstede, became combined in their action upon the unfortunate children in Mansie and Halsbeck, and gave rise to the fatal pulmonary complications. The object of Dr. Königer in making this somewhat tardy publication of the occurrence is to draw attention to the danger of these over-crowded and badly-ventilated schoolrooms, which may at any time become the breeding-ground of dangerous epidemics. The schools were closed in the districts wherever the epidemic occurred, but it was already too late. A well-timed prophylaxis will only be possible when schoolmasters, instructed to some extent as to the nature of children's communicable diseases and their premonitory signs, will have it imposed on them as a duty to exclude from the schoolroom any child that seems even slightly ill, until it has been examined by the medical attendant, independently of any request of the relatives, in order to be certain that the other children incur no danger of infectious disease from its presence among them.

REVIEWS.

The Elements of the Psychology of Cognition. By Robert Jardine, B.D., D.Sc., Principal of the General Assembly's College, Calcutta, and Fellow of the University of Calcutta. London: Macmillan and Co. 1874. Pp. 287.

This work is designed, the author tells us, principally for the use of students who are beginning their philosophical studies. Regarding it from this point of view, we must remark that, while we admit the subject has been handled ably, and expressed in language which is simple and intelligible, yet the treatment of it is too condensed for beginners, and there is nothing like a systematic doctrine contained in the book.

In a psychological work intended for the young student, we doubt the wisdom of dealing with only one of the great classes of phenomena which constitute mind, and of leaving the reader at the end of nearly 300 pages in entire ignorance of all the other parts of mental anatomy, excepting so far as they are involved in the description of this one part—cognition. For though there may be no actual separation of mental phenomena possible, and though it may be difficult to say whether a particular phenomenon should be classed as a feeling or a cognition, still there are distinctions between sensations, emotions, and intellectual and voluntary activities, which ought to be brought out clearly for the purposes of instruction, and which it is necessary for scientific ends to recognise, in order to classify these phenomena.

In our opinion, then, the work before us fails in its design, because it is concerned only with a fragment—and that the highest, most intricate, and most difficult—of psychology. The works of Bain and James Mill, for instance, though longer, yet, as furnishing a complete analysis of Mind, are far better adapted for beginners. In saying this, however, we feel bound in justice to Dr. Jardine to state that he gives his pupils full warning in his introduction that it is only on the psychology of the intellectual part of the human mind that he professes to write; and, further, that to some extent our preference for these authors is due to the fact that we are not followers of Dr. Jardine's philosophy, and do not often agree with his criticisms. Then, again, the criticising character of a great part of the book is calculated to perplex the student, who will thread his way with confused steps between the theories of transcendental and empirical philosophers, without, we fear, obtaining any accurate notion of the main differences between the teachings of these conflicting schools. No doubt Dr. Jardine's criticisms will induce those having any acquaintance with psychology to follow him in his examination of these different philosophies, but a succession of theories quickly passed in review is hardly likely to prove attractive or instructive to the novice.

In arriving at his own philosophical opinions the author acknowledges he has received much assistance from writers belonging to the school of so-called "Phenomenalism," and it is clear that he has carefully studied them, and is capable of appreciating their contributions to psychology; yet his chief object has been to show the inadequacy and unsatisfactoriness of this prevailing system, while his own doctrines point towards the transcendental philosophy. Those who follow the teachings of empirical philosophers, however, will observe with satisfaction how clearly this book gives support to the opinion, whether intentionally or not, that to this school belongs the credit of having established, by careful observation and *à posteriori* reasoning, those psychological facts which are now universally, and without question, accepted as part of our knowledge of the human mind.

If the whole field of psychological science is purposely not covered by the author, the limits of the science are nowhere overstepped either by flights into the regions of metaphysics or by digressions across the boundary-line of logic. He points out clearly enough that while the psychologist is concerned in the analysis of the complex mental processes, he has to look only to the *nature* of those processes, and not to the *results;* while, on the other hand, he implies that as psychology is a science concerned with the phenomena of consciousness, it is, for the most part, independent of metaphysics, and can be dealt with apart from metaphysical statements.

The materials required for a knowledge of Mind are drawn, as he tells us, from three chief sources—viz., from consciousness; from the physical organism; and from the *results* of continued mental activity, amongst the most important of which is "language." The author does well, we think, in admitting the importance to mental science of knowledge derived from observations in the two latter directions. To the history of the progress and development of the mind of the nation or race the attention of the student of philosophy is especially directed; but to anatomy and physiology a much more subordinate position is granted.

These sources are critically examined in the second section of the introductory chapter, and then the author proceeds to the consideration of the special parts of his subject. These he describes under three heads, and in the following order:—Chapter II., on "The Acquisition of Presentative Knowledge," consists of an analysis of perception and of sensations, etc. It shows, in fact, how we can resolve our mental phenomena into their simplest elements, and trace the manner in which these elements are combined into what is called presentative knowledge—*i.e.*, "knowledge which is immediately presented to the mind without having undergone any process of repetition, comparison, or inference." Chapter III. is entirely devoted to criticisms on the various theories of perception. Chapter IV., on "Representation," treats of the repetition or representation of mental phenomena, as exhibited in phantasy, memory, and imagination; while the fifth and last chapter is concerned with the "elaboration of knowledge," and includes the description of the processes of comparison, generalisation, and inference.

Touching the subject-matter of this work, there are one or two points to which we will now refer. Respecting the relation of Mind to Body, the doctrine that the mind is a function of the brain is opposed by the following criticism:—"The functions of all the organs with which we are acquainted are perceived by us either as some material product or some mode of motion. We are able to examine both the organ and the function as ordinary physical phenomena; both the organ and the function are made known by perception through the senses. But in the case of the brain, the organ is indeed capable of being examined as we examine any other physical organ, by external observation, aided by the employment of the dissecting-knife. And if we consider the brain as the centre of nervous force by which the muscles of the body are made to contract, we are able to perceive a function of the brain in its results—ordinary muscular motion. But mental phenomena are directly perceived only by consciousness, and are entirely different in kind from any of the functions of physical organs with which we are acquainted. Hence there is a strong presumption, which may be confirmed as we advance, against the hypothesis that the relation between the nervous system and the phenomena of the mind is identical with that between ordinary physical organs and their functions." On the other hand, the theory held by the older Cartesians and the older

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members of the Scottish philosophical school—viz., that Mind and Body are two different and independent substances—is, the author thinks, irrelevant, unscientific, and contrary to our experience. The theory which appears to him nearest the truth is one which asserts that there is a concomitance of the physical and mental phenomena, but which regards the relations between these two "partially co-ordinate series of events" as not accurately known. He remarks, "It is not legitimate to assume without satisfactory reasons that every mental phenomenon has a physical or nervous antecedent, any more than it is legitimate to take for granted that every organic action is the result of some conscious mental antecedent. As physiologists tell us about certain organic actions which take place in the body altogether independent of any mental determination, so there is an *à priori* probability that there are mental activities which are not connected with any particular physical movements." Thus Dr. Jardine opposes both the doctrine of dependence and the doctrine of independence of the mind and body, and starts a happy middle theory by supposing a concomitance or co-ordination of events.

Little is known, we are told, that is worth much about the relation of nervous action to feeling. Consciousness only is to be relied on for the direct revelation of mental facts; physiology may occasionally somewhat assist consciousness; but the attempt to make the facts and observations of physiology the foundation of mental science is tabooed as a perversion of the natural order of things. To this we may reply that others think differently, and that this opinion possibly may have to be considerably modified when mental phenomena and cerebral functions have been traced out from a physiological standpoint, in the comparative method, through the different grades of humanity—the courtier and the peasant, the learned and the unlearned, the sane and the insane—into the other divisions of the animal kingdom. The method of Darwin, when applied to the elucidation of psychological problems, will in all probability be productive of great and good results. Hitherto sufficient attention has not been given to this line of investigation, but it cannot be doubted that there is much to be done in this direction.

Dr. Jardine's criticism of J. S. Mill's theory of the idea of *extension* is, to us, confused and unsatisfactory. He tells us that the theory is altogether unmeaning, and that the idea whose origin the theory professes to explain is quietly assumed at the beginning of the explanation. Mill says that the mode in which we become aware of *extension* is by passing the hand or some other organ of touch from, say, two small bodies (A and B) placed sufficiently near together to admit of their being touched simultaneously with the right and left hands. Dr. Jardine asks why *muscular* sensations are chosen to fill up the intervening space between the one point and another. He then supposes the point A marked by a particular sensation of smell, and after a number of intervening sensations of various kinds, B, marked by another sensation (we presume of smell), is reached: is the result an idea of extension or space? "Certainly not," says the author. But, granted it is not, have we a refutation of Mill's theory? No; because this *starts* from the cognition of two *simultaneous* sensations which are *subsequently* experienced, after an intervening period of movement, as *successive*. This is not the same thing as if Mill talked of "two points of time existing simultaneously." This attempt to show the supposed absurdity of the theory would be less plausible still if A or B were supposed to be marked with sensations of sight or hearing instead of smell. The eyes and the ears approach more nearly the hands in being able to receive simultaneous impressions of their own kind, and of then receiving them as successive after an intervening period of movement.

Sir W. Hamilton, in his dissertations on Reid, thought he had crushed this psychological theory of extension, as it was expressed by Brown; but Mill, in his examination of Hamilton's philosophy, showed that the dilemma which looked so formidable had a blunted and abortive horn. He pointed out that Hamilton had not understood Brown's argument, which did not imply, as Hamilton supposed, that a *succession* of feelings could give us the idea of *simultaneous* existence; and he goes on to say: "The notion of simultaneity must be supposed to have been already acquired—as it necessarily would be at the very earliest period, from the familiar fact that we often have sensations simultaneously. What Brown had to show was that the idea of the particular mode of simultaneous existence called extension might arise, not certainly out of a mere succession of muscular sensations, but out of that added to the knowledge already possessed that sensations of touch may be simultaneous." We imagine that had Mill been living he would have dealt with Dr. Jardine's criticism of himself much as he did with Hamilton's refutation of Brown. The author is not, however, willing, as Reid and Stewart were, to let the whole question of the intuition of knowledge of matter depend on the inability of psychologists to explain the origin of the idea of extension, even though he refutes the most important attempt that has been made. He rejects the *à priori* theory, and confesses to "a strong prejudice against the explanation of a difficulty by some *latent* mental principle. It simply amounts to a confession that the difficulty cannot be explained; and, moreover, it assumes the existence of a mental principle beyond the sphere of consciousness—which is, in philosophy, a very questionable procedure." His own theory of conception of space he describes as intuitive; but it is based upon the fact that our sensations, though objects of consciousness, are inseparably connected with our physical organism—are objects to be distinguished from self, *i.e.*, are modes of the *non ego*—and are localised in our organism; *i.e.*, they involve extension. The power of localising sensations, he says, is born with us, is one of our *inherited* abilities, although it is probably perfected by the education of the senses.

One other point we will notice, and then we have done. The criticism of Mill's explanation of our knowledge of a material world is, we consider, misdirected. We refer to this for the same reason that Dr. Jardine has discussed the theory—viz., because it represents the opinions of a large class of psychologists. Mill's own words, which our readers will find in Chapter XI. of his examination of Hamilton, are as follows:—"The conception I form of the world existing at any moment, comprises, along with the sensations I am feeling, a countless variety of possibilities of sensation—viz., the whole of those which past observation tells me that I could, under any supposable circumstances, experience at this moment, together with an indefinite and illimitable multitude of others, which though I do not know that I could, yet it is possible that I might experience in circumstances not known to me. These various possibilities are the important thing to me in the world. My present sensations are generally of little importance, and are, moreover, fugitive. The possibilities, on the contrary, are permanent—which is the character that mainly distinguishes our idea of substance or matter from our notion of sensation." He adds, that these guaranteed or permanent possibilities of sensation have reference, not to single, but to groups of sensations; and that, in addition to fixed groups, we also recognise a fixed order in our sensations; an order of succession which, after observation, gives rise to the ideas of cause and effect. Those ideas become connected, not with sensations, but with groups of possibilities of sensation; and as the modifications which from time to time occur in these possibilities of sensation are quite independent of our consciousness or our presence or absence, we get to look upon them as much more real than the sensations. After this state of mind has been arrived at, we always refer a present sensation "to some one of the groups of possibilities into which a sensation of that particular description enters; and if we do not know to what group to refer it, we at least feel an irresistible conviction that it must belong to some group or other—*i.e.*, that its presence proves the existence, here and now, of a great number and variety of possibilities of sensation, without which it would not have been."

We are at a loss to see, as applied to this statement, the relevancy of the questions, "Is the possibility of a smell the cause of a colour? Is the possibility of a taste the cause of colour? Or is the possibility of all the other sensations of the group, taken together, the cause of the colour?" If we understand the theory correctly, no such sequence is implied. What is meant is, that a sensation or a group of sensations, excited by a piece of paper for instance, may cease on removing the paper, but that it will be again excited by placing ourselves under the same circumstances as before, and that there has been no intervening moment when this would not have been the case. But the possibilities remain in existence, though the sensations cease. Besides, these permanent possibilities belong to other human beings as well as to ourselves. The *permanent possibilities* are common to all; the *actual sensations* special to each of us. We do not see such utter incongruity between the antecedent and the consequent when looked at in this light. Nor does it seem to us that physical science thus becomes anything so

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very negative and shadowy, for we do not endorse the opinion that the object of science is to ascertain the laws and relations of "real objective non-phenomenal forces capable of correlation with, and transmutation into, one another." On the contrary, the object of science is to ascertain the laws and relations of visible, tangible, and measurable things—*i.e.*, of phenomena,—and the explanation of our belief in an external world by the permanent possibilities of sensation is, we imagine, quite sufficient for all purposes of scientific investigation.

FOREIGN AND COLONIAL CORRESPONDENCE.

FRANCE.

Paris, November 14.

TREATMENT OF LEAD COLIC IN THE PARIS HOSPITALS—A CASE OF PARACENTESIS PERICARDII, WITH REPORT TO THE ACADEMY OF MEDICINE BY DR. ROGER—OPERATIONS BY M. TILLAUX: FOR EPITHELIOMA OF THE HEEL, WITH OBSERVATIONS ON THE "BLOODLESS METHOD"; FOR KNOCK-KNEES; AND FOR ANCHYLOSIS OF THE HIP-JOINT, WITH GREAT DEFORMITY—AGES OF THE PENSIONERS AT THE HÔTEL DES INVALIDES—NUMBER OF MEDICAL PRACTITIONERS IN PARIS.

In going through the wards of La Charité Hospital lately, I was struck with the number of patients I saw there suffering from lead or painter's colic, for in one ward alone there were no less than six cases to be seen. I at first could not account for the presence of so large a number in this Hospital, but, remembering that it had the reputation of more successful cures of lead-poisoning than any other hospital, I made inquiries as to the particular mode of treatment adopted, and was furnished with the following formulæ, which I reproduce for the benefit of your readers, as I have no doubt it will interest them to know what is meant by "traitement de La Charité," when applied to cases of lead colic. On the first day a purgative enema composed of infusion of senna, sulphate of soda, and powder of jalap is administered. This is followed by a purgative mixture called "eau de casse" (cassia), and is composed as follows:—Decoction of tamarind sixty grammes, water 1000 grammes, tartar emetic fifteen centigrammes,—which the patient is to swallow in the course of the day; besides which he is to have a jug of decoction of guaiacum. In the evening an enema of walnut oil 125 grammes, ordinary claret 300 grammes. This is followed by a "bol calmant," composed of theriaca four grammes, opium five centigrammes. On the second day the patient is supplied with a drink composed of tartar emetic twenty-five centigrammes, water 500 grammes; this is facetiously designated "l'eau bénite" (holy water). Besides this, he is treated with the same "tisane" (decoction of guaiacum), the same enema, and the same bolus as on the first day. On the third day the patient drinks in the early morning two tumblers of a tisane composed of equal parts of an infusion of senna and decoction of guaiacum, and in the course of the twenty-four hours he is to take the same tisane, enema, and bolus as on the preceding days. On the fourth day a purgative draught of senna and jalap, followed by the tisane of guaiacum during the day, and the bolus at bedtime. Fifth day: Two tumblers of laxative tisane ordered on the third day, followed by the tisane of guaiacum, enema, and bolus as before. Sixth day: Idem. Seventh day: The two tisanes, the same enema and bolus as previously. For the first three days the patient is condemned to "diète absolue," which means total abstinence from food of any kind! This treatment, it must be confessed, must either kill or cure the patient, and strange to say, though purely empirical, it is considered the classical treatment for lead colic in the Paris hospitals, and is said to have been instituted by the monks that were attached to the Charité Hospital many years ago. Fortunately for the patients, lead colic is, generally speaking, not a fatal disease.

About the middle of last month, Dr. Chairon, Physician to the Convalescent Hospital at Vésinet, just outside Paris, submitted a paper to the Academy of Medicine on a case of paracentesis of the pericardium which he had performed some months previously. The case was that of a young artillery soldier, aged twenty-three, who was admitted into the hospital with symptoms which led Dr. Chairon to diagnose pulmonary tubercles, pleurisy of the left side, and pericarditis. As the symptoms soon became urgent, and the patient was threatened with suffocation, M. Chairon practised thoracentesis with Dieulafoy's aspirator, and drew off 1432 grammes of serous fluid; but as this afforded only slight relief, the pericardium was in its turn punctured with the same instrument, which was followed by a discharge of about 1000 grammes of bloody serum. Relief was immediate, but not of long duration, and the patient succumbed some days after. The autopsy confirmed the diagnosis of Dr. Chairon. What the paper was intended to prove, it is difficult to say, and the Academy, not much edified with the case, appointed a committee (of which M. Roger was reporter) to report upon it. M. Roger, with his usual lucidity, stated that paracentesis was an operation not only useless, but most dangerous in active dropsy of the pericardium; also in cases of effusion of blood, and in those of purulent collections connected with a general infection; whereas it is opportune, and perhaps salutary, in effusions in pericarditis. He then went on to say that the puncture should be practised in the fifth intercostal space, at a point intermediate between the sternum and breast, rather nearer the latter, bearing in mind the position of the apex of the heart, which may be displaced; and he cited several cases in which this organ has been wounded owing to inattention to this point. Moreover, it would be advisable in all cases to use capillary trocars, not only to avoid the heart, but because the wound produced by these instruments is perfectly innocuous. In his inquiry as to the therapeutical value of this mode of paracentesis, M. Roger concluded his remarks in the following terms:—"The operation, with certain exceptions, has no curative virtue; but it is positively indicated as a palliative agent, and sometimes constitutes the only resource of relief or of saving the patient's life. It will always be considered a daring operation; but there are circumstances in which the physician or surgeon must make up his mind to practise it."

With "the season" in Paris commences also the winter session of all educational institutions, which is by far the most important of the two sessions of the year, as for various reasons there is more real work done in winter than in summer. The lectures have been resumed at the Faculty of Medicine and at the hospitals, and the latter contain some of the most interesting cases I have seen for a long time. On a recent visit to the Lariboisière Hospital, I witnessed several operations performed by that young and promising surgeon, M. Tillaux, of whose ability I have had occasion to write in previous letters. In operating for an epithelioma of the heel in an old woman, M. Tillaux employed the "bloodless method," and remarked that this method was invaluable in all cutting operations on the heel, owing to the great vascularity of the latter. But one of the greatest objections that have been raised against this method was that the patient lost as much blood after the removal of the bandage as he would have done without it. To obviate this, however, M. Tillaux recommended the practice of completing the dressing *before* the removal of the bandage, which he did in the present case, and the patient scarcely lost any blood at all worth speaking of. In operating for an osteo-sarcoma of the upper jaw in a middle-aged man, M. Tillaux observed that in operations of the face the hæmorrhage was not at all in proportion to the extreme vascularity of this part of the body. This he attributed not only to the retractile property of the bloodvessels of the face, but to the retractile power of the muscles, which exerted considerable influence in closing the open mouths of the vessels, and driving the blood back towards the heart.

M. Tillaux is certainly a bold operator, and possesses all the requirements of a good surgeon. He is an accomplished anatomist, strong in *physique*, has a surgical hand, a keen eye, and a sound judgment. His powers of diagnosis are on a par with his other acquirements, and his remedies are generally most heroic. He has displayed these qualities on several occasions, and only last week he showed me two patients he had operated on about a year ago for knock-knees. Both the patients (one a girl and the other a lad) are nearly of the same age—about sixteen. The deformity in both was exactly the same—that is, the knees almost crossed each other, and the legs and heels were so far apart that they constituted the sides of a triangle, whose base may be represented by a line drawn from one heel to the other. To remedy this deformity, M. Tillaux, setting aside the classical treatment, fractured the femur just above its epiphysis, and then put the limbs up in splints as in ordinary fracture. To produce the fracture he draws the limb over the edge of the operating-table, and while the patient is

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under the influence of chloroform he presses upon it with his whole weight, and the bone snaps with a noise which may be heard some distance from the table. The result of the operation in the cases under notice is so far satisfactory, that, though still somewhat knock-kneed, the patients can walk long distances without the pain and inconvenience they suffered from before the operation; but, singularly enough, they have both come back to the hospital complaining of pain and weakness in the knee-joints, and one of them (the young lad) has a foreign body in one of his knee-joints, probably a fragment of the epiphysis of the femur. M. Tillaux intends keeping them under observation before taking any further action in their case.

About this time last year, I witnessed a similar operation performed by M. Tillaux, though not for the same deformity, and with the most perfect success. The case was that of a young woman who sought relief at the hospital, as one of her limbs was so deformed that it was perfectly useless to her, and consequently wished to have the deformity cured at any price, even at the risk of the removal of the limb itself. On examination it was found that the deformity was caused by anchylosis of the hip-joint, the result of morbus coxæ, contracted at her first confinement some few years ago. Besides being anchylosed, the limb was drawn up in such a manner that the affected thigh crossed over its fellow and lay so closely over it that it was hardly possible to pass the hand between them. This necessarily caused shortening of the limb to such an extent that she could just touch the ground with the tips of her toes. In this case M. Tillaux fractured the neck of the femur in the manner above described, and, after having broken up all adhesions that were in the way, the limb was put up in a long splint, and the patient made a most perfect recovery with scarcely any shortening of the limb—certainly less than what is usually observed in ordinary fractures of the thigh. The remarkable feature in this woman's case is, that notwithstanding the malposition of her limbs she became *enceinte*, and gave birth to a fine boy at full term, and made a very easy confinement. Since leaving the hospital she has again got into the family way, and is in the enjoyment of a fair amount of health, such as her position will admit, and can now walk about without the aid of a stick, touching the ground with the flat of her foot as with the other, which, however, gives her a slight limp.

This mode of treating such deformities is, as far as I have learned, peculiar to M. Tillaux, as none of the other surgeons, in Paris at least, have practised it. Indeed, it is generally looked upon with disfavour as being a most dangerous operation. At a final examination for the doctorship of the Faculty of Paris a pupil of M. Tillaux's presented a thesis in favour of the operation; but Professor Gosselin, the President of the Examining Board, condemned it, as, notwithstanding M. Tillaux's success, he did not see that it possessed any great advantages over the other methods of treatment in general use, but that, on the contrary, the patient ran greater risks of losing his limb altogether, if not his life. Moreover, added the learned Professor, the number of cases are as yet too limited, and the announcement of the cures too premature, to justify its general adoption. M. Tillaux, however, upholds the opinion that, where practicable, the operation is safer than either tenotomy or excision.

The *débris* of the army that fought its thousand battles under the First Napoleon is steadily on the decrease, and in a few years hence there will be none left to relate the exploits of their great captain. According to an official report recently published, there are at the Hôtel des Invalides 577 old pensioners of all ranks and arms. Of this number there are 67 maimed either by the enemy's bullet or sabre, or by the surgeon's knife; 18 blind, 2 deaf, and 100 confined to the hospital. Arranged according to age there are 157 who are under sixty, 125 from sixty-one to seventy, 220 from seventy-one to eighty, 71 from eighty-one to ninety, and 4 upwards of ninety. One of the latter was born in 1782, and is consequently ninety-three years old. He fought at the battle of Austerlitz by the side of another who is also an invalid and of the same age. It is not very long since there were still to be seen at the "Invalides" about twenty pensioners with their silver noses and chins, but of these traditional characters there is only one left. Thus it may be seen that with proper care and regular habits even wounded soldiers may live to a great age.

According to another official report there are at present in Paris 2000 medical practitioners—that is, 1700 doctors of medicine and 300 "officiers de santé,"—thus leaving a proportion of about one medical man to 1000 inhabitants, the population of Paris being estimated at nearly 2,000,000. Of the 1700 doctors there are 135 physicians and surgeons attached to hospitals; the *pharmaciens* amount to 750 in all.

Dr. Maurice Raynaud, an *agrégé* of the Faculty, and hospital physician, has been recommended by the other professors as successor to the late Professor Lorain, whose death we had to lament only a fortnight ago. Dr. Lorain, it will be remembered, was among the list of professors who were to lecture this session, his chair being that of the History of Medicine. Dr. Raynaud's antecedents would seem to justify the selection made by his colleagues, and it is anticipated that the Minister of Public Instruction will be only too glad to confirm the recommendation, as it is an appointment not much sought after.

GENERAL CORRESPONDENCE.

THE CHELSEA HOSPITAL FOR WOMEN.

LETTER FROM MR. J. MOGFORD.

[To the Editor of the Medical Times and Gazette.]

SIR,—I regret the necessity of asking you for space in your columns for a short explanation regarding myself in reference to your recent comments on the published statement of receipts and expenditure from July 1, 1874, to June 30, 1875, of the Chelsea Hospital for Women, to which institution I have acted as Secretary since November 10, 1873.

My engagement, signed by the Treasurer on behalf of the Committee of Management, was of a purely secretarial character, and excluded, at my particular request, the keeping of the accounts, which were consequently continued to be kept as before up to June 30 last. I had therefore nothing whatever to do with the finances except receiving, acknowledging, and handing over to the Treasurer the benefactions received from the public; and these have of course been duly vouched.

Before the close of the last financial year, however, a special resolution was passed by the Committee, transferring that duty to me from July 1 last. New account-books on a very simple and complete plan, suggested by myself—than which, in the words of the new auditor, "nothing could be better,"—were provided, and my request acceded to that they should be audited every month.

Having during my official career, and particularly during my eleven years' secretaryship of the Royal London Ophthalmic Hospital, received numerous and high encomiums upon the accuracy and completeness of my accounts; having also subsequently filled the office of private secretary to a foreign Minister—a position involving peculiar responsibility—with the utmost satisfaction and approval, I am not unnaturally averse to be, even inadvertently, included in any invidious criticism upon so important a point of public responsibility. To prevent the recurrence of such an unpleasant circumstance in connexion with the above-named institution, I thought proper, on the 3rd ult., to resign my appointment, and my duties ceased on the 29th ult. with an authentic audit of my accounts dating from July 1 last. I am, &c.,

8, Priory-road, Kilburn, N.W., Dec. 1. J. MOGFORD.

"THE CONSTRUCTION OF DISSECTING-ROOMS."

LETTER FROM DR. JOHN CURNOW.

[To the Editor of the Medical Times and Gazette.]

SIR,—I was surprised to find in a recent number a quotation from a paper by Dr. Lennox Hodge, of Pennsylvania, in which the dissecting-room at King's College is referred to as being the very reverse of what he would recommend in hygienic arrangement. He describes it as "being underground, in the cellar of the building, and extending under an embankment. The part in the building can be lighted only by gas, and that under the embankment by a closed skylight. The room is dark, damp, and foul; no windows, and no means for the free entrance of air are provided."

I am pleased to be able to assure you, sir, that none of these statements are applicable to our dissecting-room. It is not underground nor in the cellar of the building, nor does it extend under the embankment. It is a building on a level with the embankment, and with its own roof and skylights.

The necessity of descending two or three series of steps

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from the Strand entrance of the College must have given rise to Dr. Hodge's mistaken idea of its position. No gas was used therein until a few months ago, when two argand burners were placed at the base of the ventilating shafts, and these have been kept constantly lighted since, so as to insure a good upward draught. These shafts carry the foul air to the very top of King's College, and answer so well, that not only is the air in the room almost devoid of smell, but the occupants of the rooms whose windows overlook its roof do not complain of any unpleasant odour. The skylights are the very "box skylights" recommended by Dr. Hodge, and we have, in addition, side lights by windows (twelve feet by five feet), so that students are enabled to work from 10 a.m. to 4 p.m. throughout the year, uninterruptedly and without artificial light—an intensely foggy day or two excepted. These windows can be opened at the top so as to increase the amount of ventilation if necessary. The room is kept at an equable temperature by means of hot-water pipes, so that it is neither "dark, damp, nor foul."

In reference to the more general questions raised by Dr. Hodge, I may remind him that in London disconnected dissecting-rooms could only be obtained with great difficulty, and that their being placed in the top storey would not be an unmixed benefit. The bringing in of the subjects, and the disposal of the refuse, slop-water, etc., are more easily managed on a ground-floor. Open fireplaces are quite unnecessary in a properly warmed and ventilated room, and too often only serve for the congregation of students to talk and smoke, and so interfere with their work.

I suppose that Dr. Hodge must have visited our room when the Thames Embankment and District Railway were in course of construction, and when we were most unfortunately circumstanced in consequence; but even this does not explain the many errors in his description. I would add that most of the suggestions of Dr. Hodge which are feasible have been anticipated in the recent addition to our dissecting-room.

I am, &c.,
November 16.

JOHN CURNOW, M.D., Professor of Anatomy in King's College.

REPORTS OF SOCIETIES.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, NOVEMBER 20.

Dr. GEORGE BUCHANAN, President, in the Chair.

THE minutes of the previous meeting having been read and confirmed, it was resolved to send an address of condolence to the family of the late Dr. Sarvis upon his somewhat unexpected decease.

Dr. Stevenson and Mr. Danford Thomas were admitted members of the Association.

A communication was received from the President of the South Wales Sanitary Association, proposing that all the local health officers should be subordinated to a central authority for each county or district.

Dr. DRUITT made a few remarks upon medical education in India, highly commending the progress made in establishing colleges and schools for the training of native and European medical students throughout the empire.

Dr. CORNISH then read a paper upon "Sanitary Administration in India," of which we subjoin a summary:—The publication of the Report of the Royal Sanitary Commission for India in the year 1863 probably had the effect of first directing public attention in England to the question of the sanitary improvement of Indian stations. To the recommendations founded on the evidence collected by that Royal Commission we are certainly indebted for the constitution of a special sanitary service. In illustration of the statement that much useful sanitary work was done by men whose lives and labours are only known to us by the existence of manuscript records, permit me for one moment to dwell on a few points in the career of the first Head of the Medical Department in the Madras Presidency, Physician-General James Anderson, M.D. He acquired such repute for skill and sound judgment that on the organisation of the medical departments in the three Presidencies in the year 1875 he was selected to fill the chief office under the Madras Government—namely, President of the Medical Board and Physician-General,—an office he continued to hold until he died, full of years and honours, in 1809, having served the East India Company for a period of nearly half a century. In the manuscript *Proceedings* of the Madras Medical Board during the first year of its operations I find an able minute of Dr. Anderson's, in which he dwells upon the importance of recording, for the benefit of succeeding workers, all facts regarding the prevalence of disease and its probable causation; while in connexion with this minute is one of the earliest notices of a malady with which we have been in late years unhappily too familiar—viz., Asiatic cholera. At another time he advises the Government, in regard to the clothing and housing of troops, and the supply of comforts for the hospitals. Previous to Jenner's discovery of vaccination, I find him to have been an active advocate of inoculation for the small-pox, not confining his benevolence to the military, but extending the practice amongst the civil population wherever the growing power of the East India Company had acquired new territory. In one instance it is recorded that 16,000 persons were successfully inoculated in a single district, and only two deaths occurred from the small-pox thus artificially induced. What I have said of James Anderson might be said of many another, whose career of usefulness is now wholly forgotten or only dimly remembered. Very few of the present generation have had the opportunity of referring to the original reports of the Indian Medical Boards on the great cholera epidemic of 1817-18. Then, again, let me bring before you the great work instituted about the year 1835, at the instigation of one of whom all Indian medical officers were proud, but who has lately passed away from us, the late Sir Ranald Martin. I allude to the systematic series of medico-topographical reports brought out under the direction of the Medical Boards of the three Presidencies. In Madras all revenue districts, and every military and civil station, were minutely described in regard to seasons, climate, rainfall, soil, water-supply, elevation, agriculture, manufactures, physical characteristics of the people, diseases of men, animals, and plants. In regard to the military stations, the barrack accommodation, hospitals, and subsidiary buildings were all described and mapped. These medico-topographical reports were drawn up in all instances by medical officers, who, by long residence in the several localities, had acquired practical knowledge of their facts, and a good wholesome rule was introduced by the Medical Boards compelling all civil medical officers who had been five years in a station to submit a complete medico-topographical history of their stations and surrounding districts. Of the great value of these reports of special localities, differing widely, as many of them do, in all that relates to climatic and other influences on man, there could be no question. They brought before the young and inexperienced medical officer the recorded facts of the past, and directed his attention to the special features of the locality, and gave him the opportunity of adding to the experience of his predecessors, and also of correcting their errors or omissions. In the beginning of the year 1864 the Sanitary Commissions in India were established. The Commissioners were instructed to inspect and report on the existing barrack accommodation, and the various measures and improvements needful for the protection of the health of the populations, military and civil, of the various cantonments; to perform similar offices in regard to hospitals, gaols, and civil stations; to make suggestions for the introduction of a system of registration of births and deaths, and generally to watch over the health of all classes of the people. The new Sanitary Commissions were not established without some opposition, or at least passive resistance, but, thanks to the tact and discretion of the Presidents, and the growing conviction that the Government was in earnest in its intentions to secure adequate sanitary arrangements for its troops and civil communities, the obstacles were soon overcome. The work of the Sanitary Commissions began to proceed surely, if slowly, and within the first three years of their existence a large amount of sanitary legislation and good sanitary work was accomplished. The questions of water-supply and drainage for the great Presidency towns and military stations were discussed with more hopeful prospects of action being taken on them than at any time before. The military cantonment laws were amended and consolidated, especially in regard to regulations for the public health. Special provision was made for securing the cleanliness of native bazaars, and for the sanitary supervision of all buildings and lands within the boundaries of military cantonments. New legislation was brought about for the constitution of municipalities in towns of more than 10,000

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inhabitants, and in this way the local authorities of a large number of towns were made responsible for undertaking works of a sanitary nature for the public benefit. Regulations were formed for the management of the religious fairs and festivals at noted shrines. The diet and accommodation of emigrants proceeding on voyages by sea or river were readjusted, and the sanitary arrangements for prisoners in gaols were subjects of special report and recommendation. Regulations in detail were framed, showing the course of procedure to be adopted in outbreaks of cholera in military stations and in gaols. Carefully framed rules were laid down for the control of public women, and for the prevention of venereal diseases amongst the military. Standard plans for barracks, hospitals, and military buildings in the hills and plains were decided on; and the works of this nature projected and recommended in the first few years of the existence of Sanitary Commissions were estimated by Col. Crommelin, R.E., to involve a cost of not less than £10,000,000. One of the earliest works of the Sanitary Commissions was, to endeavour to organise the vital statistics of India on such a basis as to afford means for recording the fluctuations in the birth- and death-rates of the people. The difficulties in the way were enormous. In many parts of India the old village communes, with their staff of magistrates, accountants, messengers, and scavengers, had fallen into abeyance, and it was impossible to collect statistical data regarding the population by this agency. In the Madras Presidency, with which I am immediately concerned, the village communal system still largely prevails, and the village accountants are entrusted with the duty of registering the births and deaths within their several areas. Copies of these registers are forwarded monthly to the chief revenue official of the district, in whose office they are translated; and an abstract of the totals of each revenue subdivision, or registration area, is forwarded to the Sanitary Department. But in regard to deaths from cholera, I have been able, with the assistance of the police and revenue authorities, to have daily returns sent direct to my office, showing the number of attacks and deaths in each individual village, and in this way to obtain precise information as to the localities affected, and that without loss of time. The system of death-registration, considering its novelty, and the apathy and ignorance of the people, is working fairly well. A few years ago we commenced a registration of births, as well as of deaths, and in this respect, too, matters are progressing. I estimate that we already register about two-thirds of the aggregate deaths, and a little more than one-half of the actual births, in the whole population. My experience is, that deaths from cholera and small-pox are fairly registered, and that deaths from "fevers" include a more or less constant error, owing to the inability of unprofessional persons to discriminate between fevers *per se*, and diseases of which fever is merely a symptom. The districts exposed to an atmosphere direct from the sea are those in which the fever mortality is always registered at a minimum; while the mountainous districts in the interior show the maximum registration of fever mortality. Mr. Ellis recommended the appointment of a health officer for each revenue district, and a staff of inspectors and assistants, subordinate to him, independently of the existing medical staff in the various civil appointments. In 1868 the Government of India sanctioned the appointment of a Sanitary Commissioner for each of the separate Governments of the North-West Provinces, Punjaub, Oude, Bengal, Central Provinces, Hyderabad assigned districts, and Burmah, but left for further consideration the question of giving them a staff of health officers and inspectors to carry out the functions assigned to them. At the same time, the constitution of the existing Sanitary Commissions in Bengal, Madras, and Bombay was modified. Every year a detailed list of the works proposed in connexion with water-supply, drainage, improvement and enlargement of village sites, and establishments for cleaning and scavenging are sent to the Sanitary Commissioner for approval or suggestions. A good deal is done, year by year, in improving village wells and tanks, providing new ones where required, enlarging village sites, and in insuring greater cleanliness of the surface of inhabited areas. Hitherto the progress of sanitary improvements in rural districts has been crippled, both from want of funds, and want of qualified persons to devise and superintend such works. The town of Madras has recently spent £150,000 in bringing in and distributing a water-supply, and more money will be required to complete the distribution. The estimated cost of the proposed drainage scheme for the town is about £400,000. Calcutta has spent enormous sums upon water and drainage, and Bombay also has a water-supply, and is waiting for a drainage scheme that shall meet the natural difficulties of the locality. Other municipal towns have not been behindhand in works of public improvement; some of these are really very creditably managed, and their funds expended usefully. They all labour under the disadvantage of having a very large proportion of poor to provide for, and owing to the general poverty of the inhabitants, the average taxation for municipal objects does not amount to more than 1s. 6d. per head annually. In some parts of India the vaccinating staff is supervised by a medical officer, who acts directly under the local government; in others, the head of the Medical Department exercises a nominal supervision over the arrangements. In Madras, as I have already pointed out, vaccination is one of the duties entrusted to local boards, and paid for out of the local funds raised in the several districts. The vaccinators, therefore, are maintained and remunerated by the local authorities, and quite recently the Madras Government has transferred the inspecting staff of the Vaccination Department to the Sanitary Commissioner, and these duties will in future be carried on under the direct control of the public health service. I regard this transfer as an important step in a right direction. Vaccination in India is not yet compulsory; in many parts the people still practise inoculation, but in Southern India this is not the case to any great extent, and the people have no real objection to vaccination, though they are apathetic and ignorant, and will take no trouble to insure their protection from small-pox, except when a panic seizes them. At present about three-fourths of the whole population are unprotected by vaccination, but I am not without a hope that the representations made to induce Government to give local authorities the power of enforcing vaccination will ere long be attended to. Epidemics of small-pox in India run their course practically unchecked, except in a few places where vaccination is systematically practised. I have seen of adult prisoners 70 to 80 per cent. bearing small-pox scars. The paucity of qualified medical and sanitary agents in India is our great stumbling-block in the way of rapid improvement in sanitary administration. Schools of medicine have been established in the Punjaub, North-West Provinces, Hyderabad, Nagpore, Trabencore, and elsewhere; but these training-schools do little more than supply local demands, and a very considerable extension of their number will be found necessary. Provincial medical schools in various parts of the Presidency of Madras have been recommended; and as Government approves of the scheme, I hope soon to see it at work. Anybody can call himself a doctor and practise physic without let or hindrance. The consequence is, that the native who qualifies by long and hard study to practise his profession, finds himself in the position of competing with wise women, exorcists, and quacks of every degree. The medical profession, as a field for educated native labour in India, has received but little encouragement from the State; and without State protection and encouragement it cannot take its proper position as a pioneer of native thought and progress in useful and scientific knowledge.

In the debate which followed the reading of the paper,

Dr. LETHEBY hoped that the author would favour the Society with a paper as a sequel to the one just read, showing how far the various duties devolving upon the sanitary officials had been successfully carried out. He would be glad to hear how the distribution of the death-rate affects the vital statistics, and how far each is affected by the migratory habits of the natives, as also those of the soldiers and civilians. He would like to know what regulations are in force for the disposal of refuse and sewage, also with reference to the overcrowding of the poor in the cities and villages; how far, also, the dirty habits of the people and the density of population increase the death-rate; and if there is any check to unwholesome manufactures and dangerous occupations both of men and women.

Dr. DRUITT described a typical village or small town, such as he had visited in various parts of India. Near the centre of the town was a large tank of water, used for washing clothes and the feet before the devotee enters the adjacent temple. All slops and excrement are thrown into the gutter round the house. The water-supply is obtained from very suspicious sources.

Dr. CORNISH, in his reply, doubted if it were possible to enforce sanitary laws in the present condition of caste in India.

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He found the water analysis efficiently carried out in some of the cantonments. The natives prefer deep-well water for drinking purposes, and are particular about the quality. They very readily detect the magnesian salts in water. The higher castes keep their water-supply distinct from that of the common people. There is, however, much pollution of the drinking-water, for they think that water purifies everything it touches. In the mortality returns, deaths out of the districts are so returned when ascertained. Calcutta has a mortality of 25 per 1000. India is yet in the infancy of sanitary organisation, much remaining to be done. As a rule, municipal sanction is necessary for trades injurious to health.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

TUESDAY, NOVEMBER 23.

Sir JAMES PAGET, Bart., F.R.S., D.C.L., LL.D., President, in the Chair.

SUGAR IN HEALTHY URINE.

DR. PAVY demonstrated the existence of sugar in healthy urine. This was, he believed, much more commonly to be found than was supposed. It might be obtained in various ways, especially by acetate of lead. Thus procured, sugar might, as he showed, be demonstrated in healthy urine by all the ordinary tests—Moore's or the liquor potassæ test, Böttger's or the bismuth test, Fehling's modification of the copper test, and, finally, the crucial fermentation test.

ON AORTIC ANEURISM IN THE ARMY, AND THE CONDITIONS ASSOCIATED WITH IT.

Mr. FRANCIS H. WELCH read a paper, of which the following is an abstract:—The object of this paper, in view of the discrepancy of opinion on the causation of aortic aneurism, is to endeavour, by deductions made from a series of post-mortem examinations conducted at the Royal Victoria Hospital, at Netley, to place certain features of causation and pathology of this vascular lesion upon a basis of stability. The average death-age was thirty-two years, average period of service performed by the soldier twelve years, average duration of the lesion one and one-twelfth of a year. In five instances the dilatation of the vessel was multiple, the largest number of aneurisms in any one case being four; and in two instances an innominate aneurism was superadded to the aortic sac. The lesions (otherwise than the sac itself) observable in the bodies were capable of being arranged under two heads—(*a*) those mechanically produced by the pulsatile tumour; and (*b*) those indicative of a diathesis or general internal agency,—and the latter were rarely otherwise than syphilitic. The main object, however, of the paper being not so much to detail the disease as to inquire into its surroundings and causation, the statistics of its dispersion throughout the service are first given, to show that the disease is not peculiar to climate, station, or occupation, nor connected with age or any condition of system brought about by length of service; and upon this negative basis is superadded the positive basis furnished by the morbid anatomy and life-history of the cases comprised in this paper, the deductions arrived at being placed in the form of two propositions, the first of which refers to the condition of the vessel, and is as follows:—"That the aneurismal tumours are associated with, and preceded by, a diseased condition of the contiguous layers of the internal and middle coats of the vessel—a tissue-growth terminating in degeneration, which, by impairing the elasticity and contractility of the walls, allows of their expansion and dilatation under the tension of normal arterial blood-pressure, or this abnormally increased by any cause." The term "atheroma" is regarded as an extremely unsatisfactory designation of the disease, inasmuch as it expresses one possible phase only of it—that of degeneration,—and allows of the accumulation under the same nomenclature of structural changes divergent in origin and progress. Two forms of vessel-deterioration are embraced by it—one a distinct tissue-growth, an end-arteritis, an active lesion, having as one of its sequelæ the aneurismal sac; the other a mere opacity or occasional fatty degeneration of the inner surface of the vessel—a passive phase, followed apparently by no deleterious results between eighteen and forty years of age, the period of the soldier's service. The pathological chain of continuity between the aortic disease characterised by a tissue-growth and the aneurismal sac is complete and unbroken; and hence the important problem in etiology is to elucidate the exciting agencies in the development of the end-arteritis of the internal and middle coat, and these are given in the second proposition of the paper, which stands as follows:—"That these two forms of textural derangement of the aorta [the two spoken of as included under "atheroma"] are dissimilar in origin and causation; that the limited passive opacity is connected with long-standing diseases of various kinds, inducing a diminished vitality of the system at large; that the structural growth is, in the major number of instances, associated with syphilis, and in a minor degree with rheumatism and alcoholism, as causation; hence it follows that as the latter phase is the commencement of that pathological sequence of events under one aspect terminating as aneurism, the means for the prevention of the aneurismal tumour must be essentially directed towards the elimination of these special exciting agencies." The thirty-four cases of aneurism analysed stand as under:—50 per cent. in subjects saturated with the syphilitic virus, and with no other diseased conditions to detract from this deduction; 14 per cent. where syphilis was probably present, but not beyond doubt; 5·8 per cent. in acute rheumatic diatheses; 5·8 per cent. with excessive intemperance; 2·9 per cent. with syphilis, rheumatism, and alcoholism combined; 17·64 per cent. with no known conditions, from absence of information; and 2·9 per cent. where no associated condition could be elucidated. But as the aneurism is one sequel only of the aortic disease, a table is given to show the associated systemic condition of the aortic lesion as exemplified in 117 cases, as follows:—46·1 per cent. in undoubtedly syphilitic subjects; 6·8 per cent. probably syphilitic, but not beyond doubt; 21·3 per cent. in phthisical subjects; 14·2 per cent. with no records for determination; 5·9 per cent. with heart disease; 5·7 per cent. with various other diseases individually small. This table includes both forms of the aortic disease—the active growth as well as the passive degeneration,—but shows a great preponderance with syphilis. The subjoined facts, however, separate the lesions, and place each on its proper base. In 56 cases of syphilis terminating fatally through special lesions, 60·7 per cent. illustrated aortic nodulation, the major part of a severe type, and in about one-third of these—*i.e.*, 18 out of 56—the vessel disease had led on to dilatation more or less pronounced; that is to say, they were in the infantile stage of aneurism, and required only further development to bring them under this classification. Adding these infantile aneurisms, and including one infantile aneurism subsequently mentioned as due to the acute rheumatic diathesis, to the 34 of this paper, we have a sum total of 53; and of these 66 per cent. occurred in subjects infected with syphilis, but with no other diseased conditions to neutralise the deductions arrived at as the point of causation. Again, 106 post-mortems were taken, in which the non-existence of syphilis, both from the life-history and after-death data, was fairly deducible, in order to view the subject from an opposite direction; and the following results come out with reference to aneurism and the aortic disease:—Five cases of aneurism were present, and these are included in the aneurismal table of this paper under acute rheumatism, intemperance, and no known cause. Of the aortic disease, we get—in one instance it was severe, and had led on to dilatation in an acute rheumatic diathesis with great intemperance; in 5, or 4·7 per cent., the inner wall of the vessel was corrugated but not dilated—3 phthisical, 1 alcoholism, 1 aortic valve disease; in 29, or 27·3 per cent., the lesion was to be included under the passive phase of atheroma—mere opacity,—and of these 15 were associated with phthisis, and the remainder with renal affections, dysentery, diabetes, scrofula, lupus, cancer, in nearly equal proportions. Hence, then, from whatever light we regard the disease, the same feature becomes apparent; and as these aortic aneurisms are associated with syphilis to the extent of at least 66 per cent., and as nodular disease of the aorta is not often exemplified otherwise than with it, it becomes an incontrovertible deduction that the syphilitic virus must be regarded as a very potent cause in the development of the arterial lesion and its sequel, aneurism; but not the only one, for, as minor agencies, we must include the acute rheumatic poison and alcohol. It is considered that the chest constrictions to which the soldier is liable from the accoutrements, pack, etc., act as fostering influences to the diseased conditions engendered by syphilis, rheumatism, and alcoholism, these probably inducing a dilatation in the deteriorated vessel when no such result might ensue under ordinary circumstances, and under such amounts of physical exertion as pertain to the civil portion of the com-

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munity. The summary of the paper is as under:—1. That in the army we have a lesion of the aortic walls characterised by the presence of a fibroid growth, mainly in the internal coat, which, as a rule, ultimately disintegrates; and that this growth is connected with syphilis in a major degree, and rheumatism and alcoholism in minor degrees, as exciting agencies. 2. That this disease of the aortic coats may retrogress without producing any marked ulterior results upon the system at large, but, if extensive or severe, as a rule it is followed by one of three fatal phases—formation of aneurism, implication of aortic valve, or hypertrophy, with or without dilatation of one or more of the heart's cavities. 3. In the army there is also a lesion of the aortic walls, characterised by limited opacity or fatty change of the normal textures of the internal coat; this is common to all diseases associated with prolonged general deterioration, and especially lung-destruction, but it does not appear *per se* to lead to ulterior results. 4. That the chest constrictions and temporary forced exertions to which the soldier is liable act as adjuvants to the aortic disease in the production of aneurisms, as fostering influences to the germ laid by syphilis, rheumatism, and alcoholism. 5. That, in adopting preventive measures against aneurism, the attention must be primarily directed against the causes of aortic disease, notably the suppression of syphilis, and, secondarily, against the conditions of dress, etc., which assist in its development.

The PRESIDENT said the question of the syphilitic origin of aneurism had often been mooted, especially as regarded young subjects.

Dr. POWELL considered the careful paper by Mr. Welch a decided addition to our knowledge, but the real question was whether the lesion described was special in its characteristics or was it similar or identical with that found in non-syphilitic subjects? He had met with only one case in which the lesion could be considered at all syphilitic, and here there were depression and nodulation of the inner coats, not only of the aorta, but also of the pulmonary artery. He thought army surgeons over-rated the connexion between syphilis and aneurism. Certainly disease of the heart itself from syphilis was very rare, and there was no instance of syphilitic heart-disease in Mr. Welch's cases. In the army every attack of syphilis was returned, but not intemperance, save the men were drunk. He believed that many cases returned as syphilis were not really so.

Mr. BRUDENELL CARTER was desirous of a more accurate definition of what was meant by "syphilis": would a man he had seen twenty years after any sign of syphilis come under the category? He, too, seemed to think the evidence as to syphilis not very reliable.

Mr. MYERS said he had arrived at a conclusion, as to the relations between aneurism and syphilis in the army, totally different from that of Mr. Welch. Moreover, Dr. Maclean, of Netley, had published statistics showing that syphilis was not a special cause of aneurism in soldiers. Syphilis, no doubt, produced or favoured degeneration in various parts of the body, and the aorta might be affected as well as any other part; but why not other parts as well? Netley was not favourable to the study of syphilis, or any one specific disease. Men were received there from all parts of the world, and with all sorts of complications of disease. Aortic aneurism was greatly favoured by, if not entirely due to, external constriction. It occurred at points where the strain was greatest when the circulation was impeded.

Dr. DRYSDALE would have liked more particulars as to the cases declared syphilitic. He did not think that slightness or severity had any bearing on the formation of an aneurism in after years. Syphilis with slight manifestations was as dangerous as any other. He had seen cases of aneurism undoubtedly due to syphilis.

Sir W. GULL took exception to the word "node" as applied to the arterial degeneration referred to. Indeed, the author of the paper admitted that this nodular condition might be found in other connexions than with syphilis. But syphilis had specific characters of its own, which could not be mistaken for anything else. He was surprised to hear Dr. Drysdale say he had seen aneurism due to syphilis. As regards those cases of aneurism cured by iodide of potassium, he believed there had been a wrong diagnosis. They were not cases of aneurism at all. He had seen one case of abdominal aneurism said to have been so cured; but of what value were such reported cases without a post-mortem examination? He believed syphilis might have something to do indirectly with the causation of aneurism, but what proof had Mr. Welch that the patients were syphilitic save from these aneurisms?

Mr. WELCH said, in reply, that the life-histories of the patients had been taken from the medical history sheets, which were drawn up by different surgeons. There were distinct records of syphilitic affections, skin eruptions, sore throat, nodes, etc. No doubt aneurism might arise from other causes than syphilis, just as nodes on the shin might.

OBITUARY.

GEORGE WEBSTER, M.D., F.R.C.S. Ed., F.R.G.S.

PRESS of matter has prevented our referring previously to the lamented death of Dr. George Webster, of Dulwich, which took place rather suddenly on the 19th ult. Dr. Webster had reached the goodly age of seventy-eight, after a life of much usefulness in the wide circle of which he had been for so many years the centre. At twelve years of age Dr. Webster became the pupil of Dr. Arrott, a well-known physician and surgeon at Arbroath; at fifteen he was sent to the University of Edinburgh, and it used to be his boast that at eighteen the diploma of M.R.C.S. was conferred upon him. At this age he received an appointment on the medical staff of the army in Belgium, and remained with it until the Battle of Waterloo. Subsequently Joseph Hume offered him an appointment in India, but this he declined in favour of a partnership with Mr. Hall, the resident practitioner, at that time, in Dulwich, from which locality he never after moved. Dr. Webster was one of the founders of the British Medical Association, of which he was the President for fourteen years. He was likewise well known in his capacity of Justice of the Peace, and also as Chairman of the South Metropolitan Schools at Sutton. The interest he had always taken in advancing the education of the children of the poor was here manifested to a high degree, and it may with truth be said that the present efficiency of the Sutton Schools is a great deal due to his shrewdness and unwearied energy.

JOACHIM-ALBIN CARDOZA CAZADO GIRALDES.

THIS distinguished French surgeon, with whom so many of our readers must have made acquaintance and friendship during his numerous visits to England, died quite suddenly on Friday, November 26. On the preceding Tuesday he had taken a most active part in the discussion now going on in the Academy of Medicine on myopia, and he had only just left the Anatomical Society when he died. In fact, his life was passed amidst libraries and medical societies, and appropriately enough it was terminated in the library of the Academy of Medicine. Thoroughly master of several living languages, and endowed with a prodigious memory, he had stored away a truly remarkable amount of bibliographical knowledge, which was always at the service of his friends, and in some of the innumerable scientific discussions in which he took part was found to be of great inconvenience to those who sought notoriety by unjust claims of priority. He was, indeed, truly erudite in all that appertained to the profession, and especially the surgical division of it; and as regards our own country, certainly no Frenchman, and very few Englishmen, have ever had a better knowledge of what has been done here, or a readier power of calling up his knowledge at the moment wanted. His high appreciation of the condition of professional acquirements in this country obtained for him among his own countrymen, at one time, when the general diffusion of the knowledge of what is done in other countries was more rare than at present, a reputation of *Anglomania;* but those who knew him well also knew that French surgery had few warmer defenders than himself. His large acquaintance among the members of the profession on both sides of the Channel, his urbanity, activity, willingness to oblige, and anxiety to facilitate progress, rendered his friendship invaluable to those engaged in the literary branches of the profession. Monsieur Giraldès was in the sixty-seventh year of his age, member of the Academy of Medicine and the Society of Surgery, and of a large number of other learned societies, an *Agrégé* of the Faculty of Medicine, Surgeon to the Northern Railway Company, late Surgeon to the Hôpital des Enfants, and *Officier* of the Legion of Honour.

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MEDICAL NEWS.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, November 25 :—

De Fonmartin, Henry, Lying-in Hospital, York-road.
Mahoney, Laurence Francis, Amhurst-road, Dalston.
Roberts, Gordon Money, 82, Finchley-road.
Stephens, Meredith Lloyd, Belper, Derbyshire.

The following gentlemen also on the same day passed their primary professional examination :—

Buckell, Ernest H., University College Hospital.
Colquhoun, Daniel, Charing-cross Hospital.
Greenwood, Arthur, Charing-cross Hospital.
Hyne, Frederick Alexander, Guy's Hospital.
Roche, Eugenius A., St. Mary's Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

DAY, E. J., M.R.C.S. Eng., L.S.A.—House-Surgeon to the Dorset County Hospital, *vice* Mr. Hearn, resigned.

HAYWARD, S. T., L.K. & Q.C.P. Ire., M.R.C.S. Eng.—House-Surgeon to the Liverpool Infirmary for Children, *vice* A. James, M.B., resigned.

SAYNE, CHARLES ALFRED, M.B., M.R.C.S. Eng.—Assistant-Physician to the General Hospital and Dispensary for Sick Children, Manchester.

TWINING, A. H., L.S.A.—Junior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road, W.C.

WINSLOW, L. F., M.R.C.P. Lond., M.B. Cantab., D.C.L. Oxon.—Lecturer on Psychology at Charing-cross Hospital School.

NAVAL AND MILITARY APPOINTMENTS.

ADMIRALTY.—The following promotion has been made :—Commander Henry Forster Cleveland to be Captain in her Majesty's Fleet. The seniority of Fleet-Surgeon Dugald M'Ewan, M.D., has been altered to October 18, 1875, instead of October 19, 1875, as given in the *London Gazette* of the 9th inst. In accordance with the provisions of her Majesty's Orders in Council of February 22, 1870, and February 4, 1875, Fleet-Surgeon John Jack has been placed on the Retired List. M. Kearney, Surgeon, to the *Orwell*. Thomas T. Riordan, Surgeon, to the *Fox*. Henry Macdonnell, Staff-Surgeon, to the *Warrior*, in lieu of a Surgeon. Dr. W. R. Bennett, Staff-Surgeon, to the *Assistance*, from December 1.

WAR OFFICE.—MEDICAL DEPARTMENT.—Surgeon-Major Stanhope Hunter Fasson, M.D., to be Deputy Surgeon-General, *vice* James Macmillan Scott Fogo, retired upon temporary half-pay. Surgeon Robert de Burgh Riordan to be Surgeon-Major, *vice* Stanhope Hunter Fasson, M.D., promoted. Surgeon Thomas Young Baker to be Surgeon-Major, *vice* Sydney Alder, retired upon half-pay. Surgeon Frank Pout to be Surgeon-Major, *vice* John Smith Chartres, M.D., deceased. Surgeon William Godfrey Martelli, from the half-pay list, to be Surgeon, *vice* Wilmot Horton Trevor Power, who has resigned his commission. Surgeon Thomas John Peatfield retires upon temporary half-pay. Surgeon John Alexander Campbell retires upon temporary half-pay. Surgeon Edmund Vallance resigns his commission.

BREVET.—The undermentioned officer of her Majesty's Indian Military Forces to be granted a step of honorary rank on retirement :—Deputy Surgeon-General John Turner, Bombay Army, to be Surgeon-General.

BIRTHS.

ATTHILL.—On November 25, at St. Osyth, the wife of R. C. Atthill, L.R.C.P. Edin., of a son.

BULLOCK.—On November 30, at Overtown House, Spring-grove, Isleworth, the wife of Henry Bullock, F.R.C.S., of a daughter.

LOWNDS.—On November 23, at Egham-hill, the wife of T. M. Lownds, M.D., Surgeon-Major (retired) H.M.'s Indian Medical Service, of a son.

RICE.—On November 28, at 34, Cadogan-place, S.W., the wife of W. M. Rice, M.D., of a daughter.

STURTON.—On November 23, the wife of H. W. S. Sturton, M.R.C.S. Eng., L.S.A., of Burney-street, Greenwich, of a daughter.

TAYLOR.—On November 25, at Castlegate, Nottingham, the wife of H. O. Taylor, M.B., L.R.C.P., L.R.C.S., of a daughter.

MARRIAGES.

BAIN—STEEL.—On November 4, at Jounpore, N.W.P., India, Donald Barlow, youngest son of W. P. Bain, M.D., to Florence Maida, youngest daughter of the late Henry Steel, Esq., of Rungpore, Bengal.

CAMPBELL—MACDONALD.—On November 25, at Edinburgh, Edward B. Campbell, M.B., C.M., to Johanna Catherine Macleod, youngest daughter of the late Alexander Macdonald, Esq., Tormore, Isle of Skye.

CUNNINGHAM—COCKS.—On November 23, at Yew Bank, Broughty Ferry, William Ogilvie Cunningham, eldest son of James Cunningham, of Douglas House, West Ferry, to Annie, eldest daughter of the late Robert Cocks, M.D., of Dundee.

FURLEY—WOODMAN.—On December 1, at Christ Church, Lancaster-gate, the Rev. Edward Mainwaring Furley, M.A., second son of Edward Furley, Esq., of Town Malling, to Alice Emily, widow of Frederick Woodman, M.D., of Deal, and eldest daughter of the late Henry Cowie, Esq., of Calcutta.

HALL—POLLOCK.—On October 21, at St. John's Church, Nynee Tal, India, Geoffry Craythorne Hall, L.R.C.P. Edin., M.R.C.S. Eng., Surgeon, Bengal Medical Service, third son of Henry Hall, Esq., late War Department, to Louisa Amelia, eldest daughter of A. R. Pollock, R.C.S.

MACSWINEY—RAY.—On November 24, at the Church of St. Mary of the Angels, Bayswater, Eugene V. MacSwiney, M.D., 2nd Battalion 24th Regiment, eldest son of John MacSwiney, late of co. Cork, to Florence Mary, youngest daughter of the late Tom Ray, Esq., of 14, Pembridge-place, W.

MCKELVIE—GAEDICKE.—On November 22, at Berlin, civilly, and on the same day at the British Embassy, Robert McKelvie, M.D., of Cromer, Norfolk, to Mathilde, only daughter of the late Johann Daniel Gaedicke, P.H.D., Rector, Preuzlaw, Prussia.

POLLARD—JEANES.—On November 16, at Christ Church, Clifton, Clement Pollard, L.R.C.P., of 11, Lamb's Conduit-street, London, to Sarah Maria, elder daughter of Stephen Jeanes, Esq., of Caledonia-place, Clifton.

WHITE—RICKETTS.—On November 18, at Holy Trinity Church, Brompton, William Henry White, B.A., M.B., of Brook House, Westbury, Shrewsbury, to Sarah Annie (Cricket) Ricketts, niece and adopted daughter of Mrs. W. Hunt, of 16, Ovington-square, South Kensington, S.W.

WOOD—WHITE.—On November 29, at St. John's Church, Paddington, Henry Thorold Wood, M.R.C.S., of 86, Seymour-street, W., to Alice, elder daughter of Trayton White, Esq., of Eastbourne.

DEATHS.

COOPER, ALFRED, fourth son of George Cooper, M.R.C.S. Eng., L.S.A., at Croydon, on November 25, in his 23rd year.

DIXON, MARY, wife of Edward Livesey Dixon, L.R.C.P., at Fishergate, Preston, on November 29.

KIDD, ISABELLA, eldest daughter of John Kidd, M.D., at her residence, 37, St. Giles's, Oxford, on November 24, aged 69.

LEITH, ANDREW H., M.D., of H.M. Bombay Medical Service, late Inspector-General of Hospitals, and lately President of the Government Sanitary Commission in that Presidency, at Etherton Lawn, near Tunbridge Wells, on November 28.

MCEVOY, SARAH, beloved wife of Francis McEvoy, L.R.C.S.I., L.M., L.S.A., at Bexley Heath, on November 22.

SMITH, EMILY, wife of Henry Smith, F.R.C.S. Eng., at 82, Wimpole-street, Cavendish-square, suddenly, on November 25.

TULLOCH, JAMES STEWART, M.D., at 1, Pembridge-place, Bayswater, very suddenly, on November 27, aged 56.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

AMERSHAM UNION.—Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, on or before December 6.

BERKS COUNTY ASYLUM, MOULSFORD, WALLINGFORD.—Assistant Medical Officer. Candidates must be legally qualified, and unmarried. Applications, with testimonials, to Dr. Gilland, Medical Superintendent.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. FOX, 59, Princess-street, Manchester.

DENBIGHSHIRE INFIRMARY, DENBIGH.—House-Surgeon. Candidates must be duly qualified, unmarried, and conversant with the Welsh language. Applications, with testimonials, to the Chairman of the Committee of Management, under cover to the Secretary.

EAST SUFFOLK AND IPSWICH HOSPITAL.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, 11, Tavern-street, Ipswich, on or before December 8.

GLOUCESTER INFIRMARY.—Surgeon and Assistant-Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Committee, under cover to the Secretary, on or before January 27, 1876.

GREAT NORTHERN HOSPITAL, CALEDONIAN-ROAD, N.—Surgeon. Candidates must be F.R.C.S. Eng. Applications, with testimonials, to the Secretary, on or before December 9.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST, 26, MARGARET-STREET, CAVENDISH-SQUARE, W.—Visiting Physician. Applications, with testimonials, to the Secretary, on or before December 16.

REDDITCH AND DISTRICT MEDICAL AID ASSOCIATION.—Medical Officer. Candidates must be doubly qualified. Applications, with testimonials, to Mr. W. Aston, 147, Evesham-street, Redditch, on or before December 9.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Candidates must be duly qualified and unmarried. Applications, with testimonials, to the Honorary Secretary, on or before December 23.

SHEFFIELD GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before January 5, 1876.

ST. MATTHEW, BETHNAL-GREEN PARISH.—Medical Officer for No. 6 District. Candidates must be duly qualified. Applications, with testimonials, to Mr. J. R. Browne, Assistant-Clerk, on or before December 6.

STROUD GENERAL HOSPITAL.—House-Surgeon. Applications, with testimonials, to Dr. Paine, Stroud, Gloucestershire.

WORKSOP UNION.—Medical Officer and Public Vaccinator for the Whitwell District. Candidates must be duly qualified. Applications, with testimonials, to the Clerk of the Union, on or before December 7.

WESTMINSTER GENERAL DISPENSARY, GERRARD-STREET, SOHO.—Honorary Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Secretary before December 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Prescot Union.—The Farnworth District is vacant; area 10,794; population 3820; salary £30 per annum.

Rugby Union.—The Dunchurch District is vacant; area 14,454; population 2321; salary £40 per annum.

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St. Matthew (Bethnal-green) Parish.—The Sixth District is vacant.

Southmolton Union.—Mr. James Ford has resigned the Seventh District; area 9910; population 1642; salary £31 10s. per annum.

Wolstanton and Burslem Union.—Mr. Joshua P. Edwards has resigned the Tunstall District; area 5140; population 27,778; salary £65 per annum. Also the Workhouse; salary £60 per annum.

APPOINTMENTS.

Anglesey Union.—Lewis Thomas, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Amlwch District.

Burton-upon-Trent Union.—Samuel J. Smith, M.D., L.R.C.S. Edin., to the Etwall District.

Bury Union.—John G. Saville, L.R.C.P. Edin., L.R.C.S. Edin., to the Radcliffe District.

Crickhowell Union.—Philip E. Hill, M.R.C.S. Eng., L.S.A., to the Crickhowell District.

East Retford Union.—Daniel Rossiter, M.R.C.S. Eng., L.S.A., to the Leverton District.

Epping Union.—T. Fowler, L.R.C.S. Ire., L.K.&Q.C.P. Ire., to the Thoydon Garnon District.

Longtown Union.—Thos. H. Walker, L.R.C.P., L.R.C.S. Edin., to the High District.

Ulverstone Union.—J. Kendall, L.R.C.S. Edin., L.R.C.P. Edin., to the Conistone District.

Wimborne and Cranborne Union.—C. H. W. Parkinson, M.R.C.S. Eng., L.S.A., to the First District; Walter W. Smith, L.R.C.P. Edin., M.R.C.S. Eng., to the Second District.

A SINGULAR accident is reported to have occurred to the Archbishop of Dublin last week, on the eve of landing from the Holyhead steamer. As his Grace was descending the stairs into the saloon, one of the tendons of the knee suddenly snapped, and he fell heavily. He was immediately taken up and removed on a chair to the Marine Hotel, where he is going on favourably under medical treatment.

AT a meeting of the Edinburgh Obstetrical Society, held on Wednesday, the 24th ult., the following gentlemen were elected office-bearers for the next two years:—*President:* Professor A. R. Simpson. *Vice-Presidents:* Dr. James Young and Dr. Alexander Milne. *Treasurer:* Dr. William Craig. *Secretaries:* Dr. Charles E. Underhill and Dr. James Carmichael. *Members of the Council:* The office-bearers, and Dr. Angus Macdonald and Dr. Robert Bruce. *Librarian:* Mr. James Jamieson.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.—At a special examination-meeting of the College, held on Monday, November 29, Mrs. Ellen Sharp (Warwickshire Militia) was granted the licence to practise as a midwife and nurse-tender on very superior answering.

THE KEIGHLEY GUARDIANS "AMONG" THE PENITENTS.—The Keighley Board of Guardians have at length succumbed to the pressure brought to bear upon them through the Court of Queen's Bench, and have decided by a small majority to take immediate steps to carry out the compulsory clauses of the Vaccination Acts.

THE BLANE MEDAL.—Sir Alexander Armstrong, the Director-General of the Medical Department of the Royal Navy, has just reported to the College of Surgeons, as trustees of this prize, that to the following gentlemen has been awarded the Sir Gilbert Blane Gold Medals—viz., Fleet Surgeon Timotheus Haran, L.R.C.S.I. 1849, of her Majesty's ship *Glasgow*, 1874; and Staff Surgeon Richard Eustace, M.R.C.S. Eng. 1853, of her Majesty's ship *Himalaya*, 1873.

THE BIRMINGHAM LYING-IN CHARITY.—Dr. Charles Warden has resigned the office of Senior Honorary Surgeon to this valuable institution, having been associated with the Charity for nearly a quarter of a century, in its present form and as the Lying-in Hospital for Midwifery and the Treatment of Diseases of Women and Children. The General and Medical Committees passed resolutions highly complimentary to Dr. Warden as to his valuable services, and expressive of much regret at losing them.

RUMSEY TESTIMONIAL FUND.—Those desirous of subscribing to this fund are requested to do so at once, as the list will be closed before Christmas. Subscriptions may be forwarded to Dr. Buchanan, New Government Offices, Whitehall; to the Honorary Secretary; or to Messrs. Robarts, Lubbock, and Co., bankers. Cheques should be made payable to the Rumsey Testimonial Fund or bearer, and crossed "Robarts, Lubbock, and Co." Post-office orders should be drawn on the Curzon-street Post-office, and forwarded to Mr. W. H. Corfield, Honorary Secretary, 10, Bolton-row, Mayfair, W.

ROYAL COLLEGE OF SURGEONS.—At the half-yearly examination for the fellowship of this institution, which was brought to a close on Saturday last, fourteen candidates presented themselves, of which number eight were successful. The list cannot be published until submitted to the Council. The dates of their diplomas of membership ranged from November, 1860, to July, 1873. The following is a copy of the paper on Pathology, Therapeutics, and Surgery submitted to the candidates on the 25th ult.:—1. Describe minutely all the changes observed in the vessel, its branches, and its contents during the repair of a large artery after ligature. 2. What are the causes of non-union after fracture of a long bone? Describe the treatment you would adopt to obtain union. 3. Mention the conditions, local and general, co-existent with fracture of the skull which would guide you to a decision as to the propriety of trephining. 4. A man is the subject of strangulated inguinal hernia with well-marked symptoms. Taxis is applied, and the rupture passes back into the abdomen. Four hours afterwards, when the man is seen again, there is still urgent vomiting and no relief to the other symptoms. Explain fully the view you take of the probable nature of the case, and the treatment you would adopt. [*Erratum.*—In the list of gentlemen who passed the primary examination for the fellowship, Mr. E. W. Cottle, B.A. Oxon., L.R.C.P. Lond., of St. George's Hospital, was described as *not* being a member, a qualification which he possesses.]

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—*Bacon.*

Dr. Wolfe, Glasgow.—As soon as you care to begin.

Alad.—We fear we cannot undertake to answer our correspondent's rather extensive queries.

Jack-Daw, M.D.—The subject was alluded to in a contemporary last week: we see no occasion for repeating it.

Dr. Campbell.—Mr. S. E. Solly has just published an interesting pamphlet of forty pages, "On the Mineral Waters and Climate of Manitou, Colorado, U.S.A."

A Rejected Fellow.—Mr. Francis Mason, Surgeon to St. Thomas's Hospital, published a paper on the subject "Ununited Fractures," in the *Medico-Chirurgical Transactions.*

Sergeant-Surgeon.—We have heard that the honorarium is £200 per annum; but the late Mr. Greville, in his "Journal of the Reigns of George IV. and William IV.," states that McGregor told him that not one of the physicians and surgeons who attended the Duke of York through his long and painful illness had ever received the smallest remuneration, although their names and services had been laid before the King (George IV.). He stated, in addition, that during the sixteen years he had attended the Duke and his whole family he never received one guinea by way of fee, nor any payment whatever.

A Candidate.—We are informed that, some years ago, Westminster Hospital had four representatives on the Council of the College of Surgeons. The following Hospitals are represented on the Court of Examiners—St. Bartholomew's by Messrs. Holden and Savory, Guy's by Messrs. Birkett and Forster, University College by Messrs. Erichsen and Marshall, St. Thomas's by Mr. Clark, the London by Mr. Curling, St. Mary's by Mr. Spencer Smith, and St. George's by Mr. Holmes. The Hospitals unrepresented at the Court are the Charing-cross, King's College, Middlesex, and Westminster.

Paul F.—According to the last official report, the death-rate of the town of Lewes during the past quarter had only averaged ten and a fraction, being the lowest average known for many years. The epidemic of typhoid fever has quite subsided.

Hey J. W.—A case of fungus hæmatodes of the kidney, in a subject only four years of age, is related in the *Medical Gazette* for May, 1831.

G. S. S.—Dr. Clutterbuck first discovered the fecula now called elatin. See his paper in the *Medical Repository*, quoted by Dr. Paris.

COMMUNICATIONS have been received from—

Mr. WEBSTER, Dulwich; THE REGISTRAR OF APOTHECARIES' HALL, London; Dr. SPARKS, Mentone; Dr. DORAN; Mr. W. BAXTER, London; Mr. A. DAVEY, Winkleigh; Mr. GROSS, Gibraltar; Dr. NEWBOULD, Gisborne; Mr. H. K. HITCHCOCK, Lewisham; Mrs. BAINES, London; Surgeon-Major STAPLES; Mr. E. J. DAY, Dorchester; Mr. D. JONES, London; Mr. E. HODGOOD, Ryde; Mr. J. MCKEDWIE, Cough; Mr. T. P. PICK, London; THE REGISTRAR-GENERAL, Edinburgh; ALED; Dr. TAAFFE, Brighton; Dr. J. W. MOORE, Dublin; OUR HASTINGS CORRESPONDENT; THE SECRETARY OF THE HARVEIAN SOCIETY; Mr. GOYDER, Bradford; Mr. MAUNDER, London; Mr. F. LOWNDES, Liverpool; Dr. LEESON, Ilkley Wells; SECRETARY OF THE CLERICAL AND MEDICAL LIFE ASSURANCE COMPANY; Dr. WARDEN, Birmingham; Mr. GERMAN REED, London; Mr. GORDON BROWN, London; Professor LAYCOCK, Edinburgh; Mr. JONATHAN HUTCHINSON, London; Mr. HENRY MORRIS, London; Mr. J. CHATTO, London; Mr. W. E. POOLE, London; Mr. GEORGE BROWN, London; Dr. B. FOSTER, Birmingham; Mr. H. A. ADAMSON, North Shields; OUR GLASGOW CORRESPONDENT; Dr. CORFIELD, London; THE REGISTRAR OF THE UNIVERSITY OF LONDON; Dr. C. V. GUISAN, Vevey; Mr. F. G. LARKIN, London; Mr. A. MACKENZIE, London; Mr. D. JONES, London; Dr. L. WINSLOW, London; Dr. W. T. HAYWARD, Liverpool; Mr. H. PIKE, Gloucester.

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BOOKS AND PAMPHLETS RECEIVED—

Harvey and Davidson's Syllabus of Materia Medica, third edition—Moore's Medical History of the Meath Hospital—Des Propriétés Physiologiques du Bromure de Camphre, par M. le Dr. Pathault—Bulkley on the Management of Eczema—Two Cases of Exophthalmic Goitre, by L. D. Bulkley, M.D.—Bulkley on the Relations of the Nervous System to Diseases of the Skin—Bulkley's Analysis of One Thousand Cases of Skin Disease—Bulkley on the Relations of the Urine to Diseases of the Skin—Quain's Anatomy, vol. i., eighth edition—Archives of Dermatology, vol. i.—The Dispenser's Chart—Brown's Aids to Anatomy—Statistics of Births, Marriages, and Deaths in the City of Philadelphia for the year 1874, compiled by W. H. Ford, M.D.—Transactions of the Pathological Society of London, vol. xxvi.—Fox's Atlas of Skin Diseases, part 3—Bentley and Trimen's Medicinal Plants, part 3.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Paris Médical—Deutsche Medicinische Wochenschrift—Journal d'Hygiène—Leisure Hour—Sunday at Home—Scotsman—Science Gossip—Glasgow Herald—Hastings and St. Leonard's Independent—Monthly Microscopical Journal—Edinburgh Medical Journal—Dublin Medical Journal—Sanitary Review—Tallerman's Table-Talk.

APPOINTMENTS FOR THE WEEK.

December 4. Saturday (this day).

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

6. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. Maunder, "The Arm seven years after Excision of the Elbow-Joint" (living specimen). Mr. Alfred Freer (of Stourbridge), "On a Case of Impalement, with post-mortem results four years and a half afterwards." Dr. Robert Lee, "On Different Forms of Pessaries."

7. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Mr. Hutchison—Molluscum Contagiosum. Mr. John H. Morgan—Dilatation of Bile-Ducts. Dr. Fred Robinson—Aneurism of Aorta. Dr. Habershon—1. Obliteration of Superior Cava; 2. Ulceration of Duodenum, extending into Vena Portæ. Mr. A. Morison—Disease of Pulmonary and Tricuspid Valves. Mr. Thomas Smith—Hæmorrhagic Periostitis. Dr. Gowers—Fatty Tumour of Cord. Dr. Wickham Legg—Congenital Deficiency of Common Bile-Duct, and consequent Cirrhosis. Mr. Nunn—1. Injury to Radius; 2. Deformity from Rheumatic Gout. Dr. T. D. Griffiths—Cirrhosis of Liver in a Child. Mr. Godlee—Recurrent Epithelioma in Chest and Toe after successful Excision of Tongue. Dr. Greenfield—1. Cancer of Heart and Supra-Renal Capsules; 2. Cancer of both Breasts and Ovary. Mr. Walsham—Tumour of Clavicle. Dr. Fred Taylor—Aneurism of Aorta opening into Stomach. Mr. Alban Doran—Arrest of Development of both Forearms. Mr. Spencer Watson—Report of Sequel of Dr. Walker's case of Recurrent Sarcoma of Leg. Dr. Goodhart—Embolic Infarction in Heart Muscle.,

8. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Epidemiological Society, 8 p.m. Dr. John Wortabet (Physician to St. John's Hospital at Beyrout), "Sketch of the recent Cholera Epidemic in Syria."

Hunterian Society (London Institution), (Council Meeting, 7½ p.m.), 8 p.m. Mr. Herbert Tibbits, "On Electro-Therapeutics," illustrated by Instruments.

9. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

Harveian Society, 8 p.m. Dr. Sibson, "On Bright's Disease and its Treatment: considered mainly in relation with Arterial Tension from Blood Contamination." (Second Harveian Lecture; date altered from December 16.)

10. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Clinical Society, 8½ p.m. Dr. Donkin, "On a Case of Diabetes treated with Skim Milk." Mr. Haward, "On a Case of Lymph-Adenoma." Dr. T. S. Dowse, "On a Case of Thrombosis of Cavernous Sinus; sudden Loss of Vision; Hæmorrhage into Anterior Lobe." Mr. Venning, "On a Case of Congenital Tumour."

VITAL STATISTICS OF LONDON.

Week ending Saturday, November 27.

BIRTHS.

Births of Boys, 1192; Girls, 1111; Total, 2303.
Average of 10 corresponding years 1865-74, 2183·8.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	763	741	1504
Average of the ten years 1865-74	802·7	787·9	1590·6
Average corrected to increased population ...	...	...	1702
Deaths of people aged 80 and upwards ...	...	...	45

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	11	16	2	13	1	4	...	3
North	751729	...	9	32	...	12	1	4	1	3
Central ...	334369	...	5	9	...	2	...	3	...	1
East	639111	...	8	29	2	9	...	1	3	2
South	967692	...	21	84	3	19	...	6	1	5
Total	3254260	...	54	190	7	55	2	18	5	14

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·896 in.
Mean temperature	36·0°
Highest point of thermometer	45·6°
Lowest point of thermometer	29·3°
Mean dew-point temperature	32·6°
General direction of wind	N. & N.E.
Whole amount of rain in the week...	0·01 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, November 27, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Nov. 27.	Deaths Registered during the week ending Nov. 27.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2303	1504	45·6	29·3	36·0	2·22	0·01	0·03
Portsmouth ...	122632	27·3	75	35	...	...	...	...	...	...
Norwich	82842	11·1	33	30	43·5	30·0	37·0	2·78	0·82	2·08
Bristol	196186	44·1	120	107	42·4	26·7	36·2	2·33	0·01	0·03
Wolverhampton ...	71718	21·1	45	26	42·8	27·7	35·4	1·89	0·06	0·15
Birmingham ...	366325	43·6	264	159	43·8	29·0	35·8	2·12	0·08	0·20
Leicester	109830	34·3	59	40	43·5	30·2	36·3	2·39	0·29	0·74
Nottingham ...	92251	46·2	54	48	...	...	...	...	...	...
Liverpool	516063	99·1	393	241	43·2	29·5	36·6	2·56	0·00	0·00
Manchester ...	356626	83·1	258	172	...	...	...	...	...	...
Salford	135720	26·3	117	81	44·4	26·0	36·0	2·22	0·63	1·60
Oldham	87437	18·7	77	42	...	...	...	...	...	...
Bradford	168305	23·3	117	77	41·2	31·0	36·3	2·39	0·21	0·53
Leeds	285118	13·2	228	153	42·0	32·0	37·5	3·06	0·25	0·63
Sheffield	267881	13·6	198	107	43·0	30·0	36·3	2·39	0·28	0·71
Hull	133932	36·8	92	53	45·0	30·0	37·3	2·95	1·71	4·34
Sunderland ...	106342	32·2	88	40	48·0	33·0	39·3	4·06	0·81	2·06
Newcastle-on-Tyne	137665	25·6	121	83	46·0	31·0	39·0	3·89	0·74	1·88
Edinburgh	211626	50·5	122	98	45·0	32·0	37·5	3·06	...	...
Glasgow	534564	88·6	346	251	46·6	30·6	36·4	2·44	0·15	0·38
Dublin	314666	31·3	188	169	47·5	26·5	38·7	3·72	0·35	0·89
Total of 21 Towns in United Kingdm	7742889	37·0	5298	3516	48·0	26·0	36·9	2·72	0·40	1·02

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·60 in. The lowest was 29·77 in. on Sunday morning, and the highest 30·08 in. on Tuesday morning.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CLINICAL LECTURE
ON A CASE OF ACUTE HIP-JOINT DISEASE.

DELIVERED AT THE LONDON HOSPITAL, OCTOBER 5,

By C. F. MAUNDER, F.R.C.S.

[Reported by Mr. JOHN JOB, House-Surgeon.]

CHARLES S., twenty-five years of age, married, by occupation a clerk, was admitted on September 17, 1875, under the care of Mr. Maunder.

The patient states that he has always led a temperate life, has had no hardships, and remembers having had only one day's illness, but has never thought himself a very robust man. Family history is good. On the day before he was taken ill, he stayed for more than an hour in his garden. The ground was very damp from previous rain, and it was evening. He does not remember striking his hip.

Nine weeks ago he was quite well in every respect. He arose one morning in his usual health, and in the afternoon of the same day was seized with pains at the upper and inner part of the left thigh. The pain was severe, and was accompanied by vomiting. These pains continued for ten days, during which time he kept at rest. They then subsided, but only to be followed almost immediately by similar pains on the outer side of the limb, and in the course of the great sciatic nerve. Three weeks subsequently, a decided swelling formed on the outside below the great trochanter, which was opened by his medical attendant, and much pus liberated. Has had no pain in his knee. He looks wasted; is very weak, and unable to stand. As the patient lies in bed, the thigh is seen to be slightly flexed upon the pelvis, and when either active or passive flexion and extension of the thigh are adopted, these movements occur in the loins. The hip-joint itself is immovable. No pain is felt when the thigh is pressed against the acetabulum. There is neither lengthening, shortening, eversion, nor inversion. The pus discharged is laudable, and much less in quantity than it was a month ago. Pulse soft, 114 to 120; the slightest emotion quickens it. Tongue clean, large, and flabby. Appetite good; bowels show a tendency to be relaxed. Skin moist; temperature 100·5°; no excessive sweating. Sleeps fairly. Urine normal.

Gentlemen, the first point that strikes one is that this affection of the hip-joint is unlike, by reason of the rapidity of its progress, the very large majority of cases of hip-joint disease with which we are familiar. You must have remarked the very chronic nature of this affection. Such being the case, we have to seek for the possible cause of the malady. It certainly has not the ordinary history of struma, which is insidious and protracted in its onset and progress. On the contrary, the patient was quite well "in every respect" on one morning, when, in the afternoon of the same day, he was seized with pains about the upper part of the thigh. These pains continued for ten days and then subsided, but only to be immediately followed by repeated pain. A few days after this, a swelling makes its appearance, and a large quantity of pus is set free by incision. On the evening before his attack he spent an hour in his garden, which was very damp from previous rain. Here, then, we have the clue to his illness. You have only to look at the man to see that he is naturally weakly, with a thin skin, clear complexion, fine hair of an auburn tint, long eyelashes, and delicate features. The cold led to internal congestions, and his weak point, the hip-joint, yielded to its baneful influences. An acute inflammation, followed by rapid effusion within the joint, leading to tension of the unyielding capsule, explain the first period of pain; but there is a lull in the storm, and this, no doubt, indicated a moment at which the overstretched capsule yielded at its weakest point to ulceration or progressive absorption, and the contents became extravasated amongst the surrounding structures. This inflammatory product thus diffused became the source of more cell-growth, of more suppuration, and ultimately approached the surface at the point at which it was liberated by the knife. Some days subsequent to this we may be said to come in contact with our patient. There is a free discharge of pus, associated with immobility of the joint,—and this latter is the only symptom present indicative of joint disease. The rapid progress of the malady accounts for the absence of those objective symptoms which we are in the habit of associating with chronic hip-joint disease.

Prognosis.—Our prognosis should be unfavourable, more especially as the malady has apparently occurred from slight cause. It is true there is no history of accident, but it may be that in childhood that hip-joint was injured by a forgotten blow, and is, therefore, the man's weak point. Then, again, the abscess-cavity (for it must be recollected the original joint no longer exists) is large, has a wide secreting surface, and is deeply seated—two factors likely to prolong suppuration and burrowing, and to promote exhaustion.

Treatment.—In contemplating the man's present position, these latter circumstances claim our first consideration. We must endeavour to promote the free exit of pus, and to prevent decomposition of it in the wound, and at the same time to lessen the secreting surface. Happily the pus is laudable and inodorous, and, judging by palpation of the condition of the limb and the patient's general state, the abscess-cavity is contracting, the secretion of pus is less, and there is no decomposition. So far, then, his condition, though serious, is satisfactory; but should the symptoms alter for the worse, even in a slight degree, or should starting pains arise, indicating that inflammation had attacked the bone, the question of excision, or even of amputation at the hip-joint, would have to be quickly entertained. To avoid one or other of these severe measures, we must support the man's general health by a liberal diet; local cleanliness must be enjoined, while the joint is kept at rest by a suitable splint. I propose to employ a splint which has been used, and is extolled, by Mr. Thomas, of Liverpool. The principle of its action is closely allied to that of the time-honoured long splint, but it has this advantage over the latter, that, being made of soft iron, it is moulded to the inequalities of the trunk and limb of the patient, and when he is strong enough to move about on crutches, it can be worn without discomfort, and at the same time maintain the joint immovable. Fibrous anchylosis will be thus encouraged.

There is one other point in the treatment of suppurating joints, which has, perhaps, not been sufficiently entertained. It is that certain important viscera, such as the liver and kidneys, are liable to take on diseased action called waxy, lardaceous, or amyloid degeneration, and insidiously destroy the patient's life. This danger should encourage us to use all means in our power to prevent chronic suppuration.

THE PARIS ACADÉMIE DE MÉDECINE.—Sir Robert Christison has just been elected Foreign Corresponding Member by forty-eight votes of sixty-four voters.

COMPOSITION AND QUALITY OF THE METROPOLITAN WATERS IN NOVEMBER.—The following are the returns (by Dr. Letheby) of the Society of Medical Officers of Health:—

Names of Water Companies.	Total Solid Matter per Gallon.	Oxygen required by Organic Matter, &c.	Nitrogen.		Hardness.	
			As Nitrates &c.	As Ammonia.	Before Boiling.	After Boiling.
Thames Water Companies.	Grains.	Grains.	Grains.	Grains.	Degs.	Degs.
Grand Junction	21·03	0·173	0·115	0·002	16·5	4·2
West Middlesex	20·17	0·057	0·135	0·000	16·0	3·3
Southwark & Vauxhall	20·87	0·169	0·131	0·002	16·5	4·2
Chelsea	20·70	0·126	0·137	0·001	16·0	4·0
Lambeth	20·73	0·145	0·147	0·001	16·0	3·8
Other Companies.						
Kent	23·17	0·019	0·344	0·000	20·6	6·0
New River	20·67	0·054	0·147	0·000	16·0	3·3
East London	21·23	0·070	0·184	0·001	16·0	3·8

Note.—The amount of oxygen required to oxidise the organic matter, nitrites, etc., is determined by a standard solution of permanganate of potash acting for three hours; and in the case of the metropolitan waters the quantity of organic matter is about eight times the amount of oxygen required by it.

The water was found to be clear and nearly colourless in all cases but the following, when it was slightly turbid—namely, in those of the Grand Junction, the Southwark and Vauxhall, the Chelsea, and the Lambeth Companies.

The average quantity of water supplied daily to the metropolis during the preceding month was, according to the returns of the Water Companies to the Society of Medical Officers of Health, 117,744,907 gallons; and the number of houses supplied was 521,068. This is at the rate of 34·2 gallons per head of the population daily. The last official return from Paris stated that the average daily supply per head of the population was 28·2 gallons; but this includes the water used for the public fountains, and for the ornamental waters in the Bois de Vincennes and the Bois de Boulogne.

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ORIGINAL COMMUNICATIONS.

CASES OF OBSCURE NERVE DISORDER.

By C. HANDFIELD JONES, M.B. Cantab., F.R.S.,
Physician to St. Mary's Hospital.

(*Continued from page 442.*)

Case 14.—*Diabetes Insipidus—Administration of Valerian—Epileptic Attacks—Considerable Improvement under Nitric Acid and Ol. Morrh.*

W. W., AGED forty-two, carpenter, admitted January 16, 1875, states that about last May he had sunstroke; he was on the top of a very high building, putting a gallery round some steam-pipes. The sun was very hot, and the thermometer, which was on the roof at some distance from the hot-pipes, stood at 120° Fahr.; the next day the same thermometer stood at 60°. He did not feel anything wrong until the next day, when he had great headache. In June he had pain in the head and weakness, and had to leave off work for two or three weeks. He then got all right, and kept on working from June until two or three weeks ago, when he began to feel very weak, suffered from headache, and completely lost his appetite; had great thirst, general loss of power, and began to pass several quarts of urine in the day. Urine of specific gravity 1012, not albuminous, neutral, and of pale yellow colour. Ordinary diet; milk, beef-tea.

19th.—Total urine of twenty-four hours 190 oz., pale, specific gravity 1010, deposits phosphates. Total urea 909·4 grains. Weight 152½ lbs. He has much less thirst, but drinks altogether in twenty-four hours about six pints of various liquids—viz., two pints of milk, two of tea, one of beef-tea, and one of water. Ext. valerian ʒj., tinct. valerian ʒj., inf. valerian ℥ij., ter die.

27th.—Fundus of both eyes found normal on examination with the ophthalmoscope.

February 1.—Total quantity of urine 120 oz., specific gravity 1010, no albumen. Has much thirst; drinks nine pints of fluids in twenty-four hours. Pulse 84, much firmer than it was.

3rd.—Last evening, between 9 and 10 p.m., after drinking some milk, he was seized with strong convulsions, which lasted one hour and a half. Sinapisms were applied to the neck, after which he vomited very much, and was then in a semi-conscious condition for above an hour. Some months ago he had a similar attack, the first he had ever had. Pulse 78; temperature 96·5°.

8th.—Seems to be doing well. Total urine 90 oz., specific gravity 1010, pale, feebly acid, wheyish.

11th.—Had another fit, or series of fits, on night of 9th. Complains that he has difficulty in finding the words he wants, and that his memory is defective. Urine 115 oz.

15th.—Urine of twenty-four hours 83 oz., specific gravity 1010. Has burning pain in eyes, and a jerking sensation in the right side of his head as if something was twitching there. Often fancies that people are speaking to him when such is not the case.

17th.—Yesterday he felt strange, and had been behaving strangely; said he thought he should have another fit; had abnormal sensations down right side. His forehead was hot; his pulse 90, pretty full. He was ordered pot. bromid. gr. xx. m. c. ʒj., ter die. Soon after I had seen him a severe epileptic attack came on, from which he did not fully recover for five or six hours. In the fit the pulse ceased for some seconds, and the breathing was so weak that I performed artificial respiration on being summoned to see him. To-day he is better, but still feels the jerking sensations at right side of head.

18th.—Had a good night; pupil of right eye much larger than left; speech improving. Urine specific gravity 1006, total quantity 51 oz.

22nd.—Head much more free from pain since he had a blister to neck; no fits. Urine specific gravity 1010, total quantity 82 oz. Omittatur pot. bromid.

March 1.—Some threatening of a fit. Resumat mist. pot. bromidi, pot. iod. gr. v., ad aq. ʒj., ter die.

8th.—Urine 158 oz., specific gravity 1015; has drank seven pints a day the last day or two. Omittatur mist.; phosphori gr. $\frac{1}{25}$ in pil. ter die.

11th.—Seems to be doing well; looks more cheerful, but passes 140 oz. urine, specific gravity 1010, in twenty-four hours; pulse 96.

15th.—Not nearly so thirsty; passing 74 oz. urine, specific gravity 1007, in twenty-four hours; is easily fatigued.

19th.—Has passed 109 oz. urine, specific gravity 1010.

22nd.—Urine about 86 oz.—75 measured, some lost at stool; feels very well, but has much thirst still; drinks about six pints in twenty-four hours. Pt. c. pil., tinct. valerian ʒj., inf. valerian ℥j., ter die.

25th.—Urine 112 oz., specific gravity 1010.

29th.—Urine 88 oz., specific gravity 1010; feels very well; thirst less.

April 1.—Urine 102 oz., specific gravity 1008; not much thirst, drinks six pints. Omittatur phosphorus, pt. mist. c. ext. valerian ʒ ss. ad ʒj.

5th.—Urine 120 oz., specific gravity 1006; feels very well; rather weak; not very thirsty. Omittatur omnia, opii gr. j. ter die.

8th.—Has vomited a good deal since last date. Urine does not seem lessened in quantity. Has slept badly. Omittatur opium; acidi nitrici ℥iij., inf. cascaril. ʒj., ter die.

22nd.—Is out-patient; passes 70 oz. urine, specific gravity 1010, in twenty-four hours. Feels well, except some pain in left shoulder. Is in good flesh. Pt. ol. morrh. ʒ ij. in dies.

May 6.—Drinks six pints a day; passes 70 oz. urine, specific gravity 1009; weighs 164½ lbs.; looks well. Pt. c. mist. et ol. Total urea 367·47 grains.

June 10.—Passes 60 oz. of urine, specific gravity 1010; total urea 296·44 grains. No unusual thirst, drinks about three pints a day; looks well.

24th.—Total urine, 40 oz., specific gravity 1010; total urea 197·6 grains, uric acid 0; weight 158½ lbs.; relation of urea to body weight, 1·24 grain per 1 lb. He feels very well; has no more thirst than usual in hot weather.

Clinical Remarks.—That this was a distinctly marked instance of diabetes insipidus may be affirmed, but it was on a rather small scale. The twenty-four hours' amount of urine (measured) never exceeded 190 ounces, whereas in two of Trousseau's cases it amounted to 1120 ounces, and even to 1525 ounces. The third was correspondingly moderate, the ingested liquid not exceeding at any time 180 ounces. The urine was of low specific gravity—1010 to 1007,—but never as low as it often has been in worse cases. Trousseau and Watson mention densities of 1002 and 1001. The total twenty-four hours' amount of urea was large—viz., 909 grains—when the flow was at its maximum, three days after admission; under treatment it declined to 296 grains. The body weight on the first occasion was 152½ lbs.; a month before the last analysis it was 164½ lbs., a gain having taken place of 12 lbs. The total urea on that occasion was 367 grains, giving a relation of 2·2 grains urea to 1 lb. of body weight, whereas three days after admision it was 5·9 grains per lb. The effect of the valerian treatment was decided in reducing the flow of urine, but unfortunately was almost as decided in inducing epileptiform attacks. It is true that one had occurred previously; but after he had taken the valerian mixture some time they became so frequent and severe that I was absolutely obliged to discontinue it. As no attacks occurred subsequently during nearly four months, the conclusion that the valerian was largely concerned in their production can scarcely be denied. Pereira says that valerian may cause spasmodic movements, but does not allude to any possibility of epilepsy. Probably a certain predisposition is requisite for the effect to be produced. The origin of the disease seems obscure; it is doubtful, at least, whether the exposure to the sun six months previously had anything to do with its genesis. A case is recorded in my work (page 790) where meningitis—the result of exposure to a hot sun—produced rather copious urine of low specific gravity; but in this the urinary symptoms appeared at the same time as the cerebral. The occurrence of epileptic attacks under the provocation of valerian seems to imply an unstable, irritable state of some intracranial nerve-centre. Bernard's experiments lead us to consider the posterior part of the medulla oblongata, a little below the origin of the auditory nerves, the most probable locality for a morbid change capable of giving rise to the symptom of polyuria. Possibly a small patch of sclerosis may have formed in this region in W. W. The good effects of nitric acid and cascarilla, with cod oil, after phosphorus and opium had failed, are noteworthy. I am hopeful that the disorder may be kept well under control, if not quite cured, by perseverance with these remedies; they are useful in various forms of failure of nerve-force. In conclusion, I would remark that the first analysis shows that a considerable increase takes place in the chief

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constituent of the urinary solids; and that the fluid is not a mere off-flow of ingested liquid. The amount of this latter in my own case, and in Dr. Bradbury's, was, on several occasions, above that of the urine; but in Trousseau's patients the reverse was generally the case. This inconstancy militates against the view of there being any close relation between the two quantities. The existence of a notable tendency to epileptic paroxysms in my patient adds to the evidence already existing, that the characteristic symptom is essentially dependent on defect of some nerve centre, which may exist either in the form of evident lesion, or of functional derangement of structure.

CASES OF

METRORRHAGIA ARRESTED BY THE APPLICATION OF HEAT TO THE LUMBAR REGION.

By Dr. NOËL GUENEAU DE MUSSY,
Member of the Academy of Medicine, Physician to the Hôtel-Dieu.

TRANSLATED,(a) WITH COMMENTS,
By JOHN CHAPMAN, M.D., M.R.C.P.

A WOMAN twenty-six years old came under my care at the Hôtel-Dieu, December 14, 1874. This woman had always menstruated regularly; she had had neither children nor miscarriages.

On August 28, 1874, the menses came on at their usual time, and followed their normal course. In the interval of time which separated them from the subsequent period she had several attacks of epistaxis, which ceased on the appearance of the menstrual flux. But some days after the cessation of the menses, without any cause that she knew of or was willing to make known, an abundant hæmorrhage occurred, and determined her to enter the St. Antoine Hospital under the care of M. Brouardel. This eminent *confrère* made use of the most varied remedies, comprising warm baths, astringent injections, and cauterisations of the womb, without effecting the arrest of the hæmorrhage. She then became discouraged, and obtained admission to the Hôtel-Dieu. She appeared to have a good constitution, although she was pale and of a slightly lymphatic aspect. She complained of weakness, continued to lose blood copiously, and several times a day she expelled large clots. Examination of the womb revealed nothing capable of explaining the cause of the metrorrhagia: the womb was mobile, only it was drawn towards the right wall of the pelvis by supple adherences evidently old and organised. Palpation combined with examination per vaginam proved the absence of any tumour in the *cul-de-sac* or elsewhere. The cervix uteri was healthy. In the left ovarian region there was abnormal sensibility, which manifested itself when pressure was made on the iliac region, or in that of the right *cul-de-sac* at the level of the base of the broad ligament. As the patient presented some symptoms of hysteria, I did not, in the first instance, attach great importance to the phenomena of ovarian hyperæsthesia, which are almost constant in hysterical patients. The cause of the morbid action, evidently inflammatory, which had provoked the formation of these adherences remained undetermined.

I had recourse to the series of remedies which had already been adopted by M. Brouardel. After having tried in vain sulphate of quinine, and blisters to the hypogastrium, I asked myself if a chronic congestion with a fungoid condition of the mucous membrane of the neck of the womb was not the cause of this obstinate hæmorrhage. On several occasions I introduced solid nitrate of silver into the cavity of the neck of the womb, leaving it there to dissolve; the flow of blood was suspended during two or three days, but soon began again. The patient became gradually weaker: she began to lose her appetite, she suffered from neuralgia in the head and in the arms, and she experienced dizziness as soon as she attempted to sit up in bed.

I then decided to employ the remedy advocated by Dr. Chapman, and, by means of his indiarubber bag, I caused water as hot as the patient was able to bear it to be applied to the lumbar region; the applications were renewed every third hour. The next day, February 16, the hæmorrhage had considerably lessened; on the 17th it was completely stopped, and was replaced by a slight leucorrhœal flux. The iliac and sub-pubic pains, of which the patient had complained during the continuance of the hæmorrhage, increased considerably after the application of the heat; they persisted, and pressure on these regions caused her acute suffering; she complained also of painful sensations in the head and in the loins. At the same time she was seized with intense dyspnœa, which increased to orthopnœa; she did not cough, but was panting for breath, and expectorated about half a glassful of blood. Her voice was a little hoarse. In the presence of this pulmonary congestion, which succeeded to the utero-ovarian congestion, I carefully examined her chest, and found dulness in the right sub-clavicular region. Above the clavicle and in all the rest of the chest the sound was normal; but in the ganglionic region of this side I found slight dulness, and a resistance to the finger, also a feeble respiratory bruit in the whole of the right side. The sub-bronchial expiration being especially notable at the level of the internal part of the infra-spinal fossa, assured me of the existence of a bronchial adenopathy; the sub-clavicular dulness indicated an induration of the right apex, with which the engorgement of the glands was connected.

At the end of eight or nine days the dyspnœa diminished without ceasing completely; the ovarian sensibility persisted, and was very pronounced.

At the end of a month the menses reappeared, but, as I had foreseen, they soon assumed the appearance of a veritable hæmorrhage. The recollections of the accidents which followed the suspension of the first metrorrhagia exhorted me to be prudent; I waited five days before intervening. But the patient swooned several times; the hæmorrhage continued extremely copious; I applied the hot-water bag, and in thirty-six hours, as on the previous occasion, the hæmorrhage was completely stopped. After the hæmostatics, the iliac and sub-pubic pains augmented; there was again hæmoptysis, but much less abundant than at the preceding period; on the other hand, the patient began to cough, which she had not done until then. The catamenia on the two following occasions occurred without an accident, except that the abundance of the discharge did not correspond with the resources of the organism, and with the habitual length of the patient's periods before she suffered from the metrorrhagia. But the ovarian sensibility persisted, and the thoracic accidents continued, during more than a month. They have lessened since the return of the fine weather, but the plesimetric and stethoscopic phenomena are not modified. After the second menstrual epoch I caused a blister to be applied to the right iliac region; I ordered the tincture of iodine to be painted over the right apex of the lung, and over the ganglionic region, and at the same time arsenical preparations to be taken internally.

Some days after I had attempted in the above case to employ Dr. Chapman's method, I had occasion to apply it in the case of a young woman, twenty-two years of age, who came under my care on January 22, 1875.

This patient had always enjoyed excellent health. Married during three years, she was delivered of her first child at the end of the year 1872. On December 15, 1873, she gave birth to two children, which she is still suckling at the present time.

In November, 1874, eleven months after her confinement, the menses reappeared, and returned regularly every month. On February 5, after a delay of nine days, and some excess of sexual indulgence, the flow appeared, and was of the usual catamenial character, but was prolonged beyond the habitual limits. The patient, although she did not deny having aborted, did not remember to have passed any clots during the first days of the discharge, and was positive that she had not suffered more than usual.

It was only on February 11 that she began to pass clots, and to feel lumbo-abdominal pains. The following days hæmorrhage increased more and more, and she entered the Hôtel-Dieu February 22, under my care.

The womb was mobile; its volume was a little increased, and it was retroverted. The cervix was soft, and sufficiently open to allow of the introduction of the half of the phalanx. These signs, together with the history of the woman, make it very probable that the hæmorrhage was due to an abortion. The patient was kept under observation during two days, without any treatment except tonics and the horizontal position. She continued to lose blood abundantly, and to pass clots several times a day. She grew weaker, was very pale, and had threatenings of syncope.

(a) *Annales des Gynécologie*, July, 1875.

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On the 25th, warm water was first applied to the lumbar region by means of Dr. Chapman's water-bag. On the 26th the flow had diminished in a sensible degree, and on the 27th it had completely ceased. In the evening the patient complained a little of *malaise*, she felt flushes of heat, heaviness of head, and on several occasions she was on the point of losing consciousness. On the 28th this *malaise* disappeared. During the following days the patient regained her strength, and the hæmorrhage was definitively stopped.

Six days later, examination of the uterus assured me that the volume of the organ had lessened; the cervix uteri was considerably retracted—the finger could not enter it; and about March 8, feeling her health completely restored, she requested permission to leave the hospital.

Dr. De Mussy occupies about eight pages of the *Annales* in an interesting discussion of these cases, and I regret that the limits within which it is necessary to confine this paper preclude me from reproducing that discussion *in extenso*. I shall venture, however, to make a few observations respecting Dr. De Mussy's interpretation of some of the symptoms which were experienced in the first of the two cases described, and which, being somewhat obscure, arrested his special attention. He says:—

"We have seen with what rapidity this metrorrhagia, which during six months had resisted the most varied medication, disappeared. I let the water-bag be applied during eight days; the hæmorrhage did not reappear, but scarcely had it been suspended when the patient began to experience difficulty of breathing. I have stated what an attentive examination of her chest revealed to me: the modification of resonance in the right ganglionic region, and the feeble respiratory murmur in the whole lung of the same side, attested the existence of a bronchial adenopathy; and, on the other hand, the dulness of the right apex, along with hæmoptysis, scarcely permitted me to doubt but that this adenopathy was symptomatic of a tuberculous induration. This lesion had played the part of calling into action the congestive disposition, which during six months had become a morbid habit; hence the dyspnœa, the thoracic anxiety, and the hæmoptysis which manifested themselves all at once after the sudden stoppage of the uterine hæmorrhage."

It will be admitted that this ingenious explanation of the phenomena in question seems an adequate one; and, having regard to the great experience and sagacity of the eminent physician who has proposed it, I feel much diffidence and hesitation in confessing myself doubtful of its entire correctness. Moreover, there is on this occasion a special reason why I feel very reluctant to avow any dissent from the views expressed by Dr. De Mussy. He is, I believe, the first hospital physician who, in France, has made trial of the system which, for want of a better name, I designate *neuro-dynamic medicine*; and he has been good enough to make that trial in compliance with my earnest request; therefore I am painfully conscious that I may seem ungrateful to one who has rendered important aid in directing the attention of French physicians to that system, if I venture to express dissent, together with my reasons for that dissent, from the explanation in question. Still, I feel sure that he would not wish me to remain silent; and as an implicit acceptance of that explanation may involve grave, indeed dangerously practical consequences, I am encouraged by a sense of professional duty to offer a few words, by way of comment, on the interesting experiences which Dr. De Mussy has described, and, I may add, by way of warning to those who may be induced by the report of the above-mentioned cases to attempt to stop hæmorrhages by the application of heat to the spine.

In his report of the first of the two cases, Dr. De Mussy says:—"By means of Dr. Chapman's indiarubber bag, I caused water as hot as the patient was able to bear it to be applied to the lumbar region. The application was renewed every third hour. The next day (February 16) the hæmorrhage had considerably lessened. On the 17th it was completely stopped, and was replaced by a slight leucorrhœal flux."

The leucorrhœa was, it is stated, quickly followed or associated with increase of the iliac and sub-pubic pains, painful sensations in the head and loins, intense dyspnœa, a little hoarseness, and the expectoration of about half a glassful of blood.

Of these symptoms, "the dyspnœa, the thoracic anxiety, and the hæmoptysis" are satisfactorily accounted for, Dr. De Mussy thinks, by the explanation which he has given; but the cause of the leucorrhœa, the painful sensations in the head and loins, and the increase of the iliac and sub-pubic pains he does not explain.

Now, given two hypotheses, one of which affords an adequate explanation of an entire group of phenomena, and the other of which explains only a part of that group, and assuming that each explanation (so far as it goes) is equally satisfactory, we are justified in believing that the one which explains all the phenomena in question is most likely to be the true one; and, with respect to the symptoms in question, I venture to propose a hypothesis which has the twofold advantage of explaining the whole of those symptoms, and of doing so in an extremely simple manner. According to my belief, they were all due to the fact that the water in the spinal water-bag used by Dr. De Mussy was of a much higher temperature than it ought to have been; and the following considerations will perhaps be held to justify this belief.

Experience enables me to affirm that either the application along the lower half of the spine of the spinal water-bag, containing water at about 115° Fahr., two or three times a day during a few days, or the application to the same part of the same bag, containing water as hot as it can be borne, two or three times a day during a shorter period, will, in a large proportion of cases, produce leucorrhœa, aching across the loins and upwards to a variable extent along the spine, and not seldom headache; whereas, the spinal ice-bag applied along the spine will arrest leucorrhœa and will annul the pains in question. Hence I conclude that the leucorrhœa, the "painful sensations in the loins," and the *increase* in the iliac and sub-pubic pains, in this case are sufficiently accounted for by the application of water "as hot as the patient could bear it."

I have assured myself by a large number of observations that the volume of the voice (and I presume, therefore, the volume of the bronchial tubes) can be lessened by even moderate degrees of heat along the spine; and I have several times seen grave dyspnœa produced by the application of the spinal water-bag containing water at too high a temperature. Now, the influence of both heat and cold, when applied along the spine, extends to segments of the spinal cord at a considerable distance beyond those over which the heat or cold is applied, and therefore, even in Dr. De Mussy's case, in which the heat, "as hot as the patient could bear it," was applied along the lower part of the spine, I ascribe the "intense dyspnœa, which increased to orthopnœa," to the action of the excessively hot water which was applied along the spine.

It is known to all those who take an interest in the medical principles and practice which I have introduced, that just as uterine hæmorrhage may be stopped by the application of heat over the lumbar and lower dorsal segments of the spine, so pulmonary hæmorrhage may be stopped by the application of heat along the dorsal region. I shall perhaps seem, therefore, to be uttering only an absurd paradox when I affirm that, in my opinion, "the expectoration of about half a glassful of blood" by the patient in question is more likely to have been produced by the direct action on the lung of the excessive heat which was applied, than by its indirect action, which, according to the explanation of Dr. De Mussy, consisted of an excessively copious flux of blood to the lung consequent on "the sudden stoppage of the uterine hæmorrhage." But, absurdly paradoxical as the statement may seem, it is strictly accordant with the doctrine and fact that pulmonary hæmorrhage is most effectually and most swiftly stopped by the application of heat along the spine.

It has long been the practice of the most eminent physicians, as well as of the great body of the profession, to apply ice to the walls of the chest in order to arrest pulmonary hæmorrhage. Now, if this practice is justified by its results—in other words, if the cold contracts the pulmonary blood-vessels,—it is probable that the opposite practice of applying heat to the chest-walls will facilitate the dilatation of the pulmonary blood-vessels of those parts of the lung most nearly in contact with the heat—assuming always, of course, that the heat applied as supposed is considerable,—and will thus favour the production of pulmonary hæmorrhage. And I am speaking from experience when I say that the application of heat over the surface of the chest—by means of scalded bran enclosed in flannel bags, for example,—will be found, by those who watch its effects attentively, to cause in some cases an amount of pulmonary congestion threatening to terminate in actual hæmorrhage. If these premises be true, the conclusion from them that the application of a spinal water-bag, containing water as hot as

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the patient is able to bear it, over the upper lumbar and lower dorsal region of the spine is likely to produce congestion of the base of the lungs, posteriorly, so active as to facilitate sanguineous effusions into the bronchial tubes, and therefore likely to have produced the pulmonary hæmorrhage in the case in question (a case in which, as denoted by the epistaxis, there was already a hæmorrhagic tendency)—is at once obvious and rational, and probably true. But this conclusion is in no respect inconsistent with the doctrine—experimentally verified by numerous physicians—that, by means of *a gentle heat* (say in the form of a spinal water-bag containing water at 115° Fahr.) applied along the dorsal spine, the sympathetic nerve-centres on each side of the spine may be so influenced as to cause them to induce a contraction of the pulmonary bloodvessels to such a degree as even to arrest pulmonary hæmorrhage, without at the same time producing any appreciable local congestion of that part of the pulmonary tissue which is nearest to the spinal water-bag.

The general conclusions to be drawn from these considerations clearly are, that in the treatment of hæmorrhages by the application of heat to the spine—and, indeed, in the treatment of any other disorder in which the use of heat is indicated, the lower the temperature of the water used, so long as it is sufficiently warm to achieve the object intended, the better. The temperature at once safe and efficient ranges from 110° to 120° Fahr. Thin, nervous persons are as easily affected by a temperature of 112°, as stout, lymphatic persons are by a temperature several degrees higher. If due attention be given to the principle just indicated, the greatly beneficial effects derivable from applying heat to the spine may be insured without injurious consequences of any kind.

TRINIDAD LEPER ASYLUM IN 1874.

By GAVIN MILROY, M.D., F.R.C.P.

In your journal of September 18 appeared a short notice of the report of the medical officer of this institution for 1873, and I would now ask the favour of your inserting a few memoranda from that for 1874, which has only recently reached me, especially as it contains some highly interesting information that deserves to be made generally known. Would that Dr. Espinet's good example were followed in other colonies!

Although a larger number of fresh admissions occurred during 1874 than in any former year, and the average number of the inmates exceeded a hundred throughout the twelve months, the number of deaths was unusually small, being only nine; and of these two occurred from extreme debility very shortly after the patients were received into the Asylum. Of the remaining seven deaths, two were from diarrhœa, two from dropsy, two from gradual exhaustion, and one from chronic hepatitis.

The diminished rate of mortality Dr. Espinet ascribes to the following causes:—

"1. To the drainage and complete drying-up of the swampy lands on the south-east of the Asylum.

"2. To the clearing of the brushwood around the Asylum, and the opening of new drains by the inmates.

"3. To the regular system of manual labour and exercise lately introduced into the Asylum on the recommendation of Dr. Gavin Milroy, and now forming part of the rules of the establishment.

"4. To the superior nursing of the inmates by the Sisters of the Dominican Order.

"5. To the lesser number of patients taken to the Asylum *in extremis*.

"6. To the exceptionally healthy condition of the island during the year."

Of course the results of a single year cannot go for much; yet they are so far encouraging, and deserve to be noted.

Dr. Espinet's experience has led him to regard leprous and scrofulous diseases as akin, in many respects, to each other.

"A great affinity exists between *scrofula* and *leprosy* in some of their general characters, and a noteworthy circumstance which I have frequently observed in families in this island is, that if a member be attacked with leprosy, one or two other members will often become affected with phthisis, and *vice versâ*. . . . Besides phthisis, leprosy appears to me to be frequently complicated with insanity and epilepsy; and this is not to be wondered at, as in these two diseases, as well as in leprosy, the nervous system is deeply implicated. I do not know whether, if strict inquiries were made into family histories, leprosy, insanity, epilepsy, and phthisis would not be more frequently met with than is generally suspected in different members of the same family. I know of at least two families in this town in which insanity, epilepsy, and leprosy have existed, and in others epilepsy and leprosy only, and in others, again, phthisis and epilepsy."

As might be anticipated, the medicinal treatment of the disease, recommended by Dr. Espinet, consists mainly in the use of all means calculated "to give tone to the system, and improve the condition of the blood, which is usually poor and anæmic. These indications are best fulfilled by the administration of the mineral acids, quinine, cod-liver oil, different preparations of iron, etc." While admitting that external applications may be occasionally of real service, his main reliance is on internal remedies. "However often external manifestations may be removed by external remedies, the morbific germs continuing to circulate throughout the system (leprosy is a constitutional, and not a local cutaneous parasitic disease, as was supposed by Dr. Beauperthuy) will necessarily reproduce them on the skin and mucous membranes, their seats of election."

With regard to the results of treatment in the Asylum, it is stated that "the inmates generally improve in health soon after admission, and experience many of them so much relief, that some, especially among the Coolies, leave the Asylum, and are able afterwards to earn for themselves the means of their existence."

IMPERFECT EYESIGHT IN ENGINE-DRIVERS.

By W. SPENCER WATSON, F.R.C.S. Eng.,
Surgeon to the Great Northern Hospital, etc.

Passengers by express trains would be somewhat uneasy, not to say alarmed, if they were aware that it is a matter of some uncertainty whether the engine-driver of the train in which he is travelling is or is not suffering from commencing amaurosis. That such a state of things, however, is not only possible, but actually exists, the following case has convinced me. A man has been attending at the Central London Ophthalmic Hospital during the last three weeks, whose sight is so defective that objects which he ought to see distinctly at 200 feet can only be seen at twenty. On ophthalmoscopic examination I find indications of commencing atrophy of the optic discs, and nebulæ of both corneæ. He smokes about half an ounce of tobacco daily. I at first did not know that this man was an engine-driver, but the patient himself at length suggested that perhaps it would be well now the "snow and fogs" were coming on that he should give up work in order "to prevent accidents." In this view I immediately concurred, and wrote to the secretary of the company in whose service the man was. I hope, therefore, that he will no longer be the driver, as he was up to last Wednesday, of one of the fastest and most important express trains in England. Comment is, I think, unnecessary.

This patient informs me that he "never killed but one man," and that was his (the victim's) own fault.

7, Henrietta-street, Cavendish-square.

HOW THE CHOLERA GOT INTO SALONICA, AND WAS CARRIED OUT AGAIN WITHOUT ACCIDENT.

By JAMES M'CRAITH, M.D., F.R.C.S. Lond.,
Surgeon to the British Seamen's Hospital, Smyrna.

It has not yet been explained how cholera originated at Hama, from whence it has spread all over Syria. Some believe it may have originated *de novo* there, and say, As it must have originated somewhere, and at some epoch in time past, why not spring up again in modern times, independent of contagion? I would answer, Man must have originated somewhere, at some period, so must a grain of wheat have had an origin, but we moderns have no experience of such happening in our time. The manner in which cholera actually got into Salonica, despite the most perfect quarantine it is possible to establish, will perhaps throw some light on the matter.

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Salonica is one of the old walled towns still existing in Turkey; the sea entrance, is, I believe, at present open—at all events, the town is walled on the land side, and there is no entrance except by the gates. When cholera is threatening, every inhabitant becomes a "guardian," and the "surveillance" is extreme. In the cholera time of '65, they removed their quarantine establishment to a long distance from the town, on the coast. Cholera was frequently brought to this establishment, and fifty or sixty cases proved fatal on various occasions therein; but, on account of the strict "surveillance," it never got into the town. During the epidemic of '65, and whilst many were dying in the quarantine, Salonica was startled one day on hearing that cholera had appeared in a small village, an hour's distance perhaps from the town, and had proved fatal to several. This village was in free "pratique" with Salonica, and its quarantine equally strictly maintained, by *all* its inhabitants, as that of Salonica. A medical commission was at once sent to inquire into the matter. They found out the house in which the first cases occurred (for it was genuine cholera), and where it had proved fatal to some of the inmates. The owner of the house, and father of the family, assured the commission that he had not been anywhere, except to Salonica to buy some cotton articles for his family, and had had no communication in any way with any other person; that he was quite certain the strictest quarantine had been kept in the village; and that a few days after his arrival from his visit to Salonica his wife and children had been attacked, some of whom had died. The next individuals attacked were neighbours, who had come to assist the family in their distress; and so the disease had spread through the village, with, of course, the usual result. All cross-examining only proved that the man spoke the truth. The commission were no wiser than before; when one of them put a chance question, Had he bought anything else except the calico? Oh, yes; he had forgotten to say that he had met a man in the street of Salonica, of whom he had bought a "grego," as the man let him have it very cheap. The "grego" is a greatcoat, in other language a "capote," worn in bad weather by the people of this country universally, and is made of goat's hair. It extends to the feet, a complete "sentry-box"; it has a hood hanging down behind, which in bad weather covers the head like an extinguisher. Anyone who has ever visited these countries must remember it well. The seller was hunted up and found. It turned out that he was a man who had been employed some time previously as "guardian" at the quarantine, and the capote had belonged to a patient who had died of cholera in the establishment. I had this account from Mr. Wilkinson, the then English Consul at Salonica, at present English Consul at Malaga. His Excellency Vely Pasha (as well as I can remember), the then Governor-General of the Vyalet of Salonica, when afterwards Governor-General of the Vyalet of Smyrna, gave me exactly the same account of the affair, except that he believed that the capote was found on the road, having been lost by the party. This of course was the "official" account, reported to the Governor; it avoided blame from head-quarters, and the necessity of punishing many individuals, very likely. The account, I am convinced, is substantially correct. It shews how very difficult, if not impossible, it is to observe the rules of quarantine so strictly as to make it efficient. Here were almost all the most favourable circumstances that could exist, and certainly not to be found combined, unless very rarely—a walled town, every inhabitant being made a most efficient "guardian" by fear of the disease,—and yet Salonica was saved from cholera by the merest accident. If this capote had been sold to a poor Jew of Salonica, (a very numerous Jewish colony exists there, and the chances were a thousand to one that a Jew would be the purchaser), and had been taken to the Jewish quarter, and had there communicated the disease, it would have been simply impossible, amongst such a dense and poor population, to trace its history; and then dirt, poverty, and crowded dwellings would have been put down as having originated the disease *de novo*. With the wandering, nomadic habits of the people of those parts, how very probable, or rather certain, is it, that a capote or other equally efficient carrier of contagion has been introduced into Hama, even from a very great distance.

Smyrna.

A CONTEMPORARY states that Commander Fullerton, of the Royal yacht *Victoria and Albert*, is suffering from an attack of typhoid fever at Portsmouth; where he is under the care of Dr. McEwen, of the Royal yacht.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

THE MIDDLESEX HOSPITAL.

CASE OF MALARIAL FEVER CURED BY ARSENIC, AFTER QUININE HAD FAILED.

(Under the care of Dr. ROBERT LIVEING.)

[From notes by Mr. GOSSET, B.A., Camb.]

GUSTAV L., aged fifty-one, a working jeweller, son of a Pole, brought up at Baden; admitted July 20, 1875. Has not been in a hot climate with the exception of seven months spent at Constantinople twenty-five years ago. For the last twelve years he has lived in London, within a quarter of a mile of the Middlesex Hospital, and has enjoyed good health with the exception of epileptic fits, which began about twelve years ago but have not attacked him for the last four years. About six weeks ago, patient first experienced pain in epigastrium, followed after a few days by jaundice. There was no vomiting before the jaundice set in. The pain and jaundice have continued ever since, the pain being usually more severe immediately after taking food. About the time of the onset of jaundice, shivering fits began to occur at intervals, which for the last three weeks have come on regularly each evening at about 6 p.m. The shiverings ended in a hot stage (he usually went to bed when they came on), with an abortive cough, nausea, and sometimes vomiting. The cold stage, usually of a few minutes' duration only, the sweating stage lasting for some time. Bowels quite regular.

On Admission.—Patient well nourished. Exhibits jaundiced tint of skin and conjunctivæ. One well-marked "tâche de De Morgan" on abdomen; abdominal walls rather rigid. Edge of liver (right lobe) can be felt on making him cough; it only reaches the edge of the ribs. The liver dulness (right lobe) is not abnormal in extent, ceasing at the edge of the ribs. The left lobe extends rather lower in the mid line than normal, and here there is some tenderness on pressure, as well as to the right of the mid line. On the left side, the stomach-resonance is so extensive that the splenic dulness cannot be mapped out. Tongue furred, except at tip, which is dry and red. Urine, specific gravity 1017, acid; no albumen: coloured by bile, but not reacting strongly to nitric acid test. On evening of day of admission he had a rigor.

July 21.—Noon: Has a rigor. Pulse 108; temperature 102·5°. Pain in epigastrium increased; cat. lini to epigastrium and right hypochondrium. 2 p.m.: The shivering lasted one hour: skin now hot and pungent. Temperature 104·2°; an enema brought away a small quantity of formed clay-coloured fæces. 3 p.m.: Now sweating; temperature 101·8°. 7 p.m.: Temperature 98°.

22nd.—During the night had a slight rigor. 10 a.m., temperature 99·6°; 11 a.m., 98·1°; 6 p.m., slight rigor; 8 p.m. temperature 101° (the highest).

23rd.—3 a.m.: Severe rigor, lasting one hour. He shook so much that the nurse could not hold in the thermometer. He retched a good deal, and vomited dark bilious matter. Bowels twice opened after the rigor. 6 a.m.: Slept for two hours after the rigor; temperature 105°. 8 a.m., 101·4°; 11 a.m., 99·7°; 1 p.m., 97·2°; 2 p.m., 95·4°; 4 p.m., 96°; 6 p.m., 94·8° (a range of 10·2° in twelve hours); 9 p.m., 96·2°; midnight, 95·4°.

24th.—6 a.m., temperature 98·4°; 2 p.m., 98°; 9 p.m., 99·4°. No rigor during the day.

25th.—2 a.m., temperature 97°; 9 a.m., 97°; 3 p.m., had a rigor for one hour—a copious loose clay-coloured motion followed it; 6 p.m., temperature 102°; 7 p.m., 103·2°; 11 p.m., 98°. Sweating the last three hours.

26th.—2 a.m., temperature 96·2°; 9 a.m., 100·2°,—felt cold, and had a hot-water bottle to his feet, but no shivering; 11 a.m., 103·6°; 1 p.m., 103°; 3 p.m., 99·6°; 5 p.m., 98·2°; 7 p.m., 100·2°; 9 p.m., 104·7°. Had no shivering; is now hot and sweating; has retched a good deal. Midnight, temperature 101°.

27th.—Slept well. 9 a.m., temperature 96·4°; 1 p.m., 97·4°; 7 p.m., 102°; 11 p.m., 100·2°.

28th.—2 a.m., temperature 100·2°; 9.30 a.m., 97°. Ordered quinine gr. x. each day at 3 p.m. 2 p.m., temperature 100·6°. 2.30 p.m., 102·4°. Rigor for twenty minutes, though the

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feeling of coldness lasted longer. Quinine too late to be of any service. Temperature at 6 p.m., 102·6°; 9 p.m., 98·8°.

29th.—2 a.m., temperature 95·3°; 10 a.m., 97·8°; 2 p.m., 96·2°; 3 p.m., 98·4°. Quinine given. 4 p.m., temperature 98·2°; 5 p.m., 98·2°; 6 p.m., 104·4°; 8 p.m., 102·8°; 10 p.m., 100·6°. Complains of singing in his ears.

30th.—1 a.m., temperature 97·4°; 9.30 a.m., 99·2°; noon, 103·8°; 3 p.m., 102°; 6 p.m., 98·4°. Ordered quin. sulph. gr. iij. every four hours.

August 4.—The temperature has continued to oscillate between 96·6° and 103·4°; the highest point reached yesterday, 102°. Ordered liq. arsenicalis ℥iv. three times daily.

5th.—Temperature has not exceeded 98·2° since taking the arsenic.

11th.—General range of temperature during the last week has been from 97° to 100°; on one day it rose to 101·4°.

18th.—In the last seven days the temperature has ranged from 96° to 98°; on two occasions only has it reached 99°.

After this date only occasional observations were made; the usual temperature 97·2° to 98°.

25th.—Discharged convalescent, though still retained as an out-patient. Skin and conjunctivæ still discoloured, and the motions contain no bile. The urine has no tinge of bile colour.

Observations.—First dose of quinine, ten grains on 28th, came too late to be of any service. Second dose on 29th caused arrest of temperature at 98·2° for two hours, after which it rose in one hour to 104·4°, in spite of a slight amount of cinchonism being induced, as evidenced by the singing in the ears. Three grains of quinine every four hours had hardly any appreciable effect. Four minims of liq. arsenicalis thrice daily reduced the average maximum temperature in the first week to 100°, and the second week to 98°.

LONDON HOSPITAL.

PULSATING ENCEPHALOID CANCER OF THE LIVER, SIMULATING AN ANEURISM.

(Under the care of Dr. RAMSKILL.)

THE patient, a man aged thirty-eight, said that with the exception of having had measles and scarlet fever, he had been well up to six months before admission into the hospital. On the outset of his illness he felt languid, and had pain at the pit of the stomach—a "shooting pain," coming on immediately after food and lasting about two hours,—and the pain was increased by stooping or sitting. Five months ago, he first noticed a lump in the epigastric region. The pain was then less severe, but he became very weak, sweated profusely, and had a dread of eating a full meal. The lump gradually increased in size, and, about five weeks before his admission, became very painful. A fortnight later, he was troubled with vomiting, but not much; he had no jaundice, his bowels were regular, and the motions light-coloured. On inquiring about his habits, we could obtain no indications of syphilis, nor had he ever been a heavy drinker, but had lost flesh rapidly during the last five weeks. There was no family history of tumours or malignant disease. Soon after admission into the hospital, the edge of the liver felt sharp, and reached nearly to the pubes, and it descended during inspiration; its surface felt smooth on its outer half, but there was a firm substance, seemingly connected with the smooth surface, which felt as if it passed into the mass, which was expansile, and pulsated, and filled the epigastric region. The expansile, heaving movement was felt two or three inches beyond, that is, on each side of the line of the aorta; there was no bruit. His breathing was noticed to be laboured and accelerated, his pulse was very small and feeble, and he sweated profusely. He was very wakeful; he had, he said, not been able to sleep the last two or three nights. On the sixth day after admission his pulse was exceedingly weak, and counted with very great difficulty; but on the evening of the same day it was fuller, and therefore counted with ease. At the end of ten days, the lump in the epigastrium remained seemingly much the same; no nodular masses could be felt, and the surface was fairly smooth. There was no thrill to indicate that there was a mass of vessels greatly dilated, and it was particularly observed that there was no well-defined circumscribed mass. The heaving, pulsatile movement extending beyond the line of the aorta, suggested that there was an aneurism in the epigastric region, with the right lobe of the liver overlapping and to the right of it. This pulsating mass seemed to extend under the left costal cartilage, and the percussion-note all over the mass was absolutely dull. It was thought by some that there was a murmur with the heart's diastole; others doubted this. A fortnight later, the pulsating movement was felt as if muffled, but its expansile character continued. For the first time, two small nodules were felt about the middle of the mass, and a doubtful one along the supposed liver-edge; at this time the patient's circulation was more active, his skin was warmer, pulse fuller, he slept better, and sweated less. After he had been in the hospital nearly six weeks, the resident medical officer was called to see him at four o'clock one morning, and learnt that just previously the patient woke up, and said he "felt queer, did not know how, but everything looked queer." He had no pain, but was very thirsty, and covered with cold sweat; his hands and feet were very cold. The medical officer found him propped up with pillows, almost in collapse. His pulse was small, 110; respirations 20 per minute. The patient pointed to his stomach, but said he had no pain there, and at that time his circulation was somewhat restored. The physical signs with respect to the epigastrium remained as before, excepting that the pulsation was less distinct. He was seen again later in the day, when, on placing the hand upon the epigastrium, a broad pulsating mass was felt some two or three inches beyond the middle line, right and left; it had a distinct, but muffled, heaving movement. The edge of the liver was felt as before, sharp and distinct, but not hard as in lardaceous disease. It was very noticeable, however, that the liver-surface had become irregular; for to the right there was a distinct nodule, another about the median line, and the surface over the right lobe felt generally uneven, except at its lower part. All the signs pointed to the mass being a medullary carcinomatous pulsating tumour in liver. Early on the next morning, the nurse found the patient almost speechless; he could only mumble a few words. On being called, the medical officer found his legs were quite cold, and his pulse could not be felt, but he did not appear to be in any pain, and died shortly afterwards.

The autopsy showed that the body was exceedingly wasted. A mass was felt, filling up the epigastric region, before the abdomen was opened. On cutting through the abdominal wall, about one to two pints of serous fluid escaped from the peritoneal cavity, and the liver was seen to be very much enlarged, and studded with greyish-pink masses, evidently of cancer. Its upper surface was uneven, more so in some parts than in others, but there were no very large nodules. The liver measured twelve inches across from right to left, eleven inches from the upper to lower border of right lobe, and the thickest part of right lobe measured five inches and a quarter; it weighed twelve pounds. On section, the liver-substance reminded one of almond cake, for it was studded with an enormous number of greyish and greyish-red masses of various sizes, with milky juice,—evidently medullary cancer. The intervening part of the liver was red; but there were no large or other vessels visible, nor was any arrangement seen to explain why the liver during life had the pulsating movement described above. The edge of the liver was firm, and reached very low down in the abdomen, but no large nodules projected from it. The pancreas was very firm, and infiltrated with a greyish-white substance, seemingly cancer; and there was a gland just above it, also the seat of cancer. The stomach was small and contracted, and its mucous membrane venously congested, and coated with a good deal of mucus. The kidneys were rather large and contained cysts, but otherwise normal; and the spleen, testicles, and peritoneum were also normal. The lungs were congested, and a few emphysematous vesicles were seen here and there. The heart weighed eleven ounces and a half; the left ventricle seemed slightly dilated (but this was perhaps doubtful), its wall measured seven lines in thickness; one aortic valve was, in about one-fourth of its course, bound down to the aorta by thickened atheromatous substance in the aortic wall; the left ventricle was contracted, but not firmly. The brain was much atrophied in the anterior convolutions.

During the first two or three weeks of this patient's stay in the hospital it was thought that the pulsating mass in the epigastrium was probably an aneurism. This opinion was based upon the fact that not only had the tumour a heaving movement over the aorta, but it had also lateral expansion which extended two or three inches beyond the line of the aorta. This lateral expansion was felt by several; there could, therefore, be no doubt that it was present. It was, however, recognised that the mass might be a pulsating malignant tumour. On the assumption that it was an aneurism, it was difficult to

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explain why the liver was so very much enlarged, and what was the change in its substance which lowered its edge almost to the pubes; and, unlike an aneurism, the pulsating mass had no globular or other circumscribed form—it seemed to pass imperceptibly into the broad, smooth liver-substance. There being no unevenness of the liver-surface, and certainly no nodules, was to some extent opposed to its being malignant growth; but knowing that in the early period of cancer of the liver the capsular surface may be quite smooth, the absence of nodules by no means showed that it was not malignant. In the course of a few weeks, when the surface became uneven, there was no longer any doubt that it was not an aneurism, but a medullary cancerous pulsating growth in the liver, and it was pointed out that the heaving movement was not free and forcibly expansile, as is usual with an aneurism, but it was, as it were, muffled, as if there was a cushion between the wave of the fluid and the hand; and experience has shown that such has been the character of the pulsation of medullary cancerous growths in these parts of the body which simulated aneurism.

ST. GEORGE'S HOSPITAL.

THE TREATMENT OF JOINTS BY SULPHURIC ACID.

The treatment of diseases of the joints—especially of pulpy degeneration of the synovial membrane of joints—by the application of sulphuric acid to the diseased tissues has of late been tried by a few of the surgeons of some of our metropolitan hospitals. Though present experience is far too limited to allow of any definite conclusions being drawn as to the precise value of the remedy, or as to the exact place it should take in the treatment of joint cases, it may interest our readers to know what that experience amounts to, so far as we have been able to ascertain it.

It is now more than five years and a half ago since Mr. Pollock, in an interesting and instructive paper,(a) first directed the attention of the profession to the beneficial effects produced by sulphuric acid in the treatment of caries and necrosis. Mr. Pollock there states that he was led to try the acid as a solvent of diseased bone by having under his care a very aggravated case of syphilitic necrosis of the skull, in which, from the conditions, he was averse to any instrumental interference for the removal of the diseased portions, but in which it was clear that a very long period must elapse before exfoliation could take place if nature was unassisted by the surgeon. Subsequently, in 1865 and following years, he employed it in other cases of syphilitic necrosis of the bones of the skull, syphilitic necrosis of the tibia, and necrosis of the tibia after fracture, also for the destruction of carious surfaces in cavities of bones, and of patches on the surface of deep-seated (*e.g.*, the pelvic) bones.

The mode in which the acid is employed is twofold—either to touch the diseased bone with a glass brush or rod dipped in the strong acid; or to use a mixture of acid and water in equal parts, or in the proportion of one part of acid to two, three, or six parts of water, and either syringe it into the cavity of the bone, or place some lint, soaked in the lotion, upon the surface of the necrosed portion.

In no one of a large number of cases treated in this way at St. George's Hospital and in private practice had any evil consequences been known to follow the application of the acid to diseased bone of any part of the body, nor had the remedy been found a painful one; and when the acid has been used diluted it has not caused uneasiness to, or irritation of, the soft tissues. The antiseptic qualities of the acid favour its use, for, by altering the character of the foul discharges which so often accompany diseased bone, it puts a stop to all disagreeable smell. Hence it is a valuable agent in necrosis of the jaw, because it modifies the fetor which affects the breath of patients so afflicted.

While inclining to the opinion that the early application of sulphuric acid rather tends to check the spread of caries and necrosis, Mr. Pollock remarks—"The real merits of the treatment lie in the limitation of the action of the acid to the diseased bone, in the perfect safety of the application, and in the fact that it produces no irritation of the soft parts."

Since the publication of that paper the experience of the acid at St. George's has been a good deal extended, and it has been, and still is, very freely and fully applied by Mr. Pollock in all cases of caries, and in necrosis where operation by instruments is not considered desirable—as in necrosis of the skull. The method of its application has continued to be by means of lint soaked in the solution, or the fluid has been introduced by means of a glass tube or bottle.

The excellent results following from the application of the acid to carious bone-surfaces have been so obvious to those who have had many opportunities of witnessing them, that Mr. Warrington Haward, in 1871, was led to try its effects upon the carious articular ends of the bones, and the suppurating synovial membrane of the knee-joint, in a child under his care in the Branch Hospital for Sick Children at Highgate. As this case is fully reported in vol. vi. of the Clinical Society's *Transactions*, it is only necessary to add here that the constitutional disturbance was scarcely, if at all, increased by the operation; the pain and amount of discharge rapidly diminished, and the patient's health quickly improved. At the end of five months the child was going about with a firmly anchylosed joint. The success in this instance encouraged a repetition of the treatment in others of a similar nature, and during the last four years Mr. Haward has treated as many as ten cases of diseased joints by the local application of the acid. Mr. Pollock has employed it for strumous affections of the ankle- and wrist-joints, complicated or not with caries, and he has also used it for strumous disease of the knee-joint since Mr. Haward's first case. At St. George's, Mr. Holmes and Mr. Rouse have also tried it on the knee-joint.

The plan adopted is to lay open the joint freely, and clear it out by passing strips of dry lint through it, so as to get rid of the coating of lymph and pus; then the joint is filled with lint soaked in a solution of sulphuric acid (one part of strong acid to two parts of water). By this means the pulpy synovial tissue is destroyed, and so also are the cartilage and the carious layer (if existing) on the articular surfaces of the bones. As a rule, the local application is followed in a few days by a slough of the surfaces, and parchment-like fragments come away through the openings into the joint. Both Mr. Pollock and Mr. Haward consider that when a joint is suppurating the amount of pus is at once lessened by the local application, while it is seldom that any serious constitutional or local disturbance is produced by it. In fact, the acid converts an unhealthy, pus-secreting surface very rapidly into a healthy, granulating one, and in a very short time it appears to relieve constitutional irritation.

The advantages of the treatment, when successful, over excision are considerable: in the first place, it is a less formidable operation; secondly, it does not tend to shorten the limb as excision necessarily does; and thirdly, it allows of anchylosis in a slightly flexed position—a point upon which Mr. Pollock lays considerable stress. Mr. Callaway demonstrated years ago, in his own person, the inconvenience of anchylosis of the knee in the perfectly straight position. He was in the habit of showing that he could go upstairs only with great difficulty with his perfectly straight limb, and he believed that a slight amount of flexion would have been much better. Of the experience afforded by Mr. Callaway's case advantage has been taken by Mr. Cooper Forster and other of the surgeons of Guy's Hospital, who endeavour to obtain anchylosis of the knee in a position of slight flexion. When the treatment is unsuccessful, it in no way prevents excision from being afterwards performed.

The cases which seem most suitable to be thus treated are those in which the disease has had its origin in chronic synovitis, and gone on to ulceration of the cartilages, with perhaps superficial caries of the bones; whereas, the cases which are ill adapted are those in which the bone is very extensively diseased—*i.e.*, diseased beyond the articular extremities, and at a distance beyond which the acid cannot reach.

But although the majority of cases which have hitherto been subjected to the treatment seem to have done well, it cannot be asserted that all have. For instance, two cases at St. George's have turned out badly. One was under Mr. Holmes, in reference to which he writes—in a footnote in his new work on "Surgery, its Principles and Practice"—"I have lately had a case which proved fatal under this treatment. The child's parents having refused amputation, he sank from traumatic fever." Then, again, a child under Mr. Durham in Guy's Hospital was only saved by amputation. In the face, however, of an unsuccessful case, Mr. Holmes, though of course regarding the subject as still *sub judice*, speaks favourably, if guardedly, of the treatment, for he says (*op. cit.*, p. 432)—"The treatment of carious

(a) *Lancet*, May 28, 1870.

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joints by the application of strong sulphuric acid may, however, save many joints which would otherwise have been excised, and thus preserve the length and future growth of the limb, and at less risk to life."

While, then, the treatment of caries and necrosis by sulphuric acid may be admitted to have obtained, and to deserve, a recognised position, the use of the acid in the treatment of diseased joints is, as yet, in a state of probation. But, allowing for the accidents which may follow this as well as any other operation, it seems that the remedy, when properly applied (and repeated if necessary), is likely to prove a valuable substitute for excision, and possibly, in some cases, for amputation.

We shall, at an early period, refer again to this subject, and give the notes of some of the cases to which we have above alluded.

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Medical Times and Gazette.

SATURDAY, DECEMBER 11, 1875.

THE FORENSIC RELATIONS OF THE WHITECHAPEL MURDER.

When on a previous occasion we referred to this unpleasant case it was mainly with reference to the unfortunate bungling of the medical witnesses; but the case itself, even with the poor evidence afforded, presents many features of extreme interest. The first, and almost the most important, point was to determine the identity of the remains found in the possession of Henry Wainwright; the next would be to ascertain the mode whereby the individual met her death; and the third, the peculiar post-mortem changes observed.

With regard to the determination of identity, one main fact was not to be overlooked, viz., that the body had been mutilated—apparently, however, for the purpose of easier stowage, and not, as has sometimes been the case, for the destruction of those parts of the body most useful in identification. In this respect, therefore, the labours of the medical examiners were materially lightened. They had not to compare portions of the body, or of bodies, found far apart and under different circumstances, as was the case in the murder committed by the notorious Greenacre, and in some more recent instances. They had simply to put together all the various portions of the body found in Wainwright's possession; and, having done so, they were in a position to say that these constituted a more or less complete human frame; and this has not, we believe, been gainsaid. It will, however, be quite apparent, had these remains constituted parts, let us say, of two bodies, that the question would have been very greatly complicated.

Granted, then, that these remains constituted only a single individual, the next thing in determining the identity would be the ascertaining of the sex. In most cases there is no difficulty in making out this portion of the question, even when the medical examiner has only a skeleton to deal with; but here there was the crowning test—the presence of a uterus. Nor was the question of age more difficult to determine, as nearly as such questions are usually capable of determination: all the wisdom teeth were cut, save one, which would give as an average an age between twenty and twenty-five, or thirty at the uttermost. Perhaps the less said about the criterion of the sutures the better.

So much for generalities; but for the special identification of the remains there was an unusual array of facts. The remains on being measured gave a stature of five feet; the build was slender, and the hair was of a peculiar fair or reddish tint. Moreover, there was found a decayed tooth in a particular situation—the first of the permanent teeth to appear, and not unfrequently the first to decay. The only ear visible had a hole pierced in it for an ear-ring; and, finally, there was a scar in a certain situation spoken to by the father of the missing woman, and after this information found by the careful examiners. There were two subjects about which a good deal of nonsense was talked. First, as regards the uterus; it was sought to be determined whether it was that of a woman who had borne children. On this point we are not disposed to say much; it was enough that there was nothing to contradict the idea that she had borne children. So about the wedding-ring. The skin of the hands, Mr. Bond says, was dry and sunken (? shrunken). The Lord Chief Justice asks, "Would a ring worn upon the finger make more or less of a furrow according as a hand was full or thin?" Mr. Bond replies, "It is obvious it would make a deeper furrow on a fat hand than a thin one." And this was about a hand described as thin and slender, covered with a greasy substance, and whose skin was dry and shrunken!

Such, then, was the medical evidence relating to identity. Only one other point appertains thereto—viz., the period of death,—but that more strictly belongs to another part of our subject. It is, however, plain that had the remains been those of one recently killed, or of one killed years ago, it would have materially interfered with the theory of the prosecution. Have we here sufficient physical evidence to establish the identity of the remains of the female found in Wainwright's possession? We should say, "Certainly," had we not the Tichborne case in mind; but when these physical facts are taken in conjunction with the personal evidence forthcoming, the opinion rises to certainty. The physical characteristics of Harriet Lane are found in a mutilated dead body; the next question is, How comes this body to be dead?

Here there is again a sufficient answer in the physical signs found on the dead body. Two bullet-wounds were found in the head, and two bullets within the skull; moreover, on one side the throat was cut down to the backbone: either of which sets of injuries would certainly prove fatal, and only one set of which could by any possibility have been inflicted by the dead woman herself. But to this we must devote somewhat further attention.

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THE BRITISH MEDICAL DEFENCE ASSOCIATION.

THE meeting of members of the medical profession which we reported last week deserves somewhat more than a passing notice. For some months past there has been a movement on foot for establishing an association of registered medical practitioners, that should have for its object the reform of some of the abuses which exist, and which are injurious alike to the public and the members of the profession. It has been patent for years that quackery and unqualified and illegal practice were assuming proportions which called for some action for their suppression. The profession have appealed in vain to the General Medical Council and to the various medical corporations to take action in the matter, and to protect the public from imposture and deceit, at the same time that they maintained the just rights of medical men. The Council, however, have not the power to enter into any prosecutions on their own account, and the medical corporations were unwilling to rouse themselves. Under these circumstances it became evident that any action in the matter must come from the members of the profession themselves, and hence the establishment of the society which has for the present taken the name of the British Medical Defence Association.

Several medical men in London formed themselves into a Provisional Committee to set the matter afloat; and, having received considerable support both in London and the provinces, determined to call a general meeting of the profession to obtain the sanction, or otherwise, of their brethren to the movement. The result was the large and successful meeting whose proceedings we last week reported.

The programme which the Provisional Committee put forward is large and comprehensive, and, if only a portion of it be successfully carried out, the result cannot fail to be beneficial both to the public and the profession. The chief abuses which it aims to remedy are—unqualified practice, the sale of sham degrees and diplomas, the registration of uncertified deaths, the sale of quack medicines, the dissemination of indecent medical publications, and the present system of hospital out-patient relief. All these are questions which affect the public equally with the profession. When the Medical Act of 1858 was passed, it was supposed that it would enable the public to distinguish between those who were, and those who were not, legally qualified to practise as medical men. Such, however, is found not to be the case. To quote from the report of the Provisional Committee, which lies before us, "although it [the Medical Act of 1858] prevents unqualified persons from assuming the titles physician, surgeon, etc., the penal clauses of the Act are systematically evaded by unqualified persons, as, instead of personally assuming medical titles, they now open shops, and designate them 'medical halls,' 'provident dispensaries,' or by other similar titles. In this way the public are led to believe that they can get competent medical advice at these sham institutions." It is evident, then, that so far, the Medical Act is a dead letter. Unqualified persons can still practise as medical men, although they cannot call themselves by medical titles. The public, therefore, are no more protected from quackery and deception than they were before the passing of the Act, while medical men reap but little benefit from being compelled to pay a heavy fee for registration. The many cases of illegal practice which were brought before the meeting showed to what a great extent the Act is evaded, and how necessary it is that some steps should be taken for its amendment. The feeling seemed to be general in the meeting that the Medical Council is the proper body to prosecute, and the efforts of the Defence Association will be directed to obtaining such an amendment of the Medical Act as will give the Council prosecuting powers. Till such powers are obtained, however, the Association is obliged to content itself with such power as already exists for the suppression of illegal practice. This power is found in the Apothecaries Act of 1815, and under the provisions of that Act three successful prosecutions have already been carried out, and more are pending. As we have said, this question of unqualified practice is of great public importance—of much more importance, indeed, to the public than to the profession. It is monstrous that a man who has had no medical training whatever should be able to fit up a shop, call it a "medical hall," and take under his care the lives of his fellow-creatures, those fellow-creatures all the time believing that they are being attended by one who has made disease his study, and is competent to diagnose and treat their ailments. We trust, therefore, that the Association will receive, at any rate, the moral support of the public, and we are glad to see that one, at any rate, of our lay weekly contemporaries, and also one of the daily papers, has commented favourably on the movement. The suppression of this illegal practice is the principal and leading feature in the programme of the Association, but some of the other objects are scarcely second in importance.

The regulation of the sale of quack medicines is very necessary. At present it is possible to sell almost any poisonous concoction as a patent medicine, apparently under the direct sanction of the Legislature, evidenced by the Government stamp. Since the recent strict legislation with regard to the sale of poisons, this appears the more remarkable and inconsistent. If patent medicines must be sold at all, it should at least be made compulsory that the composition of each should be distinctly stated on the bottle or other vessel in which it is contained, so that the public might know what they are buying, and not be liable to poison themselves, or their offspring, by concentrated "homœopathic tinctures" or too-potent "soothing syrups."

The dissemination of indecent medical publications is another evil requiring removal. It is scarcely possible to walk through some of our leading thoroughfares without having several of these disgusting and mischievous productions thrust into one's hands; and the amount of injury which is inflicted by their means on the young men and young women of the country is far greater than is generally known.

These are the chief objects held in view by the Provisional Committee of the Defence Association; they are all highly laudable in their aim, and any organisation which can successfully carry them out will deserve the hearty support of the profession and of the public. Medical men have long seen these abuses growing up before their eyes, and have vainly hoped they would not be compelled themselves to take action for their own and the public protection. At last, however, the time has come when—as Dr. Richardson, who so ably presided at the meeting, remarked—it seemed that "the tares were becoming undistinguishable from the wheat, and if a clearance were not made, both would one day be burnt together as unprofitable."

Therefore, at the risk of being stigmatised as only forming a trades union, medical men have at last roused themselves to action, and a general cry is coming from all parts of the country in favour of such action. In Durham, the Forest of Dean, West Cornwall, and in various quarters of the metropolis, branch associations have already been formed, and active and energetic men are only awaiting instructions from head-quarters to commence action in several other parts of the country. It is with much pleasure that we chronicle the success of this movement, and we can only urge on all our readers the great importance of the objects which the Association has in view, and the large amount of benefit which must accrue from a successful prosecution of these objects. But we cannot help thinking, with Dr. Richardson, that the name adopted by the Association is not a happy one.

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It suggests that the main object of the Association is the defence of the profession against quackery, etc.; whereas, for success in its objects, it is most important, if not absolutely essential, that the defence of the public should be clearly its chief and primary aim.

POISONING BY CARBOLIC ACID.

UNMIXED good in things of this world is very hard to find. We learn this lesson daily in matters pertaining to our profession. When a new remedy is presented to us, we generally see first the bright side of the picture, then slowly and surely the dark shadows develope, and we begin to doubt even the value of the gift. Chloroform and chloral, beneficent as their influence has been in numberless cases, have proved themselves sometimes the agents of danger and death. No one can doubt that the discovery and the use of carbolic acid have tended to the good of mankind. A few years ago we should have thought that any danger from it could be due only to its character as an external irritant; in fact, in an able review in an American journal, it was stated that carbolic acid could not be accounted a poison. Who could be expected to swallow the caustic and powerfully-smelling stuff? Alas! a long list of cases prove to us again that *à priori* reasonings are often wrong.

We recorded recently the case of a child who died in the North-Eastern Hospital for Children from the effects of swallowing crude carbolic acid. It teaches the great caution that should be used in dealing with the agent. The authorities of the hospital are well known for the care they exercise as regards the children under their charge. It is difficult to apportion any blame in this instance. Who could imagine that a feeble child of seven, taken to the ante-room for the exigencies of diarrhœa, should, during the momentary absence of the nurse, seize a heavy gallon can, containing crude carbolic acid used for the purposes of disinfection, and drink some of its contents? The lesson of caution is learnt now; and it will be inexcusable if, in future, crude carbolic acid be left within the possible reach of children.

In looking over a list of twenty cases of poisoning by carbolic acid, we find that in ten the fluid has been swallowed or administered in mistake for medicine; and, in four, instead of beer or spirits. Carelessness here is on the face of the record.

In the case which serves as the text for these remarks, skilled aid was at once at hand, and not a moment was lost in administering antidotes. The child, however, died at the end of eleven hours and twenty minutes. Out of the twenty cases recorded, a total of seven died within three-quarters of an hour, eleven within an hour and a half, and nine at intervals varying from two hours to two days.

The first element of danger is, as is reasonable to suppose, in the quantity swallowed. One case died in twelve hours when little more than a teaspoonful was taken; another in a quarter of an hour, when between two and three drachms were imbibed.

It is possible that in the recent case several mouthfuls were swallowed; and the effects were immediate and intense. The diagnosis of the poisoning is usually sufficiently easy. The whitening of the mucous membrane and the odour of the breath leave no room for doubt. Implication of the nervous system occurs very rapidly; the extremities are cold, the surface livid, and unconsciousness rapidly supervenes.

The immediate treatment adopted in this instance was the administration of an emulsion of egg, and afterwards, at frequent intervals, albumen and water. The object is to obtain an inert coagulum. Oil has been recommended, but this cannot be justified, for, though oil readily unites with carbolic acid, it is in loose combination, and soon yields it, so that the poisonous agent is readily absorbed. Poisoning can, in fact, be induced by the inunction of carbolised oil. Albumen, on the other hand, forms with *strong* carbolic acid a firm and inert coagulum. There can be no doubt that the administration of albumen is the best immediate measure.

The general teaching of facts is to the effect that emetics are utterly useless. The alimentary tract is in fact converted by the local action of the poison into a rigid, insensitive tube. Carbolic acid, after causing a twinge of burning pain, is immediately afterwards a local anæsthetic. Emetics, therefore, are entirely inoperative, and the alimentary tube, as far as the stomach, is incapable of reflex stimulus. Doubts have sometimes been expressed as to the advisability of the stomach-pump; but, practically, we think that whilst there are the usual indications for its use in cases of poisoning, there are really no contra-indications. There is no softening of the structures, as in some poisonings by acids, but, on the contrary, a hardening of the tissues. We think, therefore, that after the administration of albumen the stomach contents should be removed by the stomach-pump, and the viscus washed out with a mixture of albumen and water.

The danger of carbolic acid, however, is not alone, nor even chiefly, in its local action; not more than the danger of alcohol lies in its caustic effects. This is proved, not only by the rapid and peculiar affection of the nervous system, but by the fact that toxic symptoms may be induced by the absorption of carbolic acid by the skin or by the lungs. Animals are rapidly killed by the external application of carbolic acid, even without irritant effect upon the skin, and symptoms of poisoning have been occasionally induced in the human subject by weak carbolised lotions and liniments. A case in which it is probable that poisoning occurred by inhalation of the fumes of carbolic acid has also been recorded (Mr. Unthank in *British Medical Journal* for November 23, 1872, p. 579).

The symptoms of carbolic acid poisoning resemble, in many respects those induced by toxic doses of alcohol. In animals there are convulsions, succeeded by muscular paralysis, in some cases followed by anæsthesia and general unconsciousness. If the duration of the symptoms be prolonged, dyspnœa supervenes. In fatal cases in the human subject, where large doses have been swallowed, a rapid and profound coma has been induced. When the duration has been greater, dyspnœa has been superadded; the poison has been eliminated through the lungs, with a condition of intense pulmonary hyperæmia.

The chief lesson taught by the records of post-mortem examinations is that there is in these cases intense venous congestion of the brain and its membranes. Almost invariably the sinuses are described as filled with black blood. This condition is very quickly, if not immediately, produced by the absorbed carbolic acid. It has been found in dogs to which non-fatal doses have been administered, death having been induced by opening the aorta. From these considerations it would appear justifiable to adopt venesection, especially of the external jugular, in cases of poisoning after the first antidotal means have been put in force. A recorded case of recovery in which this was done lends support to the view. In this instance, related by Dr. Mosler, of Greifswald, immediate insensibility with stertor occurred after a quantity (between two and three drachms) of strong carbolic acid had been swallowed. After the primary measures and washing out the stomach by warm water, venesection to the extent of a pint was adopted. The result is encouraging, for the recorded cases hitherto have been almost invariably fatal.

THE WEEK.

TOPICS OF THE DAY.

AT a meeting of the St. Pancras Vestry, held last week, a letter was received from Dr. Thomas Stevenson, Medical Officer of Health for the parish, tendering the resignation of his

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office, which he has filled for a period of seven years, and stating the chief cause of his doing so to be—"that while I am held responsible for the sanitary condition of the parish, I am denied that assistance in outdoor inspection of houses either visited with contagious diseases, or habitually in an unsatisfactory condition, which I believe to be necessary. I feel that the severe condemnation which a house-to-house visitation of the poorer parts of the parish has received from a majority of the Sanitary Committee must of necessity hopelessly weaken my authority with the sanitary inspectors, and render nugatory my efforts to carry out the Sanitary Acts." The Vestry resolved to postpone the consideration of the letter until their next meeting, when some matters connected with the sanitary condition of the parish will also be considered.

Who is responsible for the bungling or defective manner in which so many of our Acts of Parliament are drawn? A case came before the stipendiary magistrate of Manchester last week, which disclosed an important omission in the Public Health Act of last session. A wholesale confectioner was summoned for having on his premises a quantity of butter which was putrid and unfit for food. The condition of the material had been proved at a previous hearing, and the Superintendent of Markets, who prosecuted, was about to call a witness to show that it had been intended for human food, when the lawyer for the defence pointed out that the Nuisance Removal Act, under which the summons had been issued, was wholly repealed by the Public Health Act of last session. The latter Act, however, contained a clause (No. 116) exactly similar to one in the former, empowering the authorities to take proceedings only for the possession of any "animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk." There were no general words. The summons charged the defendant with having deposited for sale certain meat—to wit, thirteen tubs of butter,—but butter could not be described as meat, and therefore the summons must fail. As the law stood there was no power to prevent anyone from selling bad butter. The magistrate was bound to agree with this argument, and he expressed a wish that the recent Act had been passed in a proper form. It is to be hoped that the attention of the Legislature will be called to this dangerous omission in the law as soon as possible after the next meeting of Parliament.

We have on a former occasion pointed out that the powers given to sanitary authorities to build mortuaries in their several parishes have been ineffective because they do not also give a compulsory power of purchasing sites. Otherwise it would be difficult to account for the delay which has occurred in providing these necessary buildings. Only recently a gentleman died in an omnibus in Oxford-street from a fit of apoplexy. In consequence of there being no mortuary to which the body could be conveyed, it was taken to the St. Giles's workhouse. Dr. Hardwicke, the coroner, at the inquiry which followed, remarked that this case again showed the necessity of having public mortuaries in every parish; no doubt the friends of the deceased would not like having the body removed to a workhouse. He further suggested that the churchyards in different places would afford excellent sites, but the clergy objected to their being used for such a purpose. In almost every parish in London there are old, disused churchyards, and it is difficult to account for any objection to some small portion of them being utilised in what would really seem to be a most appropriate manner.

The experiment of planting the *Eucalyptus globulus* in the unhealthy Campagna of Rome, with the object of destroying the influence of the miasmatic exhalations from the ground, has been tried for several years, particularly in the locality of the Monastery of St. Paul Trois Fontaines, where a priest named Gildas has had the plants under cultivation. This gentleman states that the trees have thriven, and that he believes they have given indications of their power in arresting disease, though as yet they are not sufficiently numerous to produce much effect. The most important statement made by him, however, is that a decoction made from the leaves of the tree possesses valuable properties in cases of fever, and that many persons have been cured by drinking the "elixir" thus prepared. A preparation of the leaves in the form of a powder is also made, which has the advantage of keeping good longer than the decoction.

Whatever may be the result politically of the Prince of Wales's visit to India, in certain respects it must be regarded as an unqualified success. Among others, the Maharajah of Kolapore proposes to build a hospital, at a cost of between two and three lakhs of rupees, at his capital, in commemoration of the visit of his Royal Highness to India. The building is to be styled the Albert Edward Hospital, and sufficient accommodation for 100 indoor patients will be provided. The idea is to make this a general hospital for both Europeans and natives.

An illustration of the great difficulties which local sanitary authorities encounter in their endeavours to grapple with the sewage question has just been afforded. Major Tulloch, an inspector from the Local Government Board, recently held an inquiry at Twickenham in reference to an application from the sanitary authorities there for permision to borrow an additional sum of £15,000, making a total of £35,000, for the completion of the sewage works of that parish, the original estimate of the surveyor being £24,000. In reply to questions from the inspector, it was stated that no scheme for the ultimate disposal of the sewage had yet been adopted, but it was generally understood by the Board that the Worthing process of filtration through scraps of iron and ashes would be resorted to. The inspector remarked that in the first instance the money was borrowed for an irrigation scheme, and the Board appeared now to have completely changed its opinion; no definite scheme had been decided upon, although £20,000 had been spent. He could not, therefore, recommend the Local Government Board to accede to the request until something definite was known as to the final disposal of the sewage. The works have consequently been stopped, and we understand no further action will be taken until the report is published of the inquiry lately held by Colonel Cox as to the drainage of the whole of the Thames Valley.

We have again to record some very liberal and seasonable bequests which have been made to various charities by the late Mr. Wynn Ellis. Amongst the different institutions specified, we notice that the Free Hospital, Devonshire-square, is to receive £2000; the Royal London Ophthalmic Hospital, Moorfields, £2000; the Royal Infirmary for Women and Children, Waterloo-bridge-road, £2000; the Seaside Convalescent Hospital, Seaford, Sussex, £2000; the Hospital for Sick Children, Great Ormond-street, £15,000, free of legacy duty,—£5000 for the building-fund, and the remainder for the general purposes of the Hospital; and the Royal Westminster Ophthalmic Hospital, King William-street, Strand, £2000.

The Local Government Board having, as the result of the recent inquiry, given powers to the Richmond Select Vestry to construct waterworks of their own, the Vestry have purchased the "Old Brewery," with its deep chalk wells; and contracts to the extent of £25,000 have been accepted for the erection of the works. Meanwhile, the Southwark and Vauxhall Water Company have served a writ for an injunction to restrain the Vestry from proceeding further in the matter, on the legal merits of the case, the Local Government Board having declined to express any opinion upon this latter point.

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Her Most Gracious Majesty the Queen has been pleased to honour the Companionship of the Civil Division of the Order of the Bath by conferring it on W. B. Carpenter, M.D., F.R.S., the well-known and distinguished physiologist and teacher, and the Registrar of the University of London.

DR. RICHARDSON ON THE INFLUENCE OF OCCUPATIONS ON HEALTH AND LIFE.

At a meeting of the Society of Arts, yesterday week, Dr. B. W. Richardson, F.R.S., delivered the first of a series of lectures on "Industrial Pathology, or the Influence of certain Injurious Occupations on Health and Life." The lecturer began by referring to what the Government had done in the way of collecting information on the industrial occupations of the people, which, though not so comprehensive as might have been expected, was still very valuable. Among other things, he instanced the Factory Acts Commission, the Commission on Children's Work, and the Sanitary Commission. The figures he should put before them were taken from the returns of Dr. Farr, the Registrar-General, to which he had been permitted to have access while they were in the press. The calculation was based on the Census of 1871, and was composed of six classes, the first of which was the professional class, which numbered 684,102 persons. Following that was the industrial class, in which there were numbers of women, and which included 5,137,725. The third class was called the commercial, and contained 815,420 persons. The agricultural class included 1,657,138; and the domestic class, which included many women, was 7,399,582. The industrial class was that which they had especially to consider in the lecture, and this class numbered 5,137,725, of whom 1,521,998 were women. The last class was an indefinite one, which numbered 8,512,706. The methods of research adopted with the industrial classes was to obtain the causes of illness or injury, apart from the causes arising from their trade or calling. He had found that a large number of working men were very fond of attributing their maladies to what they called their work, but there were five causes of degeneration apart from their calling, of which the principal was intemperance; and the tables of statistics showed that the percentage of death amongst the class of persons who were engaged in the traffic of intoxicating liquors was the largest. Among other disturbing causes influencing the working classes, the lecturer instanced and described the food-supply, the hereditary proclivity to disease, poverty, and inattention to cleanliness. These points having been referred to at some length, the lecturer stated that the various means of dealing with those disturbing influences would form the subject of subsequent lectures.

THE PATHOLOGICAL MUSEUM AT VIENNA, AND STUDENTS' PRIVILEGES.

It will scarcely be believed that the museum in the Pathological Institute at Vienna, over which Professor Rokitansky so long presided, has never yet been freely accessible to students. They have been allowed to see a few preparations driblet fashion at lecture, but not to enter—except, we believe, occasionally for a few minutes after the lecture—the jealously guarded chamber. A week or two ago, Professor Heschl (Rokitansky's successor), at the close of his inaugural lecture, led his hearers from the theatre into the museum, and delivered a eulogium on the late Professor in front of his bust. The students were then allowed to wander at pleasure through the rooms, and to examine the preparations undisturbed; and, says our authority, the *Wiener Medizinische Wochenschrift*, "this was about the first occasion that the museum had been thrown open to the students." We in London, as a rule, make little difficulty about admitting students, or even strangers, into our pathological museums; and the liberality of the College of Surgeons in allowing them to improve their minds by the study of the preparations of the generative organs or the models of diseases of the skin is much appreciated by a certain section of the community. The guardians of our museums have, nevertheless, one fault—they guard the treasures entrusted to them too carefully. This statement may seem paradoxical, but it is, in our opinion, true. Students are generally not allowed *to touch the preparations*, and are thus precluded from more than a superficial look at them. At Lincoln's-inn-fields, for example, it is a mortal sin if the bottles undergo more than the "*monstrari digito præterquam*," and the delinquent who dares rotate an indistinguishable "pickle" is sternly rebuked by some watchful Cerberus, who orders him, in a voice which savours of acute mania, to "Leave that preparation alone!" If students are to derive instruction from what might be termed the "denizens of the spirit-world," they must be suffered to manipulate them as they will; and if the curator's work is sound, the preparations will not suffer in consequence. Those who think differently should pay a visit to the new museum at Oxford, and go over the biological department during term-time: they will then see how valuable well-catalogued preparations can be made, when students can take them down and examine them from every side as they will. In an objective science like medicine the precept, "Touch not, handle not," is a most harmful one, and is only fit to "perish in the using."

INFANT FEEDING AND INFANT MORTALITY.

In his quarterly report on the health of Brighton, which has just been issued, Dr. Taaffe gives some interesting details respecting the relation of infant mortality and improper feeding. During the quarter no less than seventy-three children died at Brighton from diarrhœa, of whom fifty-eight were under one year of age. Of these fifty-eight cases it was found that twenty-five were fed by the bottle (six of these on condensed milk), ten by the bottle and artificial food, four were nursed by the mother and fed from the bottle, two were fed entirely upon artificial food, one was fed on condensed milk, one on condensed milk and bread-sop, and one on milk and oatmeal. In eleven cases only were the children nursed by the mother; from which it is deduced that improper feeding and improper nursing are unmistakably among the principal causes of infant mortality from diarrhœa. Not only is the kind of food injurious, but it is given to infants far too frequently. Dr. Taaffe says—"If you ask a mother how often she nurses her baby, the answer will almost always be, 'Whenever it wants it'; and that means in many cases constantly." And he asks—"How is it possible that infants can be reared by such improper feeding?" He lays down the following rules:—"No infant at the breast, or who is being brought up by hand, should be fed more than once in four hours during the day, and twice in the night; and for the first six or seven months the food should be either that supplied by the mother, or milk (two-thirds) and water (one-third) sucked from a bottle. No child under these ages should ever be fed by the spoon or receive farinaceous food of any kind. In using condensed milk, care should be taken to dilute it sufficiently." If these rules were adhered to among the poorer classes there would undoubtedly be an immense decrease in the mortality among infants from diarrhœa.

DIPHTHERITIC INFLAMMATION OF THE INTESTINE.

By the advice of Professor von Recklinghausen, of Strasburg, Dr. Rajewsky, of St. Petersburg, has lately examined in his laboratory a number of cases of intestinal diphtheria in the human subject, and has been able to study the process in its various stages. The following is a summary of his results:(a) —1. Diphtheritic inflammation of the intestine is always preceded by a catarrhal condition of that organ. 2. Its com-

(a) *Centralblatt*, No. 41, page 691.

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mencement is characterised by the formation of a fibrinous exudation, which collects in the substance of the mucous membrane and on its surface. 3. The next stage consists in the death of the tissue of the mucous membrane, and in its transformation into a granular albuminous mass which dissolves in acetic acid. The work of destruction extends to the surrounding parts, and at the same time a hyaline metamorphosis of the bloodvessels occurs in the diseased tissue. 4. Micrococci and bacteria are found not only in the parts which are in a granular condition, but also in the unaltered tissues. In the one they occur in colonies, and in the other only in an isolated state. At the time when the tissue is still unsoftened, the lymphatic spaces (*Saftcanälschen*) in the sub-mucous layer are already filled with bacteria. The above results led Dr. Rajewsky to endeavour to determine what part the bacteria play in the production of intestinal diphtheria; and he found, by experiments on rabbits, that it was only possible to produce a diphtheritic inflammation of the intestine by injecting a fluid containing bacteria into the blood if the mucous membrane had been previously prepared by exciting inflammation in it by means of a dilute solution of ammonia. If this had been done, the micrococci passed through the walls of the bloodvessels and attached themselves to the mucous membrane, in which they multiplied, while, at the same time, the bloodvessels underwent the above-mentioned hyaline degeneration. It was found impossible to produce diphtheritic inflammation in the intestine, either by the injection of bacterial fluid into the blood or into the intestinal canal, unless a catarrhal inflammation had been previously excited; and in the same way, whereas only a transient catarrh was set up by simply injecting ammonia into the intestine, if this was followed by a bacterial injection, the animals died in twenty-four or twenty-six hours.

From these experiments we must therefore deduce the important conclusion that, while parasites play an important part in intestinal diphtheria, it is necessary that the soil in which they grow shall be previously prepared for them by irritating substances.

THE VISIT OF PROFESSOR DEPAUL TO BRAZIL.

The Paris *Figaro* of December 1 contains an account of an interview which the writer, M. Adrien Marx, had had with Professor Depaul, the famous obstetrician, since his return from Brazil, whither he went to attend the Imperial Princess, the Countess d'Eu, in her confinement. A few particulars from the article may interest our readers. It appears that after nine years of sterile married life, the Countess, the daughter of the Emperor of the Brazils, became pregnant after consulting Dr. Depaul in Paris, and following the treatment he recommended; but the child which was born, was born dead. She became again pregnant, and this time the Emperor solicited Depaul to come out himself, and conduct the delivery; and he at last was persuaded to go. On his arrival at Rio Janiero he met with a most frigid reception from almost every one except the immediate attendants of the Princess. The newspapers were against him, and the native physicians gave him the cold shoulder. Although he personally visited the medical men connected with the Court, on the day of the accouchement he found himself at the bedside of the Princess alone and without assistance. Only the Count d'Eu, the son of the Duc de Nemours, was unwearied in his devoted attention to his wife. After a thirteen hours' labour, which had to be ended with the forceps, a baby weighing twelve pounds (livres) was at last brought into the world; but for an hour it was doubted whether it would survive, and it was only after artificial respiration and other measures had been vigorously tried that it gave signs of life. However, it is now a healthy child. The most curious and amusing feature about Dr. Depaul's visit was the revulsion of public opinion in his favour when the successful result of his visit became known. The papers praised him, his *confrères* congratulated him, and the academies and scientific bodies sent him crowns and addresses; he was invited to banquets, and was *fêted* in a wonderful way. "After the event," says Depaul, "my room was never empty from morning till night, and I was obliged, in spite of a determination to the contrary, to give consultations. In less than eight days, 15,000 francs-worth of piastres were laid on my table as fees." Professor Depaul has certainly good reason to be satisfied with his trip across the ocean. *Non cuivis homini contingit adire Brazilum!*

PATHOLOGICAL SOCIETY OF DUBLIN.

At a meeting of this Society, held on the 4th inst., Dr. Henry Kennedy, President, in the chair, Mr. Hamilton showed a remarkable specimen of chronic rheumatic arthritis in the left hip of an old man. The external appearances simulated those of dislocation on the dorsum ilii. The chief pathological changes were ossification of the capsular ligament, concealment of the neck of the femur by stalactitic bony growths, the head of the bone being conical and curved inwards. The cartilage-cells of the acetabulum were large and fibrillated. Similar, although less marked, changes existed in other joints; the pericardium was adherent, and chronic endarteritis deformans was present in some of the arteries. Mr. Hamilton also showed a case of extracapsular fracture of the femur, with a transverse fracture breaking off the shaft of the bone from the trochanters. The diagnosis made during life was intracapsular fracture of the neck of the thigh-bone. Dr. Grimshaw exhibited the abdominal viscera of a man aged forty-two, who first complained of pain at the margin of the ribs on the left side. Icterus and ascites followed, and a hard tumour could be felt near the umbilicus. There were extensive deposits of colloid cancer in the great omentum and mesentery generally. The cystic duct was occluded. Mr. Wilson presented the eyeball of a man aged seventy-seven. It was the seat of a mass of melanotic spindle-celled sarcoma. All traces of lens and retina were lost. Dr. McDonnell exhibited a brachial artery on the fifth day after torsion had been practised on it. The invagination of the middle and internal coats of the vessel, and the presence of an adherent clot, were well demonstrated. There was no sign of suppuration or of gangrene. The patient died from the effects of a severe accident by machinery. Among other lesions there was luxation of the head of the thigh-bone into the sciatic notch. The ligamentum teres was jerked out of the head of the bone. Dr. Atthill laid on the table an example of imperfect development of the rectum in a full-grown and otherwise perfect fœtus. The Society then adjourned.

THE WEATHER AT CANNES.

An English resident at Cannes has sent to a contemporary an account of the weather at that place, which may be useful to some who contemplate wintering abroad. The following is an extract from this report:—In general the weather of November was, up to the 20th, warm, bright, very dry, and very windy; there were no less than seven successive days of mistral, which, though violent and disagreeable because of the dust, were not cold. On the afternoon of Saturday, the 20th, the temperature of the air fell very rapidly, and it has remained unusually low since. On two occasions the temperature fell below freezing-point—viz., on the 22nd, when there was one degree of frost, and on the 27th, when there were two degrees. Though some rain fell in the latter part of the month, it was generally in short, heavy showers, probably from high regions of the atmosphere, for the air near the surface of the earth remained mostly dry. Most of the deciduous trees have lost their leaves; the oaks, however, remain green. Plenty of roses are in bloom in the gardens

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The past summer was remarkable for the absence of rain; none fell between the middle of May and the middle of October. In consequence, the grape, olive, orange, lemon, and cassia crops are deficient. Since last season a good deal of new hotel-accommodation has been added, and several villas have been built. The Municipality have erected a large Hôtel-de-Ville, which was much wanted for post, telegraph, and municipal offices. It is at the west end of the Cours, the open space by the sea, where the market used to be held under the trees,—a very picturesque object, shortly to be a thing of the past. At the east end of the town a Jardin d'Acclimatisation for tropical flora (an interesting experiment) and for some few animals is in process of formation. Adjacent, a racquet-court and skating-rink will soon be ready, and will add to the attractions of the place—hitherto, it must be confessed, somewhat dull. Visitors are arriving earlier than usual, and a very full season is expected.

MILK AND THE DISSEMINATION OF FEVER.

Acting on the suggestions of the Police Board of Glasgow, the Board of Supervision of that city has issued a circular recommending all local authorities in whose district there may be dairies or dairy farms which supply the public with milk to observe the following rules and precautions:—"1. All such dairies and farms, together with their steadings and other surrounding circumstances, should be carefully inspected from time to time with reference to their water-supply and their general sanitary arrangements, such as the arrangements as to washing-houses and disposal of excrement, and the position of midden-steads. 2. The local authority should also cause inquiries to be made from time to time as to the existence of contagious or infectious disease at such dairies and farms; and whenever such disease is found to exist at any of them, they should immediately (1) take such steps as their medical officer may advise, with a view to prevent the dissemination of the disease, and (2) give notice of the facts to any other local authority within whose district milk from the infected premises may be distributed or sold."

THE BRITISH PHARMACEUTICAL CONFERENCE.

The Executive Committee of the British Pharmaceutical Conference have, at their recent meetings, made the following grants, with a view to encourage pharmaceutical investigation, viz.:—(1) £10 to Mr. A. W. Gerrard, to cover cost of extraction of pilocarpine from jaborandi, and its further chemical and pharmaceutical investigation; (2) £20 to Mr. C. R. A. Wright, for investigations on the aconitines; (3) £5 to Mr. M. M. Pattison Muir, for researches on the properties of essential oil of sage; (4) £10 to Mr. Kingzett, for continued researches on the oxidation of essential oils; (5) £10 to Mr. E. L. Cleaver, for ascertaining the proportion of morphia in opium, and reporting on a trustworthy mode of assaying opium; (6) £5 to Mr. R. H. Davies, for investigating and reporting on the definite proximate principles of ivy-berries; (7) £10 to Mr. H. E. Armstrong, for conducting researches on the oxidation products and bromo-derivatives of strychnine; and (8) £5 to Mr. W. A. Tilden, for carrying on further investigations of the aloins.

DR. CARPENTER AND THE CROYDON BOARD OF HEALTH.

At the meeting of the Croydon Local Board of Health, last week, an attempt was made, on the part of some of the members, to pass a vote of censure on Dr. Carpenter—who is a member of the Board—for writing to the *Times* and *Standard* on the late outbreak of typhoid at Croydon. Dr. Carpenter said that he had only exercised the right he possessed of appealing to the public through the press when he found that the members of the Board of Health did not recognise or fulfil their duty; and that, if the necessity arose, he should again act in a similar manner. The Water Committee had it in their power to prevent these periodical epidemics of typhoid fever at Croydon. He had warned the Committee, but his advice had not been followed. He should not be gagged by any proceedings or expression of opinion on the part of the Board. Acting on the suggestion of the chairman, the proposed vote of censure was, after a very warm discussion, withdrawn.

SMALL-POX IN BIRMINGHAM.

In his report on the health of Birmingham for the third quarter of the present year, Dr. Alfred Hill, the Medical Officer of Health, states that small-pox has during the quarter been less prevalent than in any similar period since its outbreak in November, 1871. The deaths from this cause were 14, as against 165 in the corresponding period of 1874; and the total number of cases 95, as against 1059. Of the 95 cases, 83 were described as vaccinated and 12 as unvaccinated. Although the number of vaccinated persons attacked by the disease exceeded the unvaccinated in the proportion of about seven to one, it is a fact worthy the attention of anti-vaccinationists that only four deaths occurred among those who had been vaccinated, whilst no less than ten of the unvaccinated patients succumbed to the disease.

THE ALKALOID OF ERGOT.

M. Tanret has announced to the French Academy of Sciences that he has discovered the real alkaloid of ergot, and he proposes that it shall be termed "ergotinine." He projects this expression to avoid any confusion which might arise from the use of the word ergotine, which has been before employed. The substance which he has extracted is obtained in very small quantity, and is so readily alterable in air that its extraction is attended with difficulty. The new substance has a strongly alkaline reaction, and it readily saturates acids. Its most marked characteristic is the change of colour produced by sulphuric acid, which is first of a reddish-yellow, then violet, and, lastly, intensely blue. Its physiological action has not yet been studied.

Royal College of Surgeons.—The following is the subject for the Jacksonian Prize—essays for which, we have to remind competitors, must be sent in not later than Friday, the 31st inst., viz., "The Use of the Galvano-Caustic in the Removal of Morbid Growths." The subject for the ensuing year (1876) is—"The Treatment of Cancer of the Rectum, particularly as regards the possibility of curing or relieving the patient by excision of the affected part."

Royal Institution.—The following arrangements of the lectures before Easter, 1876, have been announced:—Professor Tyndall, D.C.L., LL.D., F.R.S.—Six lectures, adapted to a juvenile auditory, on Experimental Electricity; on December 28 (Tuesday) and 30, 1875; January 1, 4, 6, and 8, 1876. Professor Alfred H. Garrod—Twelve lectures on the Classification of Vertebrated Animals; on Tuesdays, January 18 to April 4. Professor Gladstone, F.R.S.—Eight lectures on the Chemistry of the Non-Metallic Elements; on Thursdays, January 20 to March 9. William Spottiswoode, Esq. LL.D., Treas. R.S., Sec. R.I.—Four lectures on Polarised Light; on Thursdays, March 16 to April 6. R. P. Pullan, Esq. M.R.I.B.A.—Three lectures on his Excavations in Asia Minor; on Saturdays, January 22, 29, and February 5. W. T. Thiselton Dyer, M.A. B.Sc., F.L.S., Assistant Director, Royal Gardens, Kew—Four lectures on the Vegetable Kingdom, the Boundaries and Connexions of its Larger Groups; on Saturdays, February 12 to March 4. Professor G. Croom Robertson, M.A.—Three lectures on the Human Senses; on Saturdays, March 11, 18, and 25. Edward Dannreuther, Esq.—Two lectures on Wagner and his Trilogy, with pianoforte illustrations; on Saturdays, April 1 and 8. The Friday evening meetings will begin on January 21, 1876, at eight o'clock; the discourse by Professor Tyndal, at 9 p.m. The succeeding discourses will probably be given by Professor Huxley, Mr. W. Preece, Mr. Wm. Crookes, Dr. C. Wm. Siemens, Lord Lindsay, Earl Stanhope, Professor W. H. Flower, Sir H. S. Maine, Professor Odling, Mr. E. B. Taylor, and Professor James Dewar.

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LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.(a)

CHOREA.—RHYTHMIC SPASMS.

Account of a Case of Left Hemichorea—Some New Methods of Treatment in Chorea—Ether Spray—Bromide of Potassium —Chloral—Arseniate of Soda—Chloride of Calcium—Sulphate of Aniline—Calabar Bean—Constant Electric Current.

GENTLEMEN,—On January 24 last, a girl of twenty years of age came under our care in Sainte-Claire ward, affected with left hemichorea. The diagnosis was self-evident. Muscular twitchings excited an involuntary starting of the left half of the face, and led every now and then to the sudden closure of the eye; the forearm was rudely aroused from a state of rest by irregularly alternate movements of flexion, extension, and rotation, and, at rather more distant intervals, contraction of the muscles about the shoulder caused a sudden elevation of the whole upper extremity. Less extensive and less frequent in the leg, the movements were still sufficiently well marked and numerous to act as a real hindrance to the function of locomotion; that of prehension, however, was much more seriously compromised, and it was precisely on account of this disturbance rendering it impossible for her to follow her extremely delicate employment as a maker of artificial flowers, that this young woman decided to come into the hospital. These symptoms presented a complete picture of the distinguishing characters of legitimate choreic hyperkinesia: they manifested themselves involuntarily during the state of rest as well as during movement; disorderly as to the moment of their occurrence and their spontaneity, they were regular in their mode of execution; they were aggravated by voluntary efforts to suspend them; attention being drawn to them, they became both more frequent and more extensive; on the other hand, they were entirely suppressed during sleep, and further, when the disease was, upon the whole, not very pronounced, the anomaly did not recur immediately on awakening.

The disorder was strictly and rigorously limited to the left extremities and corresponding half of the face; the muscles of the trunk took no part in it. Reflex muscular action was equal on the two sides; sensation was unimpaired in every one of the modes of its manifestation; and the general health presented no noticeable alteration beyond pretty well marked anæmia, with murmur over the carotid and the aorta, and disorder of menstruation characterised by complete absence of the sanguineous discharge at the last catamenial period,—there being on that occasion nothing more than an abundant leucorrhœa, lasting for a period equal to that of the customary menstruation.

The diagnosis being thus settled, the ever-interesting question presented itself as to how the disease was generated, and we possessed the following information to guide us to a reply. This girl had no chorea during childhood; she only suffered from sick headache (migraine), palpitation, and a sense of constriction about the neck which must plainly be referred to the globus hystericus. Her ancestors and near relatives have not suffered either from nervous disease or rheumatism; but, two years ago, she herself had an attack of subacute articular rheumatism, which confined her to bed for five or six weeks. According to her account of the circumstances of that illness, which occurred sufficiently recently for her to have a distinct recollection of it, there does not appear to have been any cardiac mischief. From that time the palpitations to which she had been subject since childhood became somewhat diminished; and, taking into account these facts relating to her past history, with her present anæmic condition, the absence of disease in the circulatory system, and, lastly, the character of the soft systolic bruit heard at the base of the heart, I unhesitatingly reject the idea of a structural lesion of the heart, produced by the previous attack of rheumatism. I therefore deny also (and this fact, to which further allusion will be made, is to be particularly noted) that the chorea has a rheumatic origin. In fact, to sustain that theory in this instance would necessitate a strange perversion of judgment, not to say a dire obstinacy; for, indeed, on December 13 last, this girl, when on the eve of menstruation, remained for several hours under the influence of a terrible fright caused by a fire. Seven days afterwards she noticed, for the first time, certain involuntary movements in the index finger of the left hand; and four or five days later the phenomenon had spread to both left extremities. The face was not implicated until afterwards. With regard to the menstrual flow, it made its appearance when expected; but, for the first time, it was painful, and subject to occasional stoppages. The patient says that the blood was blacker and more clotted than usual. Then, at the following catamenial period, on January 4 or 5, there was, as I have already told you, no trace of sanguineous discharge. In this instance, the influence of nervous disturbance is so evident, the chronological connexion linking together the mental emotion and the first appearance of the phenomena is so clear, that we can assert a relationship between the two facts—not apparent only, but real. Fright and anger, you know, are the most powerful psychical causes of chorea.

This case has in itself no other value than that of the addition of a unit to the very numerous series of non-rheumatic cases of chorea; but it furnishes me with a favourable opportunity for acquainting you with some new methods of treatment, for discussing the true relationship between chorea and rheumatism, and for laying before you certain cases of recent occurrence bearing upon three equally interesting questions—namely, the pathological anatomy, the pathogeny, and the physiological seat of the disorder.

The girl whose history I have recounted to you leaves the hospital this very day. She is perfectly cured, making the fifth successful case which I owe to the treatment proposed by Lubelski—that is to say, to the application of ether spray to the vertebral region. The process is very simple: a jet of ether spray is projected, by means of Richardson's apparatus, on each side of the spinous processes over the whole length of the spinal cord. The application should not be limited to a linear surface, but should cover a space equal to the breadth of four fingers on each side of the spine. To begin with, the applications are only made twice a day, morning and evening, and for about three minutes; but in two or three days it is expedient, in severe cases, to repeat the operation three or even four times a day, and to prolong each sitting to five or six minutes. After each application the integument presents an erythematous blush, which lasts a longer or shorter time according to individual circumstances, and which testifies to the powerfully revulsive action of this remedy. Under its influence the diminution of the choreic movements is very rapid—a matter of a day or two,—and it would seem, from observations made by Lubelski and Zimberlin, that this abatement is most prompt when the symptoms are most violent; two of the cases which I saw at the municipal Maison de Santé also confirm this statement; but this preliminary arrest once obtained, complete recovery may be delayed for two, three, or even four weeks, as we saw in our patient. The rapidity of the immediate action is an extremely important advantage in those cases where the choreic movements are of such violence as to be in themselves, and hour by hour, a source of danger. To the successes obtained by Lubelski, Zimberlin, and myself, those of Rose and Lyons in England, and the cases recorded by my distinguished *confrère* Dr. Mazade, may be added. Nevertheless, the remedy has several times failed to fulfil expectation in the hands of Roger, Bergeron, and Schutzenberger; but this should not cause you any surprise, nor deter you from the use of this very simple remedy. The same thing occurs with all the remedies for chorea; you will not find one that is invariably successful. The best—and amongst these I rank the application of ether spray—have their reverses.

I employed with entire success the bromide of potassium in full doses in a case of chorea during pregnancy. The equally convincing observations made by Gubler, Gallard, Worms, Hough, and Kesteven fully justify this therapeutic experiment. Hough's case is specially interesting, in that the chorea had existed for thirteen years in a person of twenty-nine. A cure was effected in six weeks, and the maximum dose was a drachm daily.

The results obtained from chloral, which Frerichs was the first to use, are no less encouraging. Carruthers, Briess, and Russell have effected complete cures with doses of fifteen to

(a) An admirable translation (with the author's special permission) of some of Jaccoud's published clinical lectures, by Mr. C. J. Cullingworth, of Manchester, having been submitted to us, we are glad to take the opportunity of laying them before our English-reading brethren.

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thirty grains a day. Russell's patient was a woman of twenty-one, affected with severe chorea at the fifth month of pregnancy, in whom full doses of bromide of potassium had been without avail—a fresh instance of the uncertainty of therapeutics. Gairdner's case clearly proves the influence of chloral over choreic ataxy, but it would be imprudent deliberately to repeat the experiment. A girl eight years of age, affected with chorea, took forty-six grains (three grammes) of chloral in mistake for the fifteen-grain (one gramme) dose prescribed for her. Serious indications of poisoning ensued, and when they had been overcome the choreic symptoms had entirely and permanently disappeared.

The arsenical treatment has for a length of time given proofs of its efficacy, but I am unwilling to let the opportunity pass of pointing out to you the mode of administration, and the successes of my learned *confrère* and friend Professor Wannebroucq, of Lille. He employs the arseniate of soda dissolved in water. Commencing with a daily dose of one-fourteenth of a grain (five milligrammes), he gradually increases it, by additions of one-thirty-fifth of a grain (two milligrammes) at a time, to a maximum dose of three-fourteenths of a grain to four-fourteenths of a grain (fifteen to twenty milligrammes). He concludes from the cases he has observed that somewhat stronger doses administered for a short time are more efficient and less dangerous than weaker doses continued over a longer period. He has succeeded, in four instances, in curing obstinate chorea in eight, twelve, sixteen, and twenty-one days respectively.

In eight cases in which Rodolfi tried the chloride of calcium, all were successful; the duration of the treatment varied from eight to fourteen days, and the daily dose reached from seven grains and a half to fifteen grains (fifty centigrammes to one gramme). The eight patients were children. These cases are certainly very remarkable, especially considering the rapidity of cure, but they do not possess, in my opinion, all that clearness which is desirable. Along with the chloride of calcium, Rodolfi also administers day by day the extract of belladonna; and the intervention of this remedy necessitates considerable reserve in the interpretation of his results.

The sulphate of aniline, advocated by Turnbull ever since 1854, is credited to-day with a certain number of cures obtained by the proposer of the remedy, by Filiberti, and by Fraser. The medicine is administered in solution, in doses reaching from two and a quarter or three grains (fifteen or twenty centigrammes) to seven and a half or eight and a half grains (fifty or sixty centigrammes) daily; a drop of sulphuric acid is added to the solution. In the six cases reported in detail by Turnbull, the cure was effected in an interval varying from two to five weeks; in the young woman of nineteen treated by Filiberti, laudanum was substituted for the aniline when the latter had already effected a marked amendment, and the choreic disturbance immediately reassumed all its intensity; recourse was again had to the aniline, which it was found necessary to give in a much larger dose than before. A complete cure was effected in a period amounting altogether to forty days.

Aniline is an oily alkaloid obtained from indigo and from tar, having phenyl as its radical; with most of the acids it forms crystallisable salts. In animals experimented upon, this agent, when given in large doses, produces clonic and tonic convulsions, and death; given in smaller doses, the phenomena disappear in a few hours, or in a day at most. In man, aniline, in therapeutic doses, often, though not always, produces a blue discoloration, which appears first on the lips, beneath the tongue, and under the nails, and may eventually affect the whole of the covering of the body. This tinting results from the deposit of an abnormal pigment which is formed in the blood by the oxidation of the aniline. This phenomenon may be compared, according to Turnbull, to the icteric (pseudo-icteric) discoloration of the skin and the organic fluids after the ingestion of carbazotic acid, as pointed out by Moffat. Along with this effect of discoloration, aniline produces prostration, and more or less intense cephalalgia,—symptoms which occur in proportion to the limits of tolerance. As to the gastro-intestinal irritation, accompanied with diarrhœa and vomiting, it occurs much more rarely with the sulphate than with pure anfline; hence the superiority of the former for therapeutic purposes.

Some cases recorded by Ogle, MacLaurin, and Harley, established the utility of Calabar bean. A tincture is made of one drachm of the bean to an ounce of rectified spirit, and of this tincture the English physicians administer fifteen to thirty minims in slight cases, and in others give forty-five minims or a drachm. The cases are, as yet, few in number: I could not quote more than five; but, at any rate, they are admissible evidence, inasmuch as the Calabar bean has been ordered by itself, to the exclusion of any other ingredient.

Lastly, I am desirous of calling your attention to the powerful efficacy of the constant current in the treatment of chorea; success is rapid and certain, at any rate so far as may be gathered from the cases recorded by Remak and Benedikt. The application should be made over the vertebral region, with an ascending current so weak that the patient shall barely feel conscious of it. It is used once daily, at first for a minute and a half, afterwards for from two to three minutes. The results show a remarkable analogy with those obtained by the ether spray, so far as concerns the marked diminution in the symptoms obtained during the first sittings, and the possibility of the complete cure being somewhat protracted. This was the course of events in a lady brought forward by Benedikt at the Vienna College. This person, the mother of two distinguished physicians in that city, had been suffering for some months from a very severe unilateral chorea. At last galvanism was tried over the region of the vertebræ, and after the fourth application, so great was the improvement, that close observation was required to discover any remains of the chorea; but, insignificant as these were, seventeen sittings were necessary to complete the cure.

I will bring this account to an end by a remark of a general character which must be constantly present to the mind of anyone who is desirous of estimating the value of a remedial method: Chorea may get well of itself after a duration of fifty to sixty-six days. If, therefore, any treatment only proves efficacious in a length of time almost equal to the one I have mentioned, the termination of the disease may be attributed to its natural and favourable evolution quite as fairly as to medical intervention. On the other hand, a chorea which lasts beyond three months has lost all chance of spontaneous cure; it has become chronic, and we know what tenacity is involved in that character—above all in the adult. Consequently, a remedy which overcomes a chorea of several months' standing may be legitimately pronounced efficacious. It is easy to see that all the foregoing cases answer to one or other of these two conditions, and that the conclusions based upon them may be unreservedly accepted.

(*To be continued.*)

REPORT ON THE HEALTH OF INDIA IN 1873-74.

A REPORT on sanitary measures in 1873-74, together with miscellaneous information up to June, 1875, has just been issued from the India Office, and has been received with somewhat increased interest upon the present occasion, from the fact of the Prince of Wales's visit to that country. From this report it appears that in the European army the death-rate in 1873 was 15·3 per 1000—a lower rate by upwards of 2 per 1000 than any previously recorded. In 1859 the Royal Commission appointed to inquire into the sanitary state of the British Army in India found the then existing death-rate to be 69 per 100. This calculation was not, however, quite correct, as it included amongst the deaths the casualties resulting from half a century of war. In the Bengal Army there were thirty-three deaths from cholera, and fourteen among the force quartered in Burmah; but in Madras and Bombay no deaths from this malady were recorded. Dengue fever, which was prevalent all over India in 1872, appears to have died out in the following year. On the question of canteen regulations, much stress has been laid, with regard to the effect which they produce, on the liability of the soldier to diseases either caused or aggravated by habits of intemperance. In the "Bombay Sanitary Report for 1871" it was shown that the average quantity of malt liquor consumed by each man per diem was nearly a quart, and of spirits nearly four ounces—a quantity which, the Army Sanitary Commission observed, few men could drink in a climate such as that of India without craving for more. The Commander-in-Chief in Bombay states that he is confident the ill-effects amongst the men from drinking arise from the

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poisonous liquors consumed by them out of barracks, and not from what is obtained from the canteen; and the remedy he advocates is an open canteen, on the ground that the more money a soldier spends on good liquor, the less he will have wherewith to purchase the poisonous compounds of the bazaars. As soldiers will drink, it is argued that what they do consume should be of wholesome quality, and accessible to them in barracks. For some years past, coffee-shops have been established in every British regiment in the Bombay Presidency, with good results; and better barrack accommodation for married soldiers has been provided, the number and size of the rooms allotted to each family being now regulated by the character of the climate and the number of persons composing the family.

Surgeon Alcock has carried out a series of inquiries on the subject of pulmonary disease, from which it appears that whereas the deaths in the 35th Foot from this cause were 6·6 per 1000 while the regiment remained in India, they increased on its return to England to the enormous proportion of 24·2 per 1000 among the men who had returned, or more than three times greater than the estimated loss of each of the regiments on home service. This he attributes to exposure to prolonged heat and malarious poison, and it is contended that similar results would be found in every corps on return home were the career of each man who had been on Indian service separately followed out, and not, as now, lost sight of amid figures which include an influx of healthy recruits.

Amongst the non-military population it is satisfactory to find that, notwithstanding the opinions frequently expressed that vaccination would meet with insuperable objections on the score of the religious prejudices of the natives, it appears that when once they can be persuaded that it is to their interest to submit to it, all notions of injury to caste are forgotten. In Madras, hundreds of men, women, and children hastened to be vaccinated, the Government having sanctioned the payment of a reward of two annas (threepence) to every person undergoing the operation.

Sir Charles Staveley's opinion of the danger of driving the soldier to seek for stimulus in the poisonous drugs of the native spirit merchant, receives strong confirmation from the Report on Lunatic Asylums. The majority of cases of insanity are traced to the use of the narcotic preparations of the Indian hemp so largely consumed in India, whether in the form of churrus, bhang, or ganjha. It is a remarkable fact that the proportion of females to the total number of insane patients treated in the Bombay asylums was only 16·5 per cent., while in England there is an excess of females over males. This may be partially accounted for by the females, except in cases of poverty, being cared for at home by their friends.

Dr. Lewis and Dr. D. Cunningham, who have been engaged on a special inquiry into the nature and causes of cholera, are of opinion that the disease is not contagious; that it is infectious seems to be very doubtful; and the results at which they have arrived is, apparently, that the prevalence of the disease is intimately connected with meteorological phenomena, though of the nature of the connexion nothing is known at present. Dr. Cunningham is convinced that cholera is due to certain conditions of air and soil which are, as yet, but little understood.

The report under notice shows conclusively that much has been done by Government to improve the sanitary condition of the millions of our fellow-subjects in India; but whilst bearing testimony to this encouraging circumstance, it is certainly a great fact that much yet remains to be done.

FROM ABROAD.

Epileptiform Convulsions following Thoracentesis—Sudden Death following Thoracentesis.

M. Vallin has recently reported (*Gazette des Hôpitaux*) the case of a young man, twenty-three years old, who was admitted into hospital with all the signs of pleuritic effusion, which, after remaining for a long time stationary, increased to such a degree as to necessitate thoracentesis. This operation afforded marked relief to the patient, but, the effusion recurring, a drainage-tube was inserted, and phenic acid injections daily thrown into the pleural cavity. During one of the injections the patient complained of slight pain, and at the end of the injection was seized with fainting. His limbs became stiff, his extremities cold, his face cyanosed, and the pulse was small. After three-quarters of an hour, opisthotonos came on, and twelve hours after the onset of the attack the man died without having returned to consciousness. At the post-mortem examination nothing special was found except fatty degeneration of the heart—a condition which, it was thought, might possibly have been of some importance in causing the symptoms. M. Vallin regrets that the autopsy was not made more complete than it was, because these cases are rare, and their elucidation involves a delicate point in pathological anatomy. It is especially to an examination of the head that particular attention should be directed.

At the Société Medicale des Hôpitaux, this subject of sudden death after thoracentesis was lately brought forward by M. Maurice Raynaud, who reported three cases of the kind; and in the discussion on these cases M. Vallin wanted to know whether M. Raynaud had found any embolism of the cerebral arteries. He thought the cases of M. Raynaud were allied to others which he himself published some years ago under the title of "Apoplexy in Pleuritic Effusions." He called to mind the history of a patient, who in the course of pleuritic effusion was seized suddenly with right hemiplegia, then very slowly a gangrenous patch occurred in the sole of the right foot, and he died two months afterwards, notwithstanding successive tappings. At the post-mortem, softening of the left corpus striatum was found, and an embolus obliterating the corresponding middle cerebral artery. M. Vallin associates with this all the cases of the same kind which are to be found in many French and foreign publications, and amongst them one by M. Duroziez, published in the *Gazette des Hôpitaux*, 1870. Basing his opinion on these facts, he asks if it is not possible to connect the epileptiform seizures with sudden obstruction of a cerebral artery by concretions or granular detritus detached from the pulmonary veins of a lung compressed and inflamed. He knows that this explanation of embolism ought not to be too readily admitted, and he is far from wishing to connect all cases of sudden death, or of epileptiform convulsions supervening on pleurisy, with embolic obstruction in the brain; he only points out the fact of hemiplegia suddenly supervening, after thoracentesis, in young subjects who were in nowise predisposed to cerebral hæmorrhages, and asks if one ought not to admit, in these cases, a relation of cause and effect. If, following the hypothesis of M. Raynaud, there is only a reflex excitation with a peripheral origin, how admit that a serous membrane, which for many weeks submits with impunity to the contact of an irritating fluid, acquires all of a sudden so delicate a reflex sensibility? Should one not rather admit that an injection, administered with a certain degree of force, has detached a soft clot from the veins of a lung indurated, soaked in pus, and very unequally permeable to the blood?

M. Vallin has met with epileptiform attacks, probably of an embolic origin, in a patient in whom he had opened, fifteen days previously, a deep abscess of the neck, filling the carotid sheath, and he is struck with the resemblance of the symptoms which this patient presented to those which have been observed by M. Raynaud. The attack commenced with syncope, and it was not till later that spasms and clonic convulsions set in. It is difficult, he thinks, to reconcile this absence of spasmodic movement at the beginning with the reflex excitement spoken of by M. Raynaud. There was likewise hemiplegia, also sudden and complete blindness, which involuntarily made one think of a mechanical arrest of the circulation.

In reply, M. Maurice Raynaud considered himself justified in stating that a very careful and complete examination of the head was made in his cases, excepting that the carotid artery in the cavernous sinus was not looked to, and that nothing was discovered. If M. Vallin's explanation of embolic obstruction be admitted, how (he asked) is the sudden blindness to be accounted for? There does not exist a single record of embolism of the central artery of the retina of both sides occurring at the same time. M. Raynaud made a careful examination of the heart also, but found nothing particular about it. For these reasons he thinks M. Vallin's interpretation inadmissible for the cases of which he spoke, and adheres to the opinion which he himself has advanced.

In answer to the statement by M. Desnos, that sudden death after thoracentesis is the result of pulmonary congestion, M. Raynaud cannot deny that it may be, but he affirms there are cases where pulmonary congestion cannot be reckoned as the cause; and he cites a case in which thoracentesis was practised for pleuritic effusion which occurred during the course of acute articular rheumatism, and soon after this

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operation the patient commenced expectorating an abundance of mucus, and died in a quarter of an hour. At the post-mortem there was absolutely no trace of congestion of the lungs. In this case, again, reflex action would appear to have been the most probable cause of death.

M. Lepine referred to two cases in the Beaujon Hospital, which were of interest as supporting, the one the view of M. Vallin, the other the view of M. Maurice Raynaud.

M. Libermann quoted a case to prove that sudden death after thoracentesis may be merely a coincidence, and due to causes altogether independent of this operation. It was that of a soldier, twenty-four years of age, who had never been previously ill, and who came into hospital with all the signs of pleuritic effusion of the right side. Palpation of the abdomen was painless. He never complained of any abdominal pain, and the constipation from which he suffered was overcome by two doses of rhubarb. The effusion not yielding to blisters, Dieulafoy's aspirator was used. The fluid quickly re-accumulated, and a fresh tapping was required five days afterwards. A third puncture eight days afterwards gave exit to 1500 grammes of fluid, which was altogether purulent. Half an hour after the eighth tapping, which was performed in the usual way, the patient had a desire to go to stool. He was lifted and supported on the vessel; he meanwhile suddenly became pale, and died after passing a quantity of sero-sanguinolent fluid. At the post-mortem examination it was found that the several punctures had caused no local disturbance, and that death had been caused by hæmorrhage from the arteria gastro-epiploica dextra, owing to a perforating ulcer of the duodenum which had not been known of during life. The liver, spleen, and kidneys presented numerous points of granulo-fatty degeneration. The stomach, duodenum, and jejunum were distended with gas, liquid, and a solid elastic body, which, on opening the stomach, was seen to be an immense blood-clot bathed in the serum which had been exuded from it. On the posterior surface of the duodenum was a round ulcer destroying the whole thickness of the intestinal wall, its base being formed by the pancreas, to which the sharply cut margins were adherent.

The Paris Faculty of Medicine.

The long hesitation of the Faculty in presenting to the Minister of Public Instruction the name of the member whom it desires to have as its Dean, has at last been got over. Prof. Gavarret, who, it seems, would have, if he had persisted, obtained a majority, withdrew from the contest, as he was of opinion that a mere majority of four or five would not have given him sufficient authority with his colleagues and the pupils, nothing short of an approach to unanimity being likely to preserve him from a recurrence of former troubles and disturbances. The Faculty then elected Prof. Vulpian for presentation to the Minister "in the first line" by nineteen out of twenty-five votes, and Prof. Bouchardat "in the second line" by unanimity. It seems that the Council of the Department of the Seine has refused to agree to the vote of 200,000 fr. for the improvement of the Faculty, which we stated in our last it was expected to concede. Prof. Béclard, who is one of the Council, did his best to support the recommendation of the Committee in favour of the grant by pointing out the inferiority in teaching power of the Paris Faculty to that of Berlin and Strasburg, notwithstanding the immensely greater number of students resorting to the former. The Faculty of Paris, with its 4200 students, received in 1874 797,400 fr. for fees for inscriptions and examinations, while its expenditure was only 594,700 fr., so that more than 202,000 fr. returned to the coffers of the State. For 1872 the surplus of the receipts may be estimated at 400,000 fr. The new Faculty of Strasburg, with the number of pupils varying from 400 to 800, had at its disposal last year the sum of 1,400,000 fr., and the year before of more than 2,000,000 fr. In the Paris Faculty there are but twenty-seven chairs, while in that of Berlin there are 102. For the single professor of anatomy at Paris there are nine professors at Berlin; and there are two chairs for pathology in the one to twelve in the other. Nevertheless at Paris the *matériel* for the creation of professorships exists in in abundance in the corps of *agrégés*, which, possessed of great scientific potentiality, remains in a dormant state for want of the necessary funds. The demonstration proved quite useless, one of the most determined opponents to the grant declaring that "this Faculty is almost as clerical as the other."

A Substitute for Transfusion.

At the Medical Society of Victoria, Dr. Talbot read a paper (reported in the *Australian Medical Journal* for August) on "A Substituto for Transfusion in Post-Partum Hæmorrhage." He observed that there are so many difficulties attending the practice of transfusion, that in the great majority of cases it must prove almost impossible of execution except in a lying-in hospital, where everything requisite may be at hand. In a private house, where there is little or no help, or only excited help, which is a positive obstruction, it is impossible in ninety-nine cases out of 100. He proposes the following substitute:—

"Bandage each of the lower extremities from the toes to the groin with an elastic bandage, and include each half of the surface of the pelvis in this—or, better still, in a separate bandage. Next, apply a transverse elastic abdominal bandage over an elastic compress, which should be so adjusted as to thoroughly compress the uterus, and also, if possible, the abdominal aorta. The upper extremities are then to be bandaged from the fingers to the arm-pits. Of course, while applying the bandages the limbs should be elevated in order to help the emptying of them by gravitation. The quantity of blood obtainable by this plan from both the lower extremities would, I think, be about twelve ounces from each; from the surface of the pelvis, nates, and abdominal integuments say twelve ounces more; and from the two upper extremities another twelve ounces—making a total of forty-eight ounces of living warm blood. Now, the quantity of blood required need not exceed eight ounces; and, according to Dr. Barnes, six ounces are sufficient. In addition to the simplicity of the bandage, the plan has the advantage of time over that of transfusion; the fact, also, that the blood is in the vessels of the patient, and that all that is required is to transfer it from the extremities and surface to the grand centres of life. To transfer warm, living blood without the fear of coagulation, is one great and important advantage which this plan has over the possibly cold and dead blood of the transfusion method. The apparatus is also very simple—viz., four bandages, each six yards long, and four short pieces of elastic bandage. For after bandaging a limb—say one of the lower extremities,—a tourniquet, made from a piece of elastic bandage, could be tied firmly around the limb, a little below where the bandage terminates at the groin. The bandage could then be removed and applied to another extremity. While applying the bandages, the upper part of the body should be slightly depressed, in order to keep the blood in the brain. If I have estimated the available supply of blood at too high a figure, it is easy to suppose the quantity to be smaller, and even then it will be obvious that a large quantity will be under command."

In the discussion that followed it was objected that the adoption of this measure might draw off attention too much from the uterus itself, and that, as long as the hæmorrhage remained unsubdued, the mischief would only be increased by directing more blood towards it. Also, in the exhausted state of the patient, the amount of blood expected might not be forthcoming. The strongest objection, it seems to us, would consist in the difficulty and delay in applying the bandages on an almost lifeless woman, endangering the exhaustion of the little vitality that remains.

Surgical Anæsthesia in Children.

Professor Bouchut publishes in the *Bulletin de Thérapeutique*, October 30, an abstract of a communication which he made to the recent Congress at Brussels. Without discussing the relative merits of the various anæsthetic procedures which the surgeon may resort to, he wished to make known to the Congress that in children absolute anæsthesia may be obtained by administering chloral by the mouth. This action of the drug is certain and easy of production, and cannot be obtained in the adult—furnishing an additional proof of the difference in the action of certain medicinal substances in children and adults. Whether it is that the adult cannot swallow without disgust or intolerance a sufficient quantity of chloral, certain it is that he cannot be anæsthetised by it, for it would be necessary to raise the dose to eight or ten grammes, and this is a dose which the stomach either refuses or rejects. In the child, on the other hand, three or four grammes are taken without any difficulty, this producing neither pyrosis, gastritis, vomiting, nor diarrhœa, while it gives rise to a more or less intense anæsthesia. Prof. Bouchut is enabled to found this statement upon a considerable number of facts, having made very

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frequent trials of the hypnotic and anæsthetic powers of chloral ever since it was first imported into France, in 1869, by Demarquay, who denied that it produced any anæsthetic effect. Prof. Bouchut has often employed it at the Hôpital des Enfants Malades, in chorea, in cerebral rheumatism, or during the opening of abscesses and the extraction of teeth. He has been in the habit of prescribing three or four grammes for from ten to twelve children daily, sometimes continuing it for three weeks, a month, or longer—so that he can refer to something like from 8000 to 10,000 cases of its employment, and amidst this immense number he has never met with a fatal accident. In one case only did asystolia seem imminent, in a child suffering from mitral insufficiency. In several instances chloralic eruptions have followed, but these have been of no consequence, only lasting for a few hours. Intestinal irritation has never been produced, even when the choral in doses of from three to six grammes have been continued for a month or six weeks, so that the same child has taken in that time from 200 to 240 grammes of the medicine. Prof. Bouchut, who was the first to use chloral for chorea in 1869, has had cases which, from their violence, seemed to threaten death, and have been cured by chloral given in three-gramme doses, morning and evening, for fifteen or twenty days. It is the best remedy we have for this disease, and is, indeed, absolutely necessary when the movements are so violent as to excoriate the skin and cause death. By forcing upon the patient sixteen or eighteen hours of sleep and immobility out of the twenty-four hours, the skin ceases to suffer, the movements diminish, and the chorea is cured. The same effects of chloral may be produced by chloral suppositories, prepared according to M. Mayet's formula (*Bull. de Thérap.*, tome 88, p. 318); but the rectum is more irritable than the stomach, so that after three or four days the chloral suppositories induce tenesmus and rectal heat and ardor, which compel their discontinuance. The stomach is the best channel of administration of chloral for children, as by it the remedy is easily given, and its tolerance is complete. A quarter of an hour after its ingestion the anæsthesia commences, and at the end of the hour it is complete; and if now an abscess is opened or an incision made, the sleeping infant heaves a sigh, or sometimes moves a limb, without awakening, and again becomes immovable, being quite unaware of what has passed on awakening four hours afterwards. The same occurs in the destruction of erectile tumours by the Vienna paste, or the extraction of teeth. At the Hôpital des Enfants Malades the sister gives a dose of three or four grammes of chloral at eight o'clock, the child falling asleep in twenty minutes, and at nine the dentist arrives and removes one or even two teeth without awakening the child. For those who know the pain and difficulty of removing teeth in children the valuable character of this chloral anæsthetic will be appreciated.

An Epidemic of Acrodynia.

In the October number of the *Recueil de Médecine Militaire*, Dr. Bodros, surgeon in the 87th Regiment of the Line, quartered in the camp at Satory, furnishes an account of a small epidemic of acrodynia which appeared in his regiment in July and August, 1874. The disease has on various occasions appeared epidemically, and sometimes on a vast scale, as in 1828 at Paris and some adjoining towns, when 40,000 persons are said to have been attacked—great agglomerations, such as garrisons, and hospitals especially, furnishing the subjects. This epidemic did not completely cease until 1832; and subsequently various small epidemics have been observed in Belgium between the years 1844 and 1846. Since then, cases have been much more rare, and have chiefly assumed the sporadic form. In the present epidemic, M. Bodros has met with fourteen cases during the two months. The affection has been described under different names, such as *mal des pieds et des mains*, *chiropodalgie*, epidemic erythema, etc.; but acrodynia—signifying pains in the extremities—has been the term finally adopted. The most ordinary symptoms are changed conditions in the sensibility of the parts, in the form of tinglings, pains, numbness, and partial paralysis. At the same time the parts become cyanosed, algid, and bathed in a viscous sweat. They are also frequently the seat of phlyctenæ, furuncles, and phlegmons, accompanied by a blackish colour of the epidermis or ecchymoses. There are almost always present disturbances of the digestive organs; and several authors note œdema of the face, and, more rarely, anasarca and ascites. There is generally little or no fever, and the intellect is unimpaired. All these symptoms were distinctly observed during the present epidemic, with the exception of disturbances of the digestive organs, which were never marked. In the narratives of former epidemics, also, it is found that in some of these there has been predominance of disturbances of the digestive organs, and in others of the nervous system—the disease being seldom characterised by the presence of the whole of the symptoms, some of which may be absent without its diagnosis being at all uncertain. The most characteristic features of the present epidemic were numbness, pricking pains, and erythema of the extremities, and the changed condition of the epidermis, with the absence of tumefaction. In some of the patients the symptoms appeared very suddenly, and in others only gradually; and some of them had recovered in a week or two, while others were ill two months or longer. Unfortunately it did not occur to M. Bodros to take the temperature until somewhat late; but he then always found it lowered three or four degrees centigrade when the patient was in a state of quietude. Unless some complications occur, the prognosis of the disease is very favourable, although, in some recorded epidemics, death has occurred owing to the intensity of the nervous phenomena, or through complications such as diarrhœa and ascites. In some the convalescence is rapid, but in others it is slow, the disease then having a tendency to become chronic. As to the causes of the disease, the present epidemic throws no light upon them, the camp at Satory being at the time in excellent sanitary condition, and the soldiers of this regiment—the only one attacked—having no special circumstances attached to them. The nature of the disease is involved in complete obscurity, although the reporter believes that the recent researches on the physiology of the sympathetic and on the vaso-motor nerves would seem to refer these morbid phenomena to some changed condition of the medulla spinalis. The treatment has been purely symptomatic; but the whole series of apparently appropriate remedies has, in this epidemic, been found useless. M. Bodros draws attention to a fact not hitherto noticed—that in some cases the disease may become chronic; and he refers to three in his own regiment, in which the individuals, who had suffered some years since from symptoms resembling those of the present epidemic, still exhibited characteristic signs of the affection. M. Bodros is of opinion that the disease occurs sporadically far oftener than is suspected.

REVIEWS.

Paley's Natural Theology. Revised to harmonise with Modern Science, by F. Le Gros Clark, F.R.S., President of the Royal College of Surgeons of England, late Professor of Surgery and Pathology in the College, Consulting Surgeon to St. Thomas's Hospital, etc. London: The Christian Evidence Committee of the Society for Promoting Christian Knowledge. Sold at the Depositories, 77, Great Queen-street; 4, Royal Exchange; 48, Piccadilly; and all booksellers. 1875.

The Christian Evidence Committee of the Society for Promoting Christian Knowledge, desirous of bringing Paley's classic work on "Natural Theology" into more direct harmony with present science, entrusted the responsibility of preparing a revised edition to Mr. F. Le Gros Clark.

The success achieved shows how judicious was the act of the Committee in selecting such an editor. Faithful to the delegated trust, he has by apposite illustrations brought the work thoroughly up to the desired standard. Without the slightest sacrifice of the original intent, the emendations of the editor have now rendered the work a most instructive elementary manual of natural history, comparative anatomy, and physiology, which may be studied with profit by all—even by those who, adopting later views, are disposed to contest the premises on which the main argument is founded.

The evidence for Design in Nature is now treated in a manner calculated to gratify the wishes of the warmest advocates. In no work, in truth, could this subject be more forcibly developed by examples as striking and numerous as they are varied. Space is made for one extract which attracts by its novelty. In treating of design as evidenced in certain portions of the body by *concealment*, the editor remarks—"Were it possible to view through the skin the mechanism of our bodies, the sight would frighten us out of our wits." "Durst we make a single movement," asks a lively French writer, "or stir a step from the place we were in, if we saw

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our blood circulating, the tendons pulling, the lungs blowing, the humours filtrating, and all the incomprehensible assemblage of fibres, tubes, pumps, valves, currents, pivots, which sustain an existence at once so frail and so presumptuous?"

The very excellent introduction to the work, by the editor, is especially commended to the notice of the reader. The opposing view of Evolution, though briefly, is accurately stated. On one point only may we be permitted to differ from the views expressed with regard to Paley. The editor observes—"No doubt if Paley could have foreseen that the idea casually mentioned by him and then dismissed would at a later date have been revived in a far more attractive and consistent form, and under the name of the theory of Evolution have enlisted on its side the support of so many able naturalists and biologists, he would have shown in what manner his argument might be adapted to this view of nature." We venture to think that the real strength of Paley's position lay in the *direct* design argument. It formed for him the one secure foundation on which to erect that after-work which might not have remained so long stable on any other basis.

On some Unsuspected Sources of Infectious Diseases. A Paper contributed to the Public Health Department of the Social Science Congress, Brighton. (Published by permission of the Council.) By M. A. Baines. London: H. K. Lewis, 136, Gower-street, W.C. October, 1875.

The attention of householders generally might, with much advantage, be called to the hints on cleanliness and economy contained in this pamphlet. Dust-heaps, pigsties, and laundries might perhaps be called "unheeded" more correctly than "unsuspected" sources of infectious diseases; but Mrs. Baines will have done good work if she succeeds in directing the attention of medical officers of health as well as of householders to the dangers of which she treats.

Smith's Physicians' and Surgeons' Visiting List for 1876. London: J. Smith and Co., 52, Long-acre.

Having been before the profession for a period of nearly thirty years, Smith's Visiting List should be known to almost every medical practitioner. Doubtless it is used by a large number of medical men, and their number is being added to yearly. Only those who have used the List can fully understand how useful and convenient it is, or realise the important part it plays in the practices of those physicians and surgeons who enjoy the highest reputations for order, method, and regularity in the fulfilment of their engagements.

FOREIGN AND COLONIAL CORRESPONDENCE.

AMERICA.

Philadelphia, November 23.

The Professional Education of Dentists—"Transactions" of the College of Physicians of Philadelphia: Post-Mortem Examination of the Siamese Twins—Proposed Great International Medical Congress in 1876—Meeting of the American Pharmaceutical Association—Professor Austin Flint on the Natural History of Dysentery—Professor Simon on Exploration of the Bladder, and Catheterisation of the Ureter in the Female—Homœopathy in Michigan—The American Public Health Association: Systematic Sanitary Survey of the United States.

Judging from the occasional agitation of the question in medical and dental journals, I think a good many of our brethren who cultivate dentistry are sorely puzzled as to their exact status. They do not seem to know whether they are medical men who devote themselves merely to a branch of special surgical practice, or whether they are dentists, purely such, following a specialty of their own, which they admit has many medical and surgical ramifications. If the former, they might with propriety be considered as a part of our own profession, and a more thorough education to that end be expedient in connexion with the courses in our medical schools. If the latter, they have no such claim, and it remains to be seen how far they can themselves meet the requirements for a thorough education in this specialty. It is said that the number of operators in this country is from ten to thirteen thousand. Many of these have doubtless entered upon the practice of dentistry without capping their education with the degree, for we find that only about two thousand have received this "graduate" evidence of proficiency from dental colleges. How many of these men pursue the occupation as a mere money-making trade, apart from all scientific considerations, we cannot easily conjecture. Every effort to raise the standard of education for dentists must expect the opposition of many of those who are unauthorisedly pursuing this calling. At a meeting of the New York Odontological Society, held not long since, it was argued by one gentleman that dentistry, to attain a greater elevation in the professional plane, must be merged in oral surgery; that the oral surgeon should be educated and experienced, as is the ordinary medical man; that the needs of the student direct to a medical school, from which *Alma Mater* he can pass to the special clinical studies of his selected specialty—to a special clinical hospital; that the special degree of dentistry should be abolished, and the dental converted into medical schools; that the time is near at hand when dentists are to decide whether they will develope into skilful surgeons or remain mere mechanics. It was stated that several of the medical colleges are ready to act, when invited to do so, and to give the proper facilities for the consolidation of the two professions—if we may so style both. These progressive views, of course, met with much opposition, and the general sentiment of the Society seemed hostile to the change.

The College of Physicians of Philadelphia has recently published a volume of its *Transactions*, which externally resembles some of the foreign documents of a similar kind, and is internally full of interesting papers, being those read before that body from April 1, 1874, to June 1, 1875. Two of these are noteworthy as being the first exhaustive reports yet published of the post-mortem examination of Chang and Eng, the Siamese twins, by Drs. Harrison Allen and William H. Pancoast, of this city. It will be remembered that these gentlemen went to North Carolina, and, with much difficulty, procured the bodies, and brought them to Philadelphia, after binding themselves by a written agreement to return them to the family when such an examination had been made as would not disfigure the cadavers—the band which united them to be opened only on its posterior aspect, but in no way defaced in front or divided asunder. All observations were made with the bodies placed face to face, which was evidently the congenital position. Without entering into minutiæ, we may summarise the conclusions elicited as a reply to the question naturally asked by profession and laity—Would a surgical operation for the separation of the twins have been at any time justifiable? Dr. Pancoast believes, as a necessary deduction from the anatomical demonstration of its constituent parts, that no operation of section of the band, for the purpose of disjoining the twins in adult life, could have been performed without fatal results; that it would have been judicious surgery, on the death of Chang, to have at once applied a strong ligature around the band, as far as possible from the body of Eng, and then to have cut through the band, between the ligature and the body of Chang; that whether or not the operation would have been successful in the childhood of the twins is problematical, but that it would have been the part of wisdom and humanity to have made the effort. Dr. Allen infers that an attempt at division of the band in early life would have been accompanied with more serious hæmorrhage than at any subsequent period, because a certain amount of continuity was found to exist between the portal systems, and in the fœtal and early period of extra-uterine life the vessels must have been more capacious and associated with a large tract of liver-tissue.

The medical profession of Philadelphia some time since inaugurated a movement for a great international gathering of medical men from all parts of the world in September, 1876. In this they will be seconded by the representative medical elements of other important American cities. The central body which has taken the matter in charge is entitled the Centennial Medical Commission, and through its agencies the profession throughout the world will be brought into active co-operation to insure a successful issue to the undertaking. Professor Samuel D. Gross is President of this Commission. Addresses will be delivered before the Congress by medical gentlemen from all parts of the world, and discussions will take place each afternoon on subjects connected with such special sections of medicine, surgery, sanitary science, mental diseases,

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ophthalmology, etc., as the Congress shall be divided into. This opportunity of an interchange of friendly greetings, and of the renewal and cementing of old friendships, in addition to the great object of mutual information and improvement, will, we trust, meet with so general a response that we shall be afforded the pleasure of extending a cordial welcome to many of your distinguished medical men. I shall give your readers more detailed accounts of this movement as its plans become more fully developed.

I notice that allusion has recently been made in some of your medical journals to the continued sale of patent medicines by apothecaries, and to the desirability of checking the sale of compounds whose composition is usually unknown to the public, and which, in many instances, may be positively deleterious. The whole tone of the recent annual meeting of the American Pharmaceutical Association at Boston was in favour of making pharmacy a profession, than which none should be higher in its objects and tendencies. And yet at the very same meeting it was virtually acknowledged that it was impossible to abandon a traffic which was a source of considerable revenue to the druggist. The *New York Medical Record* pertinently asks the apothecaries of the country, in view of this indecision on their part in the conflict between their pockets and their consciences, whether pharmacy can ever be considered as anything more than a trade while this immense sale of patent medicines goes on. The pharmacists of the country deserve much credit for the excellent character of the papers presented at these conventions, and for the originality of their investigations. A goodly share of attention was paid at this meeting to remedies of more recent introduction or employment, such as the bromides, jaborandi, salicylic acid, digitaline, and phosphorus, especially in the report on pharmacy, which, occupying several hundred pages in the annual volume of *Proceedings*, possessed all the elements of depth and substantiality characteristic of some of the elaborate continental European scientific reports. Among the elegant modern preparations introduced by pharmacists to the attention of the medical profession are elixirs, made usually according to the fancy of the compounder, and not by any formula officially recognised. They have often been prescribed blindly by the practitioner on account of their agreeable physical qualities, as of taste and smell, and their attractive appearance, rather than from exact knowledge of their contents. The Pharmaceutical Association is making an effort to gather together some general formulæ for their preparation, which will warrant their employment under at least some form of official sanction. An interesting paper was read, exposing adulterations and sophistications of drugs and chemicals, showing how every channel of the trade was permeated by them. Methods of adulteration had been imported from Europe—not that Yankee ingenuity was insufficient to attain the same end—for mixing and cheapening all the more prominent oils. Castor oil, for instance, was frequently only a mixture of lard and croton oil. Various suggestions were made for the benefit of prescription-writers, such as the use of caution-marks where unusual doses were ordered, a strict adherence to Pharmacopœia nomenclature, the employment of the words "not renewable" on such prescriptions as were not to be renewed, etc. So far as maximum doses were concerned, the pharmacists confessed their inability to designate the extreme limits to which drugs might be prescribed, and therefore appointed a committee of the Pharmaceutical Association to confer with the American Medical Association on this and kindred matters.

Professor Austin Flint, of New York, whose work on the Practice of Medicine stands at the head of the modern American works on the subject, recently published in one of our leading medical journals a paper based on some cases of acute dysentery in which medical treatment was omitted. In these days of confidence in the efficacy of drugs, such a paper gives food for reflection. Several years ago he had come to the conclusion that acute articular rheumatism was a self-limited disease, the duration of which is not much abridged by any form of treatment; and he takes a similar view in regard to acute dysentery, which he considers due to an infection, in the sense in which the term is employed by later German writers. The practical conclusion drawn from the study of ten hospital cases of sporadic dysentery, with reference to its natural history, are—1. The disease in a temperate latitude tends without treatment to recovery. 2. It is a self-limited disease, and its duration is but little, if at all, abridged by methods of treatment now and hereafter in vogue. 3. Convalescence is as rapid when active measures of treatment have not been employed. 4. Relapses do not occur in the cases in which the disease has been allowed to pursue its own course without active treatment. 5. Sporadic dysentery, in a temperate climate, does not eventuate in a chronic form of the disease; in other words, it does not lead to ulceration or other lesions of the mucous membrane of the large intestine, and it does not involve any tendency to complications or secondary affections.

There is an interesting paper in the *New York Medical Journal* for October, 1875, being a translation by Dr. A. C. Bernays, of St. Louis, under supervision of the author, of a clinical lecture by Prof. Simon, of Heidelberg, on the "Methods of rendering the Female Urinary Bladder accessible, and on Probing the Ureter in Women." He suggests the desirability of rapid dilatation, occupying but a few minutes, inasmuch as gradual dilatation is apt to create inflammation and ulceration. He thinks that all other operations for access to the female bladder, in cases of harmless extraction of stone, and for effective local treatment in a number of other diseases, will yield to two methods—bloodless dilatation of the urethra, and vagino-vesical section or temporary artificial vesico-vaginal fistula. His exploration of the bladder consists of three acts—the slitting of the orifice of the urethra, the dilatation of the urethra itself by means of plug-shaped specula, and the subsequent bimanual digital palpation of the bladder. In regard to the danger of permanent incontinence resulting from the operation, he makes the following summary:—In the adult, dilating-plugs of 6 to 6·3 centimetres in circumference, or 1·9 to 2 centimetres in diameter, can be used without danger; in extreme cases, *i.e.*, where the disease justifies a rather more daring course, dilatation may be increased as far as from 6·5 to 7 centimetres in circumference. In girls, 4·7 to 6·3 centimetres in circumference are the measures inside of which the surgeon has to keep, according to the case. After detailing the various indications for such a procedure, he refers to probing and catheterisation of the ureter for diagnosis of diseases of that canal and of the kidneys, using a metallic probe and catheter for this purpose, and, where necessary, entering even the pelvis of the kidney.

Like all other "isms," homœopathy is more demonstrative than the number of its votaries or the success of its doctrines entitle it to be. It comes to the surface for a breathing spell, whenever it has an opportunity to do so. The latest phase of its power in this line is the controversy in Michigan recently settled by a sort of doubtful compromise. The Legislature of that State last winter passed a Bill for the establishment of a homœopathic medical department in the University of that State, in which the tenets of regular practice had always hitherto been taught; but the amount appropriated was not sufficient for the equipment of a completely independent school, so that the homœopathic students will have to attend lectures on almost all the branches delivered by the old allopathic teachers. There has been much animadversion on the course of these last-mentioned gentlemen in retaining their seats (with a single exception) under the circumstances; but it is supposed that they believe that, as at present constituted, the system of instruction will strike a blow at the cause of homœopathy, giving the students such a preponderance of good sound doctrine in the course of a session of lectures that many of them will be weaned from their admiration for its false teachings.

The American Public Health Association has just held its annual session in Baltimore. It is steadily awakening the people to a lively sense of the danger entailed by neglect of sanitary laws. The press throughout the country published pretty full accounts of the meeting, so that the masses became interested, and began to reflect on the importance of the matters discussed. This country is taking strong ground in favour of measures of public hygiene, and gradually the various States are coming into line with their State Boards, etc.; but we labour under the disadvantage of being about forty different and independent communities governed by different Legislatures, and each must act for itself and in its own way. In Great Britain no such obstacle exists. Parliament can pass an Act and impose penalties for the violation of health-laws; but the sanitary laws of each State of this country, like all other matters in its domestic management, are entirely under its own control. As an outgrowth from the recent action of this Association, a systematic sanitary survey of the United States will soon be made through the efforts of medical societies and medical

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men under the auspices of a committee of the Association. Schedules have been prepared embracing numerous questions to be propounded, and these will be distributed to all towns having a population of 5000 inhabitants or more. I should be glad to be able to give even a slight condensation of the many valuable papers presented at this meeting, but they would be repetitions of truths with which the press and people of England are now very familiar, such as sewerage, drainage, and ventilation, the pecuniary losses by epidemics, the general principles of sanitary science, and all the catalogue of precautions, preventives, and personal attention to cleanliness which they involve.

The medical schools of the country are now under full headway for the winter. Most of them follow in the old rut over which the wheels of instruction have been running for half a century. Harvard is said to be doing well under the new order of things instituted there, by which the student acquires his education progressively, and not rapidly and with his studies crowded *en masse*, as in most of the schools. But of the exact nature of the difference between them I purpose to speak more fully hereafter.

GENERAL CORRESPONDENCE.

THE WHITECHAPEL MURDER.

LETTER FROM MR. F. G. LARKIN.

[To the Editor of the Medical Times and Gazette.]

SIR,—Allow me to correct one or two mistakes in your leading article on the above case of Saturday last. You quote an absurd report of my evidence. "I put the viscera (except the brain) into a jar which had been cleaned out and filled with distilled water for any subsequent examination." As near as possible the exact words which I used were—"I put each viscus into a separate glass jar (excepting the brain, which was too pulpy to be removed entire), which had been specially washed out with distilled water, for any subsequent examination."

And further on you come to a very hasty conclusion in saying, "Neither should it be forgotten that where such a thing is possible, as it certainly was in this case, *new* vessels, and not those simply 'cleaned out,' should be used." I did use *new* vessels, as you will find by inquiring at Pellat and Co., glass-blowers, etc., Holland-street, Blackfriars, where I purchased six jars of the purest quality (as free from arsenic as possible) at the cost of seven shillings.

Then, again, you speak about the "cardinal doctrine that medical witnesses should use plain language." Had you been in Southwark Police-court when I gave my evidence you would have heard me address the Bench in somewhat the following words:—"In accordance with my promise to the reporters to avoid all technical and anatomical terms at the coroner's court, I wish to say that is my excuse for doing so on the present occasion." To which remarks Mr. Benson said he was quite sure they would all be much obliged to me for so doing. Therefore, Mr. Editor, don't lay this sin at my door.

Trusting you will insert this in your next issue,

I am, &c., F. G. LARKIN.

44, Trinity-square, Southwark, S.E.

*** We are very glad that Mr. Larkin took the precaution of using new vessels; it might have been well to have mentioned the fact. Mr. Larkin seems to think that we are angry with him for not using technical language—the reverse is the case. What said the Lord Chief Justice when Mr. Larkin made use of the word "mummified"? His observation was, "Really, sir, I don't know what you mean." But we do not desire to put Mr. Larkin in pillory, and therefore say nothing of his other little offences against the recognised laws of medical jurisprudence.

THE LATE DR. ROBERT DICKSON.

LETTER FROM MR. A. MACKENZIE.

[To the Editor of the Medical Times and Gazette.]

SIR,—I have only just seen in your journal of October 30 your obituary notice of the late much-lamented Robert Dickson, Esq., M.D. In it you allude to the charitable institutions to which that gentleman so kindly and gratuitously rendered his able services. Amongst them you mention the London Orphan Asylum. Permit me to state that it was the British Orphan Asylum, at Mackenzie-park, Slough (formerly at Clapham-rise), which the late Dr. Dickson so faithfully served; and it is only a few years since the doctor, feeling so deep an interest in the pupils, gave to them a most interesting lecture on botany—one of his favourite subjects.

The Committee will feel much obliged by your kindly causing this correction to be made.

I am, &c., A. MACKENZIE, Secretary.

British Orphan Asylum Offices, 73, Cheapside, London, November 30.

FORESHORES OF RYDE.

LETTER FROM SURGEON-MAJOR W. T. BLACK.

[To the Editor of the Medical Times and Gazette.]

SIR,—In reply to a letter from Ryde respecting objections to suggested improvements in the drainage and sewerage of that place, I hope I may be excused by stating that these were chiefly intended for the behoof of the numerous visitors by boat and rail to that charming seaside resort, and not for that of the residents there, who are already well and comfortably settled. These passengers and visitors want their propositions and objects to be considered, as well as those of the resident inhabitants, and though they do not appear in the health and mortality returns of Ryde in any way, and do not want to be enrolled as ratepayers and burgesses, yet they consider their interests in the present day as much worthy of consideration as those of the inhabitants, contributing, as they do, so much to the animation and prosperity of the place.

Edinburgh, December 7. I am, &c., W. T. BLACK.

INTERNATIONAL PROFESSORS.

LETTER FROM DR. C. GUISAN.

[To the Editor of the Medical Times and Gazette.]

SIR,—I was very much surprised to hear the spirit prevailing at Liége on account of Professor Gussenbauer's nomination. We think quite differently here, and we are glad to call as teachers able men wherever they come from. Men like Schönlein, Hasse, Pfeuffer, Henle, Arnold, Billroth, Griesinger, Liebermeister, Klebs, Naunyn, and Munck have been professors in Switzerland, and we still have Biermer, Rose, Quincke, Valentin, and many others, without thinking it to be an affront or any humiliation to our country. Men of talent have no country, but belong to all. We send in our turn professors to foreign chairs—Lebert, Hiss, etc.,—and are glad to see them welcomed and honoured. I am perfectly satisfied that the Belgian professors will soon come round, and that no resentment will subside either against the Ministry or against Professor Gussenbauer. I am, &c.,

Vevey, November 30. C. GUISAN, M.D.

PROPOSED MEMORIAL TO THE LATE DRS. ADAMSON AND BELL.—A movement is on foot in St. Andrews to erect a memorial to commemorate the services to the community of the late Drs. Adamson and Bell. A preliminary meeting has been held, and a committee appointed to collect subscriptions in aid of the object. More than £100 has already been subscribed.

A NEW DISINFECTANT.—At a meeting of the Medical Society of Victoria, Dr. Day exhibited a new disinfectant. He had been long in search of an agent capable of purifying the hands after post-mortem examinations, and for the use of persons in attendance upon the subjects of infectious diseases. He has found that a most effectual disinfectant is produced by the combination of a drachm of etherial solution of peroxide of hydrogen (erroneously called ozonic ether) with an ounce of Rimmel's toilet vinegar. There are two marked advantages in the combination of vinegar with the peroxide. In the first place, vinegar, in common with most acids, is capable of preserving the peroxide; and, in the second, it allows this powerful disinfecting agent to be used with soap, the free alkali of which, under ordinary circumstances, would decompose it. For the purpose of disinfecting the hands after attendance on persons suffering from puerperal fever or other infectious diseases, after well washing and drying them, the disinfectant should be well rubbed in.—*Australian Medical Journal*, July.

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REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

FRIDAY, NOVEMBER 26.

Sir WILLIAM JENNER, Bart., M.D., D.C.L., F.R.S., President, in the Chair.

TWO FATAL CASES OF ACUTE PYELITIS AND NEPHRITIS, APPARENTLY CONSEQUENT ON GONORRHŒA.

Dr. MURCHISON read notes of these cases. In consequence of both patients having been admitted into hospital in an unconscious state, no history was obtained of either till after death, and the real nature of the cases was only revealed by post-mortem examination; hence no observations were made as to the temperature and the character of the urine; still, the post-mortem appearances left little doubt as to the exact state in each case. S. H., twenty-eight, a grocer's assistant, was admitted into the London Fever Hospital on June 4, 1865, in a state of profound coma, with low muttering delirium and dry brown tongue. Three hours after admission, he died, having had several attacks of general convulsions. After death, it was ascertained that he had been suffering from gonorrhœa for some time, and that the cerebral symptoms had come on suddenly, only thirty hours before admission. After death, the entire length of the urinary passage, from the anterior end of the urethra to the pelves of the kidneys, was found to be in a state of intense inflammation; the mucous membrane being brightly injected, and the surface bathed with pus. Both ureters were full of thick yellow pus. Both kidneys were in the first stage of acute nephritis, and their pelves were full of pus. The lungs were much congested in their dependent parts, and in the lower lobes were a few small patches of incipient lobular pneumonia. M. D., twenty-five, a lady's maid, was admitted into the London Fever Hospital. She was unconscious, but constantly moaning. Her countenance was dusky; her breathing laboured. The pupils were equal, but there was slight internal strabismus of both eyes. No note was made of the pulse or temperature, but there were signs of hypostatic congestion of the lungs. She gradually became comatose; and, after two convulsive fits, died on the second day after admission. After death, it was ascertained that the symptoms had come on suddenly on the day before admission. At the post-mortem examination, the membranes and substance of the brain were found to be intensely hyperæmic; but there was no exudation of lymph, and no sign of tubercle either within the cranium or in the lungs. The lungs were congested in their dependent parts, but in other respects were healthy. Both kidneys were in the early stage of acute nephritis: large, smooth, and almost black from intense congestion. The ureters and the pelves of the kidneys were full of thick yellow pus. The bladder also contained pus; and the lining membrane of the vagina, urethra, bladder, ureters, and pelves of the kidneys, was intensely red.

Dr. GREENHOW said that he was reminded of a somewhat similar case, which he saw when he was a student at Edinburgh. He was present at the post-mortem examination of a man, who had died in a state of coma lasting thirty-six hours. He was supposed to have been poisoned, but he was the subject of gonorrhœa, for which he had been taking copaiva and using injections. Sir W. Newbiggin at the time attributed the symptoms to "cerebral metastasis" from gonorrhœa checked by treatment.

Sir WILLIAM JENNER asked if it were quite certain that the female patient had gonorrhœa.

Dr. MURCHISON replied that there was no history to be obtained on this point; but the post-mortem appearances were similar to those in the male patient. In answer to Mr. Berkeley Hill, he also stated that the duration of the gonorrhœa in the male patient was not defined; it had existed for some time. He further stated, in reply to a question put by Sir W. Jenner, that the man had been under treatment for the gonorrhœa, and he could not say that he had taken cantharides. Opposed to the view of the inflammation of the kidneys being primary, was the fact of the distension of the passages with pus, the ureters appearing as thick cords. Chelius had mentioned that gonorrhœal inflammation occasionally extended to the kidneys; and the accident could not be so very exceptional, since two cases occurred within six months of one another at one London hospital.

The PRESIDENT remarked that inflammation spread usually upwards to the secreting organs, as from the bladder to the kidneys, and not in the contrary direction.

ACUTE CANCER OF THE LIVER, WITH PYREXIA.

Dr. MURCHISON read the notes of this case, which occurred in a man aged twenty-four. James C., a carpenter, was admitted into St. Thomas's Hospital on November 6, 1872, with the history of a strain six months previously, which caused swelling and pain in the left testicle. About six months before admission he began to complain of pain in the right side, and to lose flesh. There was no hereditary history of cancer. When admitted, he was emaciated, and there was a hectic flush on his face. He suffered much from pain on the right side of the abdomen, and from dyspnœa. The temperature was 101·3° Fahr. On the right side of the abdomen was a visible bulging, continuous apparently with the liver; its lower margin extending almost to the brim of the pelvis. The surface of the swelling was firm, smooth, and moderately tender. The skin and conjunctivæ were jaundiced; there was neither ascites nor enlargement of the abdominal veins. The tongue was moist, slightly furred; there was no appetite; much thirst; no vomiting; the bowels were open, but not loose; bile was passed in the stools; the urine had a specific gravity of 1018, and contained copious lithates, some bile-pigment, and a trace of albumen. He lay on his right side. The respirations were 32, thoracic; he had some cough, but no expectoration; sibilant râles were audible over both lungs, chiefly on the right side; the breath-sounds were feeble, and there was slight impairment of resonance on percussion. Pulse 120. The heart-sounds were normal. The left testicle was twice the size of the right, hard, but not tender. He lived ten days after his admission, during which time he had rigors, constant vomiting of green bilious matter, and a uniformly high temperature—on two occasions the thermometer registering 103° Fahr. The liver continued to increase in size; he became delirious, rapidly weaker, and died on November 16. At the post-mortem examination the liver was found to be much enlarged, and measured before removal twelve inches and a half vertically. Its entire substance was studded with large masses of cancerous deposit. There was a mass of similarly affected glands found in the neighbourhood of the left kidney, and extending along the vessels to the left testicle, which also contained a vascular tumour of the size of a cherry. Dr. Murchison remarked that little was known as to the range of temperature in cancer, but he believed that, in this disease, unless there were some inflammatory complication, the bodily temperature was at or about the normal standard. But the case quoted proved that this rule was not absolute. In this case, moreover, the age of the patient was opposed to cancer of the liver, while not only the pyrexia, but the rigors, the previous injury and enlargement of the testicle, the rapid course, and the delirium, all favoured the diagnosis of pyæmic inflammation in preference to that of cancer of the liver.

Dr. MURCHISON stated, in reply to the President, that, as regarded the condition of the hepatic tissue between the cancerous nodules, there was a good deal of injection in such situations; but nothing like opacity, or infiltration, or exudation, into the liver-substance, which was examined microscopically. There was nothing like pyæmic infiltration, nor any sign of recent peritonitis of the liver. In reply to Dr. Southey, Dr. Murchison remarked that the structure of the growth in the testicle was just like the growths in the liver. The testicle had not grown much; but a secondary chain of enlarged glands ran from the testicle up by the side of the spine, towards the liver.

Dr. MOXON asked whether the condition of the veins of the liver was noted. About three years ago he had published in the *Lancet* notes of a somewhat similar case. It was that of a gentleman, aged twenty-six, at Highgate, whom he had seen in conjunction with Dr. Lucey; he had symptoms resembling those of suppuration in the liver, and often had a temperature of 102·5°, accompanied by rigors, night-sweats, and pronounced symptoms of hectic. After death, nothing but cancer was discovered. The growth was curious. It had grown into the branches of the portal vein in the liver, which were stuffed with it "like a sausage." In places, portions of the liver-tissue were pale and sunken. The case was an instance of excessively severe and sudden cancerous changes, with symptoms of pyrexia, because the growth was so sudden. He would say that, just as oxygen usually fed combustion, yet one might produce a fire with chlorine, so inflammation usually produced pyrexia, but cancer might also cause it.

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Dr. MURCHISON remarked that, in his case, cancer was certainly not present in the larger veins; but that, as regarded the smaller ones, he could not speak so positively.

Dr. SOUTHEY had seen, in a case a fortnight before, the same appearances as had been described by Dr. Moxon. In the portal vein were growths attached, and lying in the vein. The pyrexia observed in Dr. Murchison's case, he (Dr. Southey) thought, was not very uncommon in quickly growing cancer. With all such growths in all parts of the body, temperature was high. In abscess of the liver there was elevation of temperature.

Dr. MURCHISON asked if ascites was present in the cases of Dr. Moxon and Dr. Southey. There had been none in his own case. He thought that cancer running a quick course might, perhaps, give an elevated temperature; but that, in a critical case of diagnosis, the fact of elevation of temperature would rather be against cancer.

The PRESIDENT mentioned the case of a boy who had a lump in his abdomen, of which Mr. Cæsar Hawkins thought very seriously. Another eminent surgeon thought lightly of it; but the boy died in a fortnight. The cancer was largely disseminated; the diaphragm was invaded, and the internal wall infiltrated, and yet the temperature was not much elevated —was certainly never 102°.

Dr. MOXON had always regarded his case as a notable exception to the fact that, with obstruction of the portal vein, one necessarily had ascites. Dr. Moxon had also shown, at the Pathological Society, a specimen in which the coronary sinus was closed, and yet there was no hydropericardium; and another specimen in which the veins of the brain were closed, and yet no water on the brain was found. In cases of cancer of the uterus, the pelvic veins were frequently quite closed, without there being œdema of the feet. Therefore he thought there were certain conditions in which a vein might be closed without the existence of œdema behind it.

Mr. CARTER remarked that Mr. Hutchinson had brought forward a case at that Society in which the ophthalmic vein was quite closed by a cranial aneurism, and yet there was no œdema of the optic disc.

In reply to Mr. Callender, Dr. MOXON stated that not all the coronary sinus, but only a part about an inch from the auricle, was blocked in the case he had mentioned. The other veins of the wall of the heart had probably enlarged, and carried on the circulation.

The PRESIDENT thought that, where the passage of blood was impeded, and the blood dammed back, it must get out somewhere. Probably other veins became enlarged.

Dr. MOXON thought that, in the case of cancer in the portal vein, there might have been enough connexion between the parietal veins of the abdomen and the venules of the portal system to carry on the circulation.

Dr. COUPLAND stated that Mr. Hulke had, for a long time, taken the temperatures of his cancerous patients in the Middlesex Hospital; and that he found the temperature was almost always normal or sub-normal, scarcely ever above normal.

SKIN-GRAFTING UPON A STUMP AFTER AMPUTATION.

Mr. BERKELEY HILL exhibited a female, twenty-nine years old, from whom he had amputated the left thigh at the hip on August 12, 1874, to remove a very large rapidly growing tumour of round-celled sarcoma. The new growth completely embedded the femoral artery, so that the anterior flap was dissected from it; and, thus deprived of its nutrient vessels, it sloughed as high as two inches above Poupart's ligament. The after-healing occupied several months, during which time more than one hundred skin-grafts were transplanted. The strain on the healing surface, caused by the weight of the buttock, was at length effectually supported by a frame bearing round the pelvis, which thrust forwards the buttock by a spring and pad. This was worn till cicatrisation was complete. The patient was exhibited, fifteen months after the operation, in excellent health; no recurrence of the sarcoma being apparent in the lumbar glands or liver; and the scar was small, soft, and supple, and easily movable over the pubes and iliac spines, the islands of skin-grafting being very distinct. The acetabulum, dry and free from scabs, was filled up to a cavity about as large as half a walnut-shell.

Mr. CALLENDER remarked that with the abdominal tourniquet, transfixing and making an anterior flap had fallen into disuse. A flap of skin was now made, and the limb was cut through transversely, so as to prevent the splitting of the artery during the cutting of the vessel; and vessels were to be preserved for the nutrition of the anterior flap. As regarded the skin-grafting, the grafts were so numerous that they would probably represent several square inches of skin. Why were so many necessary?

Mr. HILL stated that the operation was performed in this particular way, because the growth enveloped the femoral artery, so that the flap was skin-flap only. The division had to be done high up, in order to remove the tumour entirely, and Mr. Hill supposed that the vessels which supplied the flap might have been divided. The grafts were over one hundred. They were put on at different times, and probably many of them died; but, as the skin was supple, he thought the majority must have lived. The cicatrix did not resemble fibroid tissue, it was so very supple.

TUMOURS OF THE ORBIT.

Mr. GEORGE LAWSON exhibited two patients, from each of whom he had removed a tumour of the orbit. The cases were essentially different; but each presented points of great clinical interest. The first case was that of an elderly woman, who was admitted into the Middlesex Hospital with a large melanotic tumour, involving the eye, and filling up the whole orbit. This growth Mr. Lawson removed, and then applied the chloride of zinc paste, and in such a manner that it succeeded in saving the upper eyelid. One of the great disadvantages, he remarked, of the use of chloride of zinc in such cases had been that, owing to the running of the paste into the cellular tissue of the eyelids, both lids had been destroyed by it. The plan which he now adopted, when practicable, was the following:—After the eye and tumour had been excised, pressure was made in the orbit until all bleeding had ceased. The mouth of the conjunctival bag, from which the globe had been enucleated, was then held open with two pairs of forceps, whilst the chloride of zinc paste spread on small strips of lint was plastered round the sides of the orbit. A small piece of cotton-wool was next introduced to keep the strips of lint *in situ*, and the mouth of the conjunctival bag was closed over the whole by a single continued suture. A layer of lint was then placed over the conjunctiva, and upon this the lids were closed and kept in position with a compress of lint and a roller. The patient progressed well, and had suffered no pain, and had no recurrence of the disease since she left the hospital on May 25. In the second patient, Mr. Lawson removed a tumour from within the orbit without inflicting any injury on the eye. The growth occupied the floor of the orbit, and seemed to spring from the periosteum far back in the orbit. It was about the size of half a walnut, much flattened where it was pressed between the eye and the orbit, but rounded at its free external border. The specimen was examined by Dr. Coupland, of the Middlesex Hospital, who pronounced it to be a lymphoma.

Dr. MURCHISON related the case of a man from whose orbit a spindle-celled sarcoma involving the eyeball had been removed by Mr. Hulke. The growth returned nine years subsequently in the liver, and gave rise to symptoms closely resembling those of hydatid, but which were proved not to be so by puncture. The man died; and his liver was then found to be studded with spindle-celled sarcoma.

Mr. CARTER mentioned a case in which, four years before, a spindle-celled sarcoma had been removed by himself, and had not yet returned. It had simply left an ugly appearance of the orbit; and he had thought whether he should fill up the gap by transplantation of skin. Mr. Lawson's case reminded him of yet another. A young man came to St. George's Hospital with the orbit filled with a large growth, and with the eyelids and eyelashes much hypertrophied. The growth had come in his infancy, and had grown rapidly until he was four years of age. It had then grown simply with his growth. Mr. Carter had removed it by a large incision; and the tumour was found to be a degenerated nævus. The eye then went back, and the deformity was much relieved. The eyeball of that side was larger than its fellow; and the corresponding palpebral fissure was also large. Mr. Carter united its two sides for about half an inch at the outer canthus, and the man's appearance was much improved. After a time, the growth was found to be increasing, when Mr. Carter again opened the orbit, and took away the growth which was returning. Erysipelas and suppuration followed; and it was to be hoped the latter process had destroyed all the nævoid tissue in the orbit.

Mr. LAWSON considered that the cases fitted for treatment

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by the chloride of zinc paste, as he had described, were only those in which there was a piece of conjunctiva of which to form a bag in which the paste could be sewn up.

New Method of Performing Iridectomy for the Improvement of Sight.

Mr. B. Carter exhibited a patient who had been greatly benefited by the performance of this operation (a description of which was given in our columns a little time ago), and in whose eye the effects of the operation were very visible.

MEDICAL NEWS.

University of London.—The following are lists of the candidates who have passed the recent Examinations:—

B.S. Examination.

PASS.

First Division.—Hullard, Jean Arthur, B.Sc., University College; Maclean, Thomas Edwin, University College; May, Bennett, Birmingham General Hospital.

Second Division.—Hobson, Lewis John, University College; Jameson, Leander Starr, University College; Rose, William, King's College; Voelcker, George Henry, University College.

HONOURS.

First Class.—Hullard, Jean Arthur, B.Sc. (Gold Medal), University College; May, Bennett, Birmingham General Hospital, and Rose, William, King's College (equal).

M.S. Examination.

Logic and Moral Philosophy only.—Gould, Alfred Pearce, University College.

M.D. Examination.

Crocker, Henry Radcliffe, B.S., University College; Duncan, Andrew, King's College; Eastes, Thomas, (Gold Medal), Guy's Hospital; Philpot, Joseph Henry, King's College; Sturge, William Allen, University College; Yeo, Isaac Burney, (a) King's College.

Logic and Moral Philosophy only.—Hoar, Chas. Edward, King's College; Houghton, Walter Benoni, B.S., University College; Leech, Daniel John, Manchester Medical School; Lewtas, John, University of Edinburgh and Netley Hospital; Lowe, Walter George, St. Bartholomew's Hospital; Nicholson, Arthur, King's College; Rigby, James Arthur, Guy's Hospital; Taylor, Herbert, St. Bartholomew's Hospital.

Apothecaries' Hall.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 2:—

Broome, Stephen Bernard, 99, Camden-street, N.W.
Elcum, Donald, Warwick House, Cheltenham.
Houchin, Edmund King, High-street, Stepney.
Whitfeld, Wm. Clarke, St. Owen-street, Hereford.

The following gentlemen also on the same day passed their primary professional examination:—

Bailey, Henry Frederick, University College.
Gairdner, John, University College.
Reace, Wm. Henry, London Hospital.

BIRTHS.

Attwater.—On December 2, at Wickham, Gateshead-on-Tyne, the wife of A. W. Attwater, L.R.C.P., M.R.C.S., L.S.A., of a daughter.

Barnes.—On December 4, at 45, Lowther-street, Carlisle, the wife of Henry Barnes, M.D., of a daughter.

Hurd-Wood.—On December 2, at Great Bardfield, Essex, the wife of John Hurd-Wood, M.D., of a daughter.

Lydall.—On December 2, at 19, Mecklenburgh-square, the wife of Wykeham H. Lydall, L.R.C.P. Edin., M.R.C.S. Eng., of a daughter.

Thornton.—On November 29, at 38, Hove-villas, Brighton, the wife of Dr. J. H. Thornton, Surgeon-Major Bengal Army, of a son.

Waterworth.—On December 2, the wife of T. H. Waterworth, M.D., M.R.C.S. Eng., L.S.A., of New Kent-road, of a daughter.

Wilbe.—On November 30, at York Lodge, Finchley-road, N.W., the wife of Richard Haydock Wilbe, M.D., of a son.

MARRIAGES.

Bulley—McNab.—On November 4, at St. Matthew's Church, Paddington, Francis A. Bulley, F.R.C.S., of Reading, to Catherine, youngest daughter of the late Daniel McNab, Esq., of Epping-place, Essex.

Evans—Wilkinson.—On November 30, at Christ Church, Southport, Alfred Paget Evans, M.R.C.S. Eng., L.S.A., West Bromwich, to Mary Anne Wilkinson, The Grange, Carlton-in-Craven.

Gee—Cooper.—On December 2, at St. Stephen's Church, East Twickenham, Samuel Gee, M.D., F.R.C.P., of Harley-street, W., to Sarah, daughter of Mrs. E. Cooper, of Park-road, Twickenham, and the late Emanuel Cooper, Esq.

Van Someren—Weymouth.—On December 4, at Madras, Godlier George Bennet van Someren, Esq., of Tellicherry and Cochin, barrister-at-law, eldest son of W. J. van Someren, M.D., Deputy Surgeon-General, Madras Presidency, to Emma Louisa, eldest daughter of R. F. Weymouth, Esq., D.Lit., Head Master of Mill-hill School, Middlesex.

Williams—Shattuck.—On December 1, at The Abbey, Bath, John Ambrose Williams, of New York, son of the late Rev. John Williams, of Addingham, Yorkshire, to Eleanor L. Shattuck, widow of G. W. Shattuck, M.D., of Albany, U.S.A.

(a) Obtained the number of marks qualifying for the medal.

DEATHS.

Anderson, Margaret Skelton, younger child of J. G. Anderson and Mrs. Garrett-Anderson, M.D., at 4, Upper Berkeley-street, W., on December 3, aged 15 months.

Buchanan, Thomas Cox, F.R.C.S. Eng., at 11 Spa-walk, Gloucester, on November 29.

Bruce, Jane, wife of William Bruce, M.D., Retired Deputy Inspector-General of Hospitals and Fleets, at Dunimarie, near Cuiross, N.B., on December 4.

Donovan, James, M.B., R.N., late of Killarney, county Kerry, at 6, Addington-road, Dublin, on December 3, in the 76th year of his age.

Mountford, Sarah Jane, eldest daughter of the late John Mountford, M.R.C.S., at her residence, 17, Victoria-grove, Brompton, on December 5.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

Berks County Asylum, Moulsford, Wallingford.—Assistant Medical Officer. Candidates must be legally qualified, and unmarried. Applications, with testimonials, to Dr. Gillaud, Medical Superintendent.

Chorlton-upon-Medlock, Rusholme, and Moss-Side Dispensary, Manchester.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

Denbighshire Infirmary, Denbigh.—House-Surgeon. Candidates must be duly qualified, unmarried, and conversant with the Welsh language. Applications, with testimonials, to the Chairman of the Committee of Management, under cover to the Secretary.

Gloucester Infirmary.—Surgeon and Assistant-Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Committee, under cover to the Secretary, on or before January 27, 1876.

Infirmary for Consumption and Diseases of the Chest, 26, Margaret-street, Cavendish-square, W.—Visiting Physician. Applications, with testimonials, to the Secretary, on or before December 16.

Male Lock Hospital.—House Surgeon. For information apply to the Secretary.

Rotherham Hospital and Dispensary.—Resident House-Surgeon. Candidates must be duly qualified and unmarried. Applications, with testimonials, to the Honorary Secretary, on or before December 23.

Sheffield General Infirmary.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before January 5, 1876.

Westminster General Dispensary, Gerrard-street, Soho.—Honorary Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Secretary before December 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Bosmere and Claydon Union.—Mr. Henry Beck has resigned the Needham Market West District; area 13,978; population 2558; salary £39 per annum.

Malton Union.—Mr. William Colby has resigned the Malton District; area 14,280; population 6869. Also the Workhouse; salary £88 per annum.

APPOINTMENTS.

Caistor Union.—Henry E. Turnour, M.R.C.S. Eng., L.S.A., M.D. St. And., to the Tealby District.

Hailsham Union.—Josiah Sarjant, M.D. St. And., L.R.C.P. Edin., M.R.C.S. Eng., to the Fourth District. Frederic M. Wallis, M.R.C.S. Eng., L.S.A., to the Fourth A District.

Newport Pagnell Union.—James Smith, M.B. & C.M. Glasg., to the Seventh District.

SUPERANNUATION ALLOWANCE.

Mr. William Bennett, who has served as a Medical Officer in the Parishes of St. Giles and St. George, Bloomsbury, for a period of thirty-two years, has been granted a retiring allowance of £200 per annum.

Royal Medical Society, Edinburgh.—The following is the list of office-bearers of the Royal Medical Society of Edinburgh for the session 1875-76:—*Presidents:* A. R. Turnbull, M.B., C.M.; A. R. Coldstream, M.B., C.M., L.R.C.S. Edin.; Thomas R. Ronaldson, M.B., C.M.; Thomas D. Wilson, M.D., M.B., L.R.C.P. and S. Edin. *Hon. Secretaries:* George Ogilvie, B.Sc.; Leslie Ogilvie, B.Sc. *Curator of Library:* J. J. Cox, M.B., C.M. *Curator of Museum:* J. Graham Brown, M.B., C.M. *Hon. Treasurer:* J. R. Young. *Sub-Librarian:* John Turner.

New Board of Examiners.—In addition to the list published last week of the Fellows of the College of Surgeons who have offered themselves for the chairs of Examiner in Anatomy and Physiology at that institution, the following gentlemen were nominated at a meeting of the Committee on the 2nd inst., viz.:—Messrs. John Birkett and John Cooper Forster, of Guy's Hospital; Luther Holden and William Scovell Savory, F.R.S., of St. Bartholomew's Hospital; Timothy Holmes, of St. George's Hospital; and Arthur Trehern Norton, of St. Mary's Hospital. The first-named five gentlemen are already members of the Court of Examiners. We have since heard that Professor Thomas, of Queen's College, Birmingham, and Mr. Henry Power, of St. Bartholomew's, have sent in

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their name as candidates. We should be glad to see a good provincial teacher a member of the Board of Examiners. The Committee on Examinations in Anatomy and Physiology met on Thursday last, the 9th inst., to determine the list of Fellows to be recommended to the Council for election as members of the Board of Examiners.

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

*** Mr. Persse White, of Harcourt-street, Dublin, is grieved with us, and surprised at our narrow-mindedness. We received some time ago an account of a case from him, which we should have been glad to publish in ordinary course. Meanwhile the paper appeared in the *Medical Press and Circular*, and blocks to illustrate it came to us from the office of that paper. As we do not—except under special circumstances, which do not here arise—print second-hand communications, we took the earliest opportunity of returning Mr. White his MS., and of sending the blocks to the place whence they came. *Hinc illæ lachrymæ.*

C. J. Egan, Esq., South Africa.—Letter, with enclosure, received.

N.—At the present moment we are uncertain as to all places where the Act is in force. The most important are—Woolwich, Aldershot, Portsmouth, Plymouth, Devonport, and the Curragh. The most important exceptions are—London, Liverpool, Manchester, Birmingham, and the large seaports generally.

A Successful Candidate.—We cannot publish the list until next week; it must be submitted *pro formâ* to the Council first. Yes, you may venture to sign yourself F.R.C.S. to the document in question.

Linacre.—The President of the Royal College of Physicians changed his name from Vaughan to Halford. He was a quiet, easy-going, and successful physician, of whom the late Mr. Greville, Clerk of the Council to George IV. and William IV., writes in his memoirs—"Halford has been with me this morning gossiping (*which he likes*); he gave me an account of his discovery of the head of Charles I. in St. George's Chapel, Windsor, to which he was directed by Wood's account in the 'Athenæ Oxonienses.' He says that they also found the coffin of Henry VIII., but that the air had penetrated, and the body had been reduced to a skeleton. By his side was Jane Seymour's coffin untouched, and he has no doubt her body is *perfect*. The late King (George IV.) intended to have had it opened, and he says he will propose it to this King (William IV.). By degrees we may visit the remains of the whole line of Tudor and Plantagenet too, and see if these famous old creatures were like their effigies. He says Charles's head was exactly as Vandyke had painted him." Poor Sir Henry, who was a perfect courtier, was terribly cut up when the Duke of Wellington returned him a letter intended for Lord Melbourne, congratulating him on his accession to office, and hoping it would be long before the Tories again took possession of the reins of Government; and one to himself, expressing his deep regret that the rascally Whigs were again in power, which he hoped they would not hold long enough to be of any danger to the country. A full account of his explanation for refusing to bleed his dying friend, as he was not a surgeon, appeared in the medical journals at the time.

Orion.—The value of the office of Chancery Visitor of Lunatics is £1500 a year, and travelling allowances in addition. It is in the gift of the Lord Chancellor.

A. A. P.—Mr. C. F. Gardner, of Ashborne, Derbyshire, has been awarded the prize of twenty-five guineas, offered by Dr. Lory Marsh, for the best essay "On the Application of Sanitary Science to Rural Districts, with a view to insure the Highest Condition of Health and the Prevention of Disease." We understand that nineteen essays were sent in.

M. S.—During the reign of George III. the practice of tobacco-smoking, which had previously been very prevalent, went out of fashion, and was nearly superseded among the higher and middle classes by that of snuff-taking.

Ergo.—The eccentric Dr. Sir William Browne was buried at Hillingdon, in Norfolk. A monument to his memory was erected there. The inscription it bears was copied from his will and written by himself. He died in 1773, at the age of eighty-two.

Celsus.—According to Biot, temperatures are the different energies of caloric in different circumstances.

O., Kent.—The horrid mutilation of youths referred to was abolished by Pope Clement XVI. in the eighteenth century. It was practised in Italy to preserve the childish voice of infancy.

N. B.—There are no "medical men" in America; all are doctors,—all M.D.'s.

M. B. M.—1. 1830. 2. The Registrar-General shows, in his annual report (recently published) of Scotland for 1874, that during that year twin births occurred 1:99 times, and triplet births seventeen times. The preponderance of male children born was very remarkable.

Gifford L.—At the census in 1801, Birkenhead had 110 inhabitants.

Worcester.—A noted quack, named Dr. John Case, was one of Radcliffe's contemporaries; he united the two professions of physician and astrologer. He took the house where the famous William Lilly had resided, and over his door he placed the following distich, by which he earned a fortune:—

"Within this place
Lives Dr. Case."

Upon his pill-boxes were these lines—

"Here's fourteen pills for thirteenpence;
Enough, in any man's own conscience."

C. D.—We are told that Galen in the decline of life suffered much from morbid vigilance, until he had recourse to eating a lettuce every evening, which cured him.

C., Doncaster.—The sarcastic remark of the great anatomist was that "the ancients endeavoured to make physic a science, and failed; the moderns have made it a trade, and succeeded."

Student should consult "Bacot on Syphilis," and George Gaskoin's translation of the works of Villalobos, before he makes up his mind that syphilis was known to the ancients. As for allusions in the Bible, consult Bishop Lowth's "Lectures on Hebrew Poetry," an interesting book and good guide to criticism in general. Bishop Lowth remarks that, by an habitual process of imagery, physical disease, wounds, bruises, and putrefying sores were taken as symbols of *sin*. King David complains that his loins are filled with a sore disease. But if we are to ask what disease, and to treat this expression as evidence of syphilis, we must do the same with the imagery which speaks of grief and misery as symbolised by storms, floods, and muddy swamps. It will be time enough (says the Bishop) to ask what disease David was affected with, when we make out what river he meant in the first verse of the sixty-ninth Psalm.

Gregory.—The epitaph on Dr. Thomas Crossfield, in Hendon Churchyard, Middlesex (written by himself), is as follows:—

"Beneath this stone Tom Crossfield lies,
Who cares not now who laughs or cries.
He laugh'd when sober, and when mellow
Was a harum-scarum, heedless fellow.
He gave to none design'd offence,
So 'Honi soit qui mal y pense.'"

Lloyd P.—According to the January number of the *Bulletin de Statistique Municipale*, Paris, just published—which is only nine months behind, instead of twelve and more as it used to be—the number of births in Paris was 4836—viz., 2447 males, and 2389 females. The deaths were 3948—viz., 2005 males, and 1943 females. The most fatal diseases were, as usual, consumption 678, and congestion of the brain 264 cases.

D. E. C.— "His vigorous remedy displayed
The power of art without the show."

Cid.—Diphtheria appears to have been first seen in this country in 1748, when Dr. Fothergill described it as a peculiar form of sore throat attended with ulcers.

Theo D.—A large medical and surgical hospital has been erected at Jeypore, called the Mayo Hospital. It is to be opened by the Prince of Wales during his visit to India.

A. M. R.—The order of the Governors of St. Thomas's Hospital is that none of the House-Surgeons shall conduct a post-mortem examination, either under the order of a coroner or otherwise, and they have specially appointed a qualified practitioner to make the same. The object is, to prevent, as far as possible, infection being conveyed to the patients.

J. R. B.—The Social Science Congress will meet next year at Liverpool.

A. A., Staffordshire.—

"I writ it also out of great goodwill
Unto my countrymen, and leave my skill
Behind me, for the sake of those that may
Not yet be born; but in some after day
May make good use
Of it, without abuse."—*T. Mace.*

A. McC.—1. October 6, 1858. 2. We understand that Lord Derby has postponed until the middle of December his rectorial address to the students of Edinburgh University.

Medical Advice in the Eighteenth Century.

TO THE EDITOR OF THE MEDICAL TIMES AND GAZETTE.

Sir,—I find, in a book entitled "L'Histoire de St. Chéron," *à propos* of surgeons, barbers, and apothecaries, a quotation from a volume published in Paris in 1771, and bearing the name "Secrets Utiles et Eprouvés dans la Pratique de la Médecine et de la Chirurgie," par M. ——, Docteur de la Faculté, the following prescriptions or secrets. I must add that the book of Secrets was published "avec approbation et privilége du roi."

"*In cases of Epistaxis.*—Take some pigs' dung and put it up the nostrils; the bleeding will cease immediately. Or place under the tongue a leaf of the plant called periwinkle.

"*Amulet to be worn round the neck to cure Sore Throat.*—Dry the heads of two vipers and sew them up in a black silk bag.

"*For Dysentery.*—Pound up the bowl of an old tobacco-pipe and swallow the powder in any convenient fluid.

"*Colic.*—Take the dung of a black donkey and cook it in white wine; pass it through a sieve, and use it as a clyster lukewarm.

"*Remedy for Cold Feet.*—In the strawberry season fill your shoes with that fruit and walk about as usual."

I am, &c., Sidney Chater, M.R.C.S. Eng.

St. Chéron (Seine-et-Oise), France.

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Sans.—The model lodging-house system in London was commenced twenty-eight years ago—in 1847.

A late Colonial Surgeon.—Mr. W. R. Beaumont, of Toronto, lately deceased, was a Fellow of the London College of Surgeons of 1844, and obtained his diploma of membership so long ago as 1826. He was the inventor of many valuable surgical instruments, his attention to which led to the discovery of the invaluable sewing-machine, for which others have taken the credit.

COMMUNICATIONS have been received from—

Our Hastings Correspondent; Our American Correspondent; Mr. J. E. Adams, London; Mr. W. R. Dalton, Dovercourt; Mr. C. J. Egan, South Africa; The Registrar-General, Edinburgh; Messrs. Gilbey and Co., London; Professor Attfield, London; N.; Surgeon-Major Black, Edinburgh; Mr. Ingpen, London; Dr. Vinen, London; Surgeon Spurway, Paignton; The Registrar of the University of London; The Secretary of the Royal Institution; Dr. Hudson, Chatham; Mr. Hemming, London; Mr. Larkin, London; Dr. Cockle, London; Mr. H. Morris, London; Mr. J. Chatto, London; Mr. Spencer Watson, London; Mr. W. E. Poole, London; Dr. John Chapman, London; The Registrar of Apothecaries' Hall, London; Dr. C. Theodore Williams, London; Mr. Robert Kershaw, London; Dr. Sparks, Mentone.

BOOKS and PAMPHLETS RECEIVED—

Crombie on the Cause of the Commencement of Parturition—Carpenter's Human Physiology, eighth edition, edited by Power—Dalton's Human Physiology, sixth edition—A Book about Sherry, by Don Pedro Verdad—Ridge's Diet for the Sick—Rajpootana Dispensary, Vaccination, Gaol, and Sanitary Report for 1874—Ueber das Lehren und Lernen der Medicinischen Wissenschaften an den Universitäten der Deutschen Nation, von Dr. Th. Billroth—Gross's History of American Medical Literature from 1776 to the present time—The Potato Disease.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Paris Médical—Deutsche Medicinische Wochenschrift—Journal d'Hygiène—Croydon Advertiser—Hastings and St. Leonard's Observer—Hastings and St. Leonard's Chronicle—Indian Medical Gazette—New York Druggist—Obstetrical Journal, December—Transactions of the Odontological Society, vol. viii., No. 1.

APPOINTMENTS FOR THE WEEK.

December 11. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

13. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Dr. Henry Lawson will exhibit M. Hayem's New Mode of Estimating the Amount of Blood-Globules. Mr. Alfred Freer, "On a Case of Impalement, with post-mortem results four years and a half afterwards."

14. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopedic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

Royal Medical and Chirurgical Society (8 p.m., Ballot), 8½ p.m. Mr. Marsh, "On a Case of Abdominal Section for Intussusception in an Infant." Dr. Fagge and Mr. Howse, "On a Case of Abdominal Section for Intussusception in an Adult." Mr. Hutchinson, "On a Case of Operation for Intussusception into the Colon."

15. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

16. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopedic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

17. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

Medical Microscopical Society, 8 p.m. Dr. U. Pritchard, "A New Form of Freezing Microtome." Mr. J. Needham, "Specimens."

Quekett Microscopical Club, 8 p.m. Mr. Henry Davis, "On a Larval Cirripede." Mr. John E. Ingpen, "On the Measurement of Angular Aperture." (No meeting on December 24.)

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 4.

BIRTHS.

Births of Boys, 1049; Girls, 1023; Total, 2072.
Average of 10 corresponding years 1865-74, 2181·4.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	806	822	1628
Average of the ten years 1865-74	794·5	806·4	1600·9
Average corrected to increased population ...	...	...	1713
Deaths of people aged 80 and upwards ...	...	...	60

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	12	19	2	15	..	5	...	1
North	751729	...	19	22	5	12	2	7	...	3
Central ...	334369	...	7	4	1	3	1	1	1	2
East	639111	...	8	13	...	12	1	3	1	3
South	967692	...	13	46	8	12	...	4	3	4
Total	3254260	...	59	104	16	54	4	20	5	13

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·717 in.
Mean temperature	30·9°
Highest point of thermometer	35·9°
Lowest point of thermometer	23·7°
Mean dew-point temperature	26·6°
General direction of wind	N.E. & N.
Whole amount of rain in the week	0·41 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 4, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Dec. 4.	Deaths Registered during the week ending Dec. 4.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2072	1628	35·9	23·7	30·9	−0·62	0·41	1·04
Portsmouth ...	122632	27·3	74	52	...	...	...	...	...	...
Norwich	82842	11·1	48	35	38·8	22·0	32·8	0·45	0·51	1·30
Bristol	196186	44·1	144	114	37·8	28·1	33·4	0·78	0·14	0·36
Wolverhampton ...	71718	21·1	51	43	37·0	28·0	32·8	0·45	0·21	0·53
Birmingham ...	366325	43·6	288	175	38·0	28·0	34·0	1·11	0·39	0·99
Leicester	109830	34·3	65	70	37·8	28·8	33·6	0·90	0·32	0·81
Nottingham ...	92251	46·2	66	41	38·3	30·0	33·6	0·90	0·34	0·86
Liverpool	516063	99·1	358	291	39·5	27·3	34·2	1·22	0·00	0·00
Manchester ...	356626	83·1	232	173	...	...	...	...	...	...
Salford	135720	26·3	111	89	39·6	27·0	34·0	1·11	0·05	0·13
Oldham	87437	18·7	62	59	...	...	...	...	...	...
Bradford	168305	23·3	128	96	37·8	30·2	34·4	1·33	0·12	0·30
Leeds	285118	13·2	209	150	39·0	31·0	35·4	1·89	0·22	0·56
Sheffield	267881	13·6	236	118	39·0	30·5	34·5	1·39	0·05	0·13
Hull	133932	36·8	108	57	40·0	31·0	35·9	2·17	0·57	1·45
Sunderland ...	106342	32·2	91	49	...	31·5	36·3	2·39	1·19	3·02
Newcastle-on-Tyne	137665	25·6	95	74	...	28·0	...	...	1·70	4·32
Edinburgh	211626	50·5	125	119	41·5	25·0	35·1	1·73	...	...
Glasgow	534564	88·6	369	304	...	...	...	...	...	...
Dublin	314666	31·3	153	162	41·3	23·1	34·3	1·28	0·61	1·55
Total of 21 Towns in United Kingdm	7742889	37·0	5085	3899	41·5	22·0	34·1	1·17	0·43	1·09

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·72 in. The highest was 29·96 in. on Sunday morning, and the lowest 29·55 in. on Thursday afternoon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CLINICAL LECTURE
ON CHRONIC HIP-JOINT DISEASE.

DELIVERED AT THE LONDON HOSPITAL, OCTOBER 19,

By C. F. MAUNDER, F.R.C.S.

GENTLEMEN,—At our last meeting I discussed with you a case of acute suppuration of the hip-joint. Since then a fortnight has elapsed, and I am glad to be able to tell you that the patient, the subject of this, has much improved, his temperature having fallen some three degrees, his pulse being between 90 and 100, instead of 120, and the discharge being much less in quantity. These symptoms indicate both contraction of the abscess-cavity and a diminution of the sympathetic fever. I am very hopeful of his recovery. I shall now draw your attention to a disease with which many of you are already, and with which all of you will become, familiar by reason of its frequency—chronic hip-joint disease. The common history of the complaint is illustrated by the case of this child. Henry H., aged eight, admitted August, 1873. He has very light hair and fair complexion. Many months before admission he began to be stiff about the left hip, followed by pain after a few weeks. He came under my care on October 1, and the chief symptoms are lengthening of the limb to the extent of one inch and a half, and immobility of the joint.

October 15.—One of the splints invented by Mr. Thomas is applied.

17th.—Lies and sleeps in the splint without discomfort.

Many writers give three stages to this disease, but practically you often find them blended; and in reality the pathology of strumous disease of the hip differs in no way from the same malady in another joint.

The affection probably in the large majority of instances arises in the synovial membrane (occasionally in the bone), in the shape of a slow growth of cells which have a tendency to degenerate into pus rather than either to be re-absorbed or to proceed to a higher state of development. This cell-growth you can most readily appreciate in a superficial joint like that of the knee, where it is called "white swelling" from its physical character alone. The early symptom of the disease, *stiffness*, has thus a purely mechanical cause.

Prognosis is unfavourable; the disease being most lingering in its progress, and not unfrequently attended, sooner or later, by lardaceous disease of the important viscera.

The case of the child may be said to be the first stage of the disease becoming secondary, while the case of this young man will represent a phase of the second stage.

J. S., aged fifteen, was admitted on September 8, 1875. Three months previously he began to complain of stiffness, and then of pain, about his right hip. In coming under my care (October 1), apparent, not real, lengthening of the limb existed, with eversion; the fold of the groin was lost by swelling, and tenderness on pressure existed both behind and in front of joint. Extension by a weight and sandbags, to encourage inversion, were ordered.

October 17.—The swelling in groin is elastic, as though fluctuating.

The third stage is marked in the lad F. I., in Talbot ward, the subject of recurring abscess.

[Reported by Mr. C. F. HAWKINS.]

The patient, aged twelve, was admitted into the hospital on July 19 last. He was then suffering from a fluctuating swelling, which extended from the knee to the hip of the left leg. Six or seven years ago he says he strained himself when jumping, since which time he has limped more or less when walking.

He was examined, and it was then found that there was shortening of the limb, and that when the ordinary movements of the joint were attempted the pelvis moved also.

On July 26 the tumour was aspirated, and about four ounces of pus came away. The canula of the aspirator was then blocked with a cheesy-looking substance, and no more pus was abstracted, although the canula was cleared two or three times. The puncture was then sealed with collodion.

On July 28 his appetite became impaired. Skin very hot, and increased tenderness about the left thigh; and at the outer part of the thigh, about the middle, the skin felt thinner.

On the 29th an incision two inches long was made into the thinnest part of the swelling, from which issued about four ounces of creamy pus.

On the day after the incision was made, several tags of what appeared to be necrosed tissue came away. The swelling diminished in the thigh, discharging healthy-looking pus.

October 16.—On Tuesday last another incision was made in the buttock, and a quantity of pus escaped. He is now better. He does not experience pain when moving. His general appearance is improving. Temperature to-day 99°.

This lad has been under my observation very occasionally for some years in private, and ultimately is admitted and seen by us with a large abscess occupying the outer side of the thigh, almost to the knee. During the last fortnight another abscess has formed, with acute symptoms, in the buttock, and this I evacuated last week. It will be convenient to consider the further treatment of these three cases at once. The first indication in all chronic disease is to improve the general health as much as possible, while the primary local indication where inflammation exists is to maintain the part at rest. Unfortunately, in the case of the lower extremity, this can generally be obtained only by keeping the patient in bed at the risk of injury to his health. Besides this, it is desirable by means of certain appliances to prevent deformities symptomatic of the disease, and this consists in the application of some kind of splint, of which there are a great many varieties, but of which the long splint is the most simple. This latter is often replaced nowadays by a weight and perineal band. As a rule, we keep our patient at rest so long as pain and tenderness persist, gradually allowing him to return to his usual mode of life; but in very many instances the disease, instead of being arrested, progresses from bad to worse, and suppuration is established. This suppuration often comes on very insidiously, and is frequently first recognised by the surgeon while the patient is totally ignorant of any change in his malady. The favourite place for a chronic suppuration associated with the hip-joint, to indicate its presence, is at the upper part of the thigh, a few inches below the anterior superior spine of the ilium, and, as it were, at the junction of the anterior and outer surfaces of the limb. A fluctuating swelling in this position may be regarded as almost pathognomonic of morbus coxarius.

Suppuration established, what are we to do? As a general principle, we must look upon the presence of pus as a foreign body, which, therefore, ought to be removed; but provided that the general health is not deteriorating, nor the abscess quickly increasing in size, we should be justified in waiting a while, because in rare instances the abscess recedes. Such a case is known to me in private practice, and one of the girls to be alluded to, whose photograph I show you, is another example. The abscess is subsiding. Under other conditions these abscesses should be first tapped by the aspirator, as in the case of the lad, and then, when its cavity has become contracted, or the skin inflamed at some point, it may be opened freely by the knife. This treatment of abscess applies equally to others which form during the progress of the case, as seen also in the person of the lad, who experienced a good deal of local pain in the buttock, associated with some constitutional disturbance. Both sets of symptoms have been relieved by the incision which I made in the buttock last week.

You are aware, gentlemen, of the malpositions of the extremity in connexion with this disease—lengthening or shortening. The former is always apparent; the latter may be also apparent, but is often real. Lengthening, as witnessed in the young man, is due to abduction of the limb, and a downward and forward yielding of the pelvis; while shortening is due to adduction of the limb, and an upward tilt of the pelvis. Real shortening is consequent on one of two causes—dislocation of the head of the femur (which is rare), and loss of bone-substance (which is common). As the disease progresses, the bones forming the joint become destroyed either by caries, or by absorption caused by mutual pressure. The ligaments being destroyed, and the limb adducted, the head of the femur is drawn upwards and outwards against the edge of the acetabulum, and the former is diminished in size whilst the latter is grooved, and so the limb ascends, as shown in this specimen. It is to avoid this serious pathological change that extension and counter-extension are often conjoined to the other means of treatment; and it is more especially essential when this real shortening from loss of bone is due probably to an inflammation of this structure, and which is believed to

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exist when the patient is the subject of "starting pains."(a) The sufferer is tolerably comfortable during his waking hours; but, as he falls asleep, voluntary control over his muscles ceases, the bone surfaces come into contact, and he awakes with a cry of agony, indicative of the pathological condition present. This pain, so disturbing to rest, affects the general health, impairing both appetite and nutrition, and, when associated with an exhausting discharge, calls for the consideration of operative interference. By this I mean the removal either of the upper extremity of the femur, or of that and more or less of the acetabulum also. This question of operation must, very possibly, be entertained in the case of the lad, but the amount of repair necessary to recovery after its performance is so great a tax upon the patient's powers, that it is a proceeding comparatively rarely resorted to, for that reason. When resolved upon, the operation is best performed by a longitudinal incision, four fingers' breadth in length, begun above, and terminating at the base of the great trochanter. Cutting carefully upon this bone, the soft parts attached to this must be divided, and then the finger introduced and carried towards the joint finds this more or less disorganised—cartilage gone, possibly cario-necrosis existing, ligaments destroyed. Now, using the femur as a lever, to protrude the upper extremity of the bone somewhat, and protecting the soft parts with a spatula, the upper end of the bone, consisting of remnant of head, neck, and the great trochanter, may be removed with a saw. Loose pieces of acetabulum may be picked away with the finger or forceps, while carious portions may be removed with the gouge. I advocate the removal of the upper extremity of the bone as described, and as suggested by Fergusson, rather than abscission of the head only, because, if left, the trochanter forms a kind of lid or cap to the acetabulum, preventing the ready egress both of secretions and of any probable sequestra. The after-treatment consists in plenty of nourishment, local cleanliness, and rest to promote anchylosis.

I am able to show you this young woman, now seventeen years of age, whose right hip-joint, consisting of upper extremity of femur and greater part of acetabulum, I removed five years ago. Fibrous anchylosis has taken place, and, as you see, she walks comfortably with the aid of a high boot, and without any other artificial help.

Some of these specimens which I have on the table illustrate the extent to which the bones may be destroyed, while others show repair.

Some of the distressing deformities consequent on the disease, and the remedial measures, will be discussed next week.

A Third Dentition at the Age of Seventy-three.—M. Echerac relates in the *Gazette des Hôpitaux* (October 9), the remarkable case of an old gentleman, aged seventy-three, who, after the manifestations of nervous symptoms for some time, and an abundant salivation, exhibited in his upper jaw, which had long been dismantled of teeth, some fine ones projecting about two millimetres beyond the edge of the gums. They were six in number—four incisors, one canine, and one small molar. These teeth were neither very white nor very strong, but formed an excellent substitute for those lost. Van Helmont relates a precisely similar case occurring at the same age.

Consumption of Tobacco in France.—M. Hamille, in his report to the National Assembly on the tobacco monopoly, cites the following statistics:—In 1835 the production scarcely attained 13,000,000 kilos. (12,774,635 kilos.), while at the present time it has reached 30,510,150 kilos., after having exceeded 32,000,000 kilos. in 1869, when Alsace and Lorraine were part of France. The production has thus almost tripled itself in less than forty years. In 1835 there was nearly an equal consumption of tobacco for smoking (6,000,000 kilos. in round numbers) and for snuff-taking (5,800,000 kilos.), cigar-smoking being but little pursued, and only 58,250,000 cigars weighing 233,000 kilos. being fabricated. Cigarettes were then almost always rolled up by the smoker himself. The progress in the consumption of the different tobaccos has been very different, for while in 1872 there were 6,950,000 kilos. in place of the 5,800,000 used for snuff, there were 16,500,000 kilos. used in smoking, the production of cigars rising in 1869 to 2,977,000 kilos., or 744,250,000 cigars.—*Gazette Hebd.*, December 10.

(a) Barwell on Diseases of the Joints.

ORIGINAL COMMUNICATIONS.

CASE OF SCARLATINA FOLLOWED BY ACUTE RHEUMATISM.

By W. E. GREEN, M.R.C.S. Eng., L.S.A.

On Friday, June 4, 1875, I was called to see W. E., aged six years. His mother told me he had been apparently well in the morning, and had gone to school as usual, but that in the afternoon he complained of intense headache, and she had sent him to bed. The symptoms not improving towards evening, she sent for me. I found him in a very drowsy condition, from which he could not be roused; he was feverish in appearance, and rolling his head about uneasily. Temperature 100·6°, and with a quick pulse, which could not easily be counted, owing to his restless condition. Face was flushed, and pupil of each eye contracted. Gave him a draught of liq. ammon. acet.

June 5.—Has passed a very restless night, and skin feels very burning and dry. Temperature 101·4°; pulse 112. This morning is able to answer questions, but still complains of intense headache, which is however confined more to the ears. Tongue very dirty, and an examination of the fauces shows great enlargement of both tonsils, though no pain is complained of in swallowing. To take a mixture of perchlorids of iron and acetate of ammonia.

6th.—Temperature 102·8°; pulse 112. Skin very hot and dry. Tongue white; appearances about fauces the same. Left ear has commenced discharging freely, relieving to a certain extent the great pain in the head. Bowels acting naturally. Complains of thirst, but no pain in swallowing. Towards night the right ear began to discharge also, completely relieving the pain in the head. Patient natural in appearance and cheerful.

7th.—Symptoms continue, but a slight rash has made its appearance upon front of chest and face, showing the case to be one of scarlet fever. Temperature and pulse the same.

The progress of the case from this time forward was very satisfactory, with this exception—that the child was quite deaf, except at the time the ears were being syringed with a solution of chloralum, when there was a little perception of sound. The temperature became normal, the throat symptoms improved, the rash disappeared, and the patient was doing well. A preparation of lactate of iron was given on the 10th, in doses of ten grains every four hours.

On the 12th, the morning temperature was again 102°, but towards evening it rose to 104·4°, with a pulse of 120. The child was unable to say where he felt ill, and it was difficult to account for the change, as he was taking nourishment well, and was as talkative and cheerful as usual. Owing to his deafness, it was extremely difficult to make him understand anything, but this was, to a certain extent, overcome by writing on a black-board when it was necessary to converse with him.

June 13.—9.30 a.m.: Temperature 104°, pulse 136. Child dull and languid; has passed a restless night, and cries much as if in pain; he cannot understand sufficiently to answer questions. Some swelling was observed in both ankles and in the left knee, but all parts were extremely sensitive to the touch. I now found that I had to do with a case of acute rheumatism, and therefore substituted trimethylamine in three-minim doses every four hours for the preparation of lactate of iron. At 5.30 p.m. I was summoned to see him. He was lying on his back, in a very flushed and excited condition. Temperature 105·4°; pulse very weak, 168. Ordered to be placed in a bath at 90°, and to remain in for twenty minutes. At 8.30 p.m., bowels acted naturally, and he has vomited; temperature 98·4°; pulse 120, stronger; child quite conscious.

14th.—Passed a comfortable night. Tongue coated; temperature normal; pulse 120. Patient taking nourishment freely. In the afternoon became restless again; temperature rose to 105°; pulse 144. Swelling only in left foot, which is extremely red and shining.

15th.—Towards 6 a.m. slept soundly. Temperature normal; pulse 120. Child rational and quiet.

16th.—Morning: Temperature 103·4°; pulse 120. Evening Temperature 101·2°; pulse 120.

17th.—Very restless, crying much as if in pain; temperature 103°; pulse 144. 8 p.m.: Temperature 105°; pulse 144. Ankle much swollen and very sensitive. No other joint

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affected, so far as I could judge from appearances; but the child apparently suffers pain, and cries out when any other joint is touched. At times is quite rational, but again lapses into an insensible condition.

18th.—Temperature 100°; pulse better, 124. Passed a quiet night, sleeping soundly; more conscious, and puts out his tongue when signalled to do so (a thing he has not done for some days)—it is cleaner, and has only a few white patches upon it. Ears discharging a great deal of fetid pus; they have been regularly syringed out with warm water and chloralum solution. Evening: Temperature 102·4°; pulse 144. Appears more rational.

19th.—Passed a good night without taking his usual chloral draught, after a bath of 87°. The foot looks better. Temperature 97°; pulse 108. Appetite improving; tongue clean; bowels acting naturally; is much sharper, and able to comprehend when spoken to loudly in the right ear. From this time the temperature never rose again; the strength gradually returned; and in a few weeks, after continual injections of a weak solution of chloride of zinc, the hearing returned, and the discharge from the ears ceased. The swelling and pain in the foot nearly disappeared, when, after a slight blow, the inflammatory action was again set up; suppuration occurred in about forty-eight hours, and, after this was let out, the case gradually recovered, and at the present time there is very fair movement of the joint.

Remarks.—The above case presents several points of interest. In the first instance, the manner of invasion was not quite like that of an ordinary case of scarlatina. Nevertheless, except for a reason to be presently mentioned, I should have diagnosed it as being probably a case of scarlet fever; for, added to the other symptoms, it was accompanied by that peculiar dry, pungent heat, mentioned by Trousseau in his "Clinical Lectures" as peculiar to scarlatina. I was, however, thrown off my guard by the following circumstances:—In January last I was called upon to attend the servant in the family, and found her suffering from a mild attack of scarlet fever; she afterwards, owing to carelessness in exposing herself, had albuminuria. A few days after, all the children were attacked with scarlatina, which ran a very mild course. This was rather perplexing; and it was not until the rash appeared that I pronounced the case decidedly one of scarlet fever. On June 15 the eldest girl again showed symptoms of another attack of the fever; it was, however, very mild in character, the temperature never rising above 100·4°. These are the only cases I have seen in which scarlet fever has occurred twice in the same individual within so short a time; but I have read of a case in which it occurred a second time at the end of a fortnight, in hospital practice. I may mention that all the children had measles during the previous autumn. The next remark I have to make is with regard to the occurrence of acute rheumatism after taking the preparation of lactate of iron. I know that acute rheumatism is not uncommon as a sequel of scarlatina; and I have seen many instances of it. I have, however, never seen it commence, as it did in this case, some days after the temperature had become normal, and the patient, to all appearance, rapidly becoming convalescent. The rheumatic symptoms did not commence until after the child had taken the lactate of iron for more than thirty-six hours; and knowing the theory that acute rheumatism is caused by the accumulation of lactic acid in the blood, I looked upon the preparation as having been a probable cause of the attack, and discontinued it in consequence. (Since the above case happened I have had the pleasure of reading a clinical essay by Dr. Balthazar Foster, of Birmingham, in which he proves conclusively that lactic acid is capable of giving rise to symptoms of acute rheumatism.) There was one symptom in this case which made it very troublesome to treat, and that was the complete deafness which continued during the whole of the most acute period of the attack, and which made it impossible to obtain answers from the patient. When he began to improve, after his last attack, this difficulty was overcome by means of the slate and black-board. I have one other remark to make with regard to the effect of the trimethylamine—*i.e.*, the way in which it acted in this, and in several other cases of gout and rheumatism in which I have used it. It appeared to control the pain, even if it did not shorten the severe symptoms in the case. I am quite of opinion, with Dr. Spencer of Bristol, that it has great power in mitigating the pain, and in cutting short attacks of acute rheumatism. I have, however, found it followed, in two cases, by very unpleasant symptoms, which rendered it necessary to discontinue its use. In one case, a boy about eighteen years of age, the relief of pain in the joints was almost magical; but it produced such intense colicky pains, even when combined with opium, that it was necessary to cease giving it. In the other case, a lady about thirty-five years of age, it caused such a feeling of numbness and loss of power all over the body that she could not move, and refused to take a second dose in consequence.

Neath, South Wales.

MARSH FEVER.

By JOHN SULLIVAN, M.D., M.R.C.P. Lond.

The influence of malaria in tropical regions is exercised with an energy unknown in temperate climates; its manifestations are more sudden, more deep-seated, and more dangerous. It is to this permanent influence, to the violence of its repeated attacks, that we must ascribe the unhealthiness of the torrid zone.

This morbid element cannot be appreciated by the senses; it evades all physical inquiry and all chemical analysis. The human system is the only field for its energy, and it is by the series of disorders which it produces in that system, varied but constant, that we are enabled, by induction, to attribute its existence to marsh malaria. It is doubtful whether the term "marsh" can with propriety be applied to this fever, which often rages in localities where no marshes exist. It is from the soil that these malarious effluvia are exhaled. Meteorological conditions alone will not produce this fever, since there are many regions beneath a burning tropical sun where malarious fever is unknown.

In the high as well as in the lowlands in the West Indies the malarious endemic prevails, although not to the same extent. In the latter it is constant and active, in the former less severe and less frequent. How account for these fevers, which prevail endemically as well as epidemically in these elevated regions? Are they owing to malaria conveyed by the winds which have passed over marshy lands, distant many leagues away? Is this miasma exhaled from lands agitated in the process of cultivation, or is it scattered in the air from an evaporation of these subterranean filtering stagnant deposits of water, which ultimately finds a resting-place upon the alluvia settled upon volcanic basis?

The influence of light and heat sets into activity the decomposition of bodies. All stagnant waters which contain vegetable detritus give birth, through evaporation, to febrile miasma.

The lowlands are the true foci of marsh fever. There we find the land periodically inundated, heaps of decayed rubbish at the mouth and along the borders of rivers and canals, and marsh vegetation rankly flourishing, and marking out along the coast the extensive zone of endemic malaria. When the soil has been overflooded by rains, especially in the winter season, it is there when evaporation takes place under the influence of solar heat, and fevers rage in all their intensity. The miasma is drawn out by evaporation, and when the soil cools down the watery vapours become condensed under the form of a fog, which retains the malarious emanations suspended in the atmosphere. This fog, like to a funeral pall, is visible in certain localities a little before sunrise. I have been told that in some parts of French Guiana this fog is thick enough at a certain hour in the evening to shut out the brilliancy of the stars, and it then goes under the not very cheerful name of "the shroud for Europeans." The winds, no doubt, act an important part in disseminating these miasmata, and bearing them away to distant localities, and thus become the true carriers of death.

However varied may be the effect of marsh miasma upon the human frame, it possesses one constant characteristic—I mean its intermittence—to which its origin must always be traced. Intermittence is the stamp and original form of all marsh infection; it may be absorbed and remain latent in the system for a shorter or longer period, but so soon as fever shows itself, it sets in as an intermittent, however varied and different may be its ulterior manifestations.

What is malaria? This is a question of vast importance, since malarious diseases have a powerful effect in checking the spread of Europeans over a large portion of the globe, and prevail to a formidable extent in our East Indian possessions; even in healthy seasons, one in three of our British troops in India suffers from marsh fever.

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I have consultod many of our most approved authors on tropical diseases on the origin of malaria, and regret that, after an attentive perusal of their various opinions, I have been unable to arrive at any satisfactory or practical conclusion. Dr. Lind, of Bengal, believes that violent heat with vegetable decomposition is a powerful exciting cause of this fever; and that sudden cold in hot marshy countries is to be reckoned, next to marsh miasmata, as the strongest exciting cause of that disorder. And many are of opinion that cold alone, provided that the body is sufficiently predisposed, is sufficient to generate a disorder perfectly like that which is produced by marsh miasma.

I agree with Dr. Lind that the first condition is an important cause of fever, but I entirely disagree with him as regards the possibility of a sudden chill, or abstraction of heat, as capable of producing a fever of an intermittent type like that which is the result of exposure to marsh miasma. It often happens that a man, after having endured much fatigue, may expose his skin, accustomed to be bathed in perspiration, to the impression of cold, the functions of which become suddenly suspended: a shock is produced to the nervous system, the circulation is affected, and congestion of some internal organ, generally that of the lungs, takes place. This may be succeeded by stages of reaction of fever with sweating, similar to an attack of intermittent. But, should the disease take upon itself an intermittent type, it can only have been the result of exposure to marsh miasma or malarious causes, which alone can produce true intermittence. Fever from exposure to cold or a chill, and not from malaria, may be followed by pneumonia or some rheumatic affection, but never by affections of the spleen or liver, as would be the case in genuine intermittent. In the year 1872 I casually paid a visit of etiquette to the accomplished wife of the late American Consul, who resided at some distance from the city of Havana. I found the lady, who had lately arrived in Cuba, seated at a window which overlooked some fields bounded by an extensive swamp. She looked pale and anxious, complained of chill, and of experiencing a sensation which she had never felt before—a wild, yet sad, presentiment of some impending calamity. I requested her to retire immediately, and seek repose in her bed, from which she never rose again. She died from pernicious fever of the worst type four days afterwards—hæmorrhages having taken place from all the outlets of the body, even previous to her death, owing to a complete dissolution of the blood from malarious causes.

I well remember when eleven young Spaniards, full of life and health, arrived in Havana one afternoon; they took up their abode in an hotel near to my house. After a night spent in dissipation, followed by chills and exhaustion, seven of the eleven died from pernicious fever within a period of eight days after their arrival.

How can it be imagined that this poor American lady, had she exposed herself to a chill or cold by sitting at her window in New York or any non-malarious district, could have fallen a victim to such a disease as that which carried her off in Havana? She might have had an attack of some pulmonary disease, which might also have proved fatal. The same remark may apply to the case of the young Spaniards. If, as some believe, sudden cold applied to the surface is capable of generating intermittent fever in a malarious district, independent of malaria, it surely ought to produce the same result in a non-malarious district,—which it never does. Fever of an intermittent type always derives its origin from malaria; and where the poison is more than usually intense it assumes the remittent or continued type, with a tendency to decomposition of the blood.

It is to me incomprehensible how a practitioner so experienced in diseases of the tropics as the late Sir Ranald Martin could have rejected the idea of a specific marsh poison, and ascribed these diseases to his theory of "thermo-electro-hygrometric influences," all which conditions are compatible with the existence of marsh miasm. As to the germ theory of malarious fever, I believe it to be untenable. In marsh vegetation, where malaria abounds, organisms of low vitality no doubt do exist peculiar to such vegetation, varying according to the degree of solar heat or the rankness of the vegetation; but that these germs or organisms should possess a power independent of locality to produce intermittent when absorbed into the blood, I believe the theory unworthy of practical consideration.

Dr. Oldham has recently published an interesting work on malarious diseases; still, he does not define malaria, though he instructs us greatly respecting the hygienic treatment of intermittent, the value and beneficial effect of trees in tropical climates, of irrigation, of the protective action of fire against malaria, of the advantages of "interesting work to do, abundance of wholesome food, of being well housed and well clothed." These last few recommendations might be better suited to a temperate than to a tropical climate.

Some authors deny the speciality of the action of quinia; I only wish I could fall in with some of those incredulous disciples of Galen in the Island of Cuba, in order that they might bear witness to the effect of quinia properly administered in fevers of a pernicious character, when all other remedies had failed. I do not deny that there are cases of chronic intermittent where very little benefit is derived from the use of quinine. I have in such cases administered, with good effect, bromide of potash, and occasionally strychnia. The bromide is a valuable adjunct to quinia, especially in cases of enlarged spleen, where nervous excitement and sensibility exists; it exerts over nervous matter a directly sedative influence, and where the repeated attacks are more the result of a morbid habit than of malarious influence.

Now let me revert to the question, What is malaria? A subtle, invisible, imponderable element, the product of the decomposition and decay of vegetable matter, under certain conditions of heat and moisture, finds access to the human system through the portals of the lungs, contaminating the blood, to which it communicates the decomposing and destructive nature of its origin: it may act quickly, or may remain latent for a longer or a shorter period. Its direct action tends to the nervous system, which it powerfully depresses and paralyses, especially the system of the great sympathetic, which presides over organic life. Then follows diminished action of the heart and great arteries, and consequent congestion and determination of blood to internal organs; and thus is formed the cold stage, or stage of congestion and depression—the most characteristic expression of the poison of malaria. The other stages—the hot and sweating—have no connexion with the poison; they are only a consequence of a reaction which, did it not take place, death from algidity must inevitably result. The circulation gradually rallies, and from languid becomes quick, and soon tumultuously violent. Thus succeeds the second, or hot stage, to be followed by the third, or sweating stage, when the functions of the skin, kidneys, and liver are restored by an increased secretion of perspiration, urine, and bile. Now, fever produced by the introduction of a septic poison into the blood, the product of decayed animal or vegetable matter, is generally of an intermittent type.

The fevers produced by dissection-wounds, from opening the carcases of infected animals, by deposits of purulent matter, from tuberculosis, puerperal fever, etc., are, if not of a purely intermittent type, attended by marked exacerbations.

It is not, therefore, to be wondered at that the fever of marsh miasma should be always intermittent.

Having resided many years in tropical climates, five of which have been passed in the Island of Cuba, where fevers of a most formidable character, marked by decomposition of the blood, are of daily occurrence, I am in a position to assert, with the most decided confidence, that quinine is the most certain antidote against blood-poisoning from decayed animal or vegetable matter in tropical countries. Hence we may deduce:—

1. Malaria, the product of decomposition and decay in the soil of the earth, under the influence of heat and moisture, acts as a ferment in the blood, and tends to produce that decomposition which gave it birth.
2. The consequent fever is always of an intermittent type.
3. Quinine is the most certain antidote.

In a late half-yearly number of that valuable compilation of facts and improvements in medicine and surgery, "Braithwaite's Retrospect," I remember having read an interesting account of a strong, healthy young farmer, who, on examining the carcase of one of many cows which had died from some contagious epidemic, unfortunately received a wound in one of his fingers; he was soon afterwards seized with cold shivering, followed by a fever of a typhoid character, so alarming that his life was despaired of by his medical attendants. However, as a last resource, ten grains of quinine were ordered to be administered every three hours. Great was the astonishment of the physicians to find their patient out of danger the following morning. Now, here is a case of blood-poisoning from absorption of decayed and infected animal matter by inoculation.

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The absorption from decayed vegetable matter by inspiration or through the cutaneous surface will produce similar results. Although the fever of malaria is characteristically intermittent, it is often irregular in its intermissions. The seizure is not always attended, as in temperate climates, by three stages—the cold, hot, and sweating. At times the cold stage is violent, or it may be altogether wanting. The hot stage is seldom absent, and often constitutes in itself the entire and only access of fever. The sweating stage is often scarcely perceptible, or may be altogether wanting. The type of fever may also be irregular, and it may change rapidly, although periodical intermission constitutes the generic type of the fever. The periods when the attacks come on vary greatly, and are often irregular.

The continued or remittent types do not characterise different species of marsh fever; they are only devious or modified types derived from intermittence.

The attacks which mark the onset of remittent fever might pass unnoticed by reason of their slight intensity, and the rapidity with which they pass one into the other—sometimes only one irregular access ushers in remittent fever; occasionally, but rarely, under the influence of quinine, the continued and remittent fevers pass into intermittents.

The first attacks of marsh fever are regular, but soon, after repeated attacks of great violence and long duration, they lose their regularity, and the short period of intermittence, which passes away, often changes the type into remittent or continued.

All the different types of fever, quotidian, tertian, etc., including the modified types—remittent and continued—constitute a group which might be comprised in one general chapter, but the bilious fevers of the tropics require a separate chapter.

So do also pernicious fevers, which are really only intermittent, accompanied by some rapid and formidable change or by the predominance of some symptom dangerous to life, as algidity, excessive sweats, attacks of dysentery, coma, etc. These pernicious tendencies are always ready to start up, and thus aggravate the malarious condition.

These fevers require a chapter to themselves, which may embrace the subject of Febris algida and comatosa, so frequent in the West Indies.

A chapter will also be devoted to "masked fevers," a subject of great interest and importance to practitioners in the West Indies; and, finally, the last chapter will touch upon the subject of Cachexia paludinosa.

Marsh miasma does not affect all persons in a similar manner: some, but very few, resist its influence; others suffer from attacks of intermittent, remittent, and masked fever; while in others the poison remains dormant until some cause from without brings it into play, when intermittent will declare itself. Others, again, fall into a state of cachexia; some there are, who, after having removed to a healthy climate, suffer occasionally from attacks of fever, even of a pernicious character. There are others, again, who, although they may have changed climate, should they by chance receive a wound, or suffer from some other inflammatory affection, will reveal, by the intermittence of the symptoms, the malarious influence which lies latent in the system.

This prolonged incubation, this slow evolution, these manifestations far from the scene of the morbid cause, establish the existence of a malarious diathesis, which ends in cachexia.

Havana.

SULPHIDE OF CALCIUM A REMEDY FOR DIABETES.

By J. M. ELBOROUGH SCATLIFF, M.B.

Some few days since I was called to see a medical friend (well known to the profession) who was suffering from a localised inflammation threatening to terminate in suppuration. He was also the subject of diabetes, for which he had on a former occasion undergone the usual treatment (bran-bread, etc.) at the hands of an eminent London physician.

Together with the onset of the inflammation above referred to he had an aggravation of all the diabetic symptoms come on, and he was, when I saw him, passing quarts of water night and day (sp. gr. 1028). At my request he tried Dr. S. Ringer's treatment (calc. sulphide one-eighth grain ter die), first in the form of powders mixed with sacch. lactis gr. iij., and afterwards in pills (made by Mr. Cox, of Brighton). He *immediately* experienced great relief. Two days after he was passing only a normal quantity of water (sp. gr. 1023·5), and felt "quite comfortable." He had kept to his ordinary diet, and had not in any way avoided amylaceous foods at the time.

I find that Garrod speaks of the sulphide of ammonium as useful in diabetes, but only in so far as it "controls the morbid appetite"; but here was a case in which the whole train of morbid symptoms was cut short in a quick and decisive manner by the calcium sulphide.

The inflammation also terminated in resolution, no pus forming. The patient *most emphatically* attributed his relief entirely to the action of the sulphide.

13, Charlotte-street, Marine-parade, Brighton.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF COMPOUND COMMINUTED DEPRESSED FRACTURE OF SKULL—TREPHINING AND ELEVATION OF BONE—WOUND OF DURA MATER—HERNIA CEREBRI—MENINGITIS—DEATH.

(Under the care of Mr. MARSHALL.)

For the following notes we are indebted to Mr. A. Pearce Gould, B.S.:—

About 5 p.m., on February 23, the patient, Henry B., aged twenty-four, a mechanic, while running fast, stumbled and fell against an iron spike. His head was injured by it, and he was brought to the Hospital not quite insensible.

In the casualty-room the patient was in a semi-insensible condition, but would mumble an answer somewhat incoherently when asked a question in a loud tone of voice. He was found to have a small punctured wound through the whole thickness of the scalp, into which the finger could be placed. Underneath the scalp the skull was fractured and depressed, and a small portion of brain-substance was protruding through the fractured parietal bone; this was detached, and was removed by the finger. There was considerable loss of blood. The wound was situated somewhat above and anterior to the left parietal eminence. The pulse was small, and about 96 per minute. Pupils equal, acting readily to light; of normal size.

Mr. Marshall saw the patient very soon (in ten minutes or so) after his admission. The patient was then lying on his back with eyes closed, and making every now and then an effort to rub the wounded side of the head, but he did not offer much resistance when his hand was removed. When questioned he answered slowly and mutteringly, but was quite rational, and seemed to know what was going on; he answered petulantly, as if he resented being interfered with. Examination showed that there was a large area of depression, and he was removed to the operating theatre at once—viz., within a quarter of an hour of his admission to the ward. He took the chloroform quite quietly, but as soon as he was under he vomited, and afterwards had frequent muscular efforts about the neck and throat, as if he would be sick again. Mr. Marshall made an incision about four inches long in a horizontal direction, having for its centre the wound already made in the scalp. He then made a short cross cut perpendicularly, which was afterwards lengthened to about the same as the other cut, so that there were two incisions crossing, each about four inches long. Some arterial hæmorrhage occurred in small jets, and four or five small arteries were tied as they were cut on either side of the wounds. On reflecting back the triangular pieces of scalp from the bone it was found that the pericranium was extensively raised from the depressed fracture. When the bone was laid bare, there was only a minute opening through it, which would admit a scissors-blade. There appears no doubt, however, about the brain-matter outside, so that probably the fragments had fallen together again after the withdrawal of the spike, which had carried the brain-matter along with it. The depression was formed by the driving inwards of three triangular pieces of broken parietal bone, which had their apices wedged together in the centre of the depression, and their bases rounded, so that the circumference of the depression was rounded, and included an area considerably larger than a five-shilling piece,

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having a diameter of about one inch and a half. The depression would about admit the ball of the thumb, and was, perhaps, about three-quarters of an inch deep; one small fragment stuck directly upwards from the centre of the depression. It was found impossible to raise the fractured pieces by an elevator, as they were so wedged together, therefore, a small circular trephine was applied to the undepressed bone, so as partly to overhang the depressed portion in the most anterior angle of the crucial wound. The trephine was made to saw through both tables of the bone, and then the almost circular disc of bone was removed by the elevator; the larger pieces of the outer table were raised by the elevator, and other pieces, of variable size, were removed from the inner table by dressing forceps. The inner table of the skull was much more comminuted, and the fractures extended over a larger area than corresponded to the fractures of the outer table. After this the projecting edges and spicula were trimmed off by the cutting bone-forceps. The whole wound was well syringed out with weak carbolic water, and the membranes of the brain examined, when it was seen that the rupture in the meninges was about an inch and a quarter long, lacerated, and irregular, and had a direction forwards and *slightly* upwards from the situation of the punctured wound in the bone. The brain was seen to be pulsating and rising and falling in the ordinary way, and there was a considerable amount of arterial hæmorrhage welling up from within the dura mater at each movement. The wound was dressed with a piece of lint soaked in weak carbolic acid lotion, and over this a larger piece of lint soaked in carbolic oil, both being placed underneath the edges of the wounded bone. The edges of the wounded scalp were not brought into apposition. All the remaining hair was then removed. About the time that the depressed bone was removed, the pulse became diminished in frequency, but decidedly increased in force. 6.30 p.m.: Temperature in axilla 96·4°. Patient, when asked if he feels any pain, says "No," and answers questions in a sleepy way, but not incoherently. Both pupils are contracted, but the left pupil is much more so than the right; both are very sensitive to light. His breathing is irregular. 10 p.m.: Temperature 99·2°; pulse 108; respirations 12. Quite sensible; quiet; has slight pain at seat of injury, nowhere else. Pupils equal, small, act to light readily. Passed his water voluntarily.

February 24.—Quite rational, answering questions without hesitation or reluctance. Complains of pain at the seat of injury and in the forehead and left side of the cheek, but there is neither paralysis nor loss of sensibility here or elsewhere. Pulse 108, full and soft; respirations 17 per minute; temperature in mouth 100·4°.

25th.—10 a.m.: Temperature 103°; pulse 108. Since 7 p.m. yesterday patient has been taking one grain of calomel every fourth hour, and since 7.30 one drop of aconite every half-hour. The bowels have acted once freely, and his pulse is now soft and rather jerky; his skin is dry and rather hot; he lies quietly, as yesterday; is quite rational, and still complains of headache, principally frontal. Wound has been dressed as before with carbolised water and carbolic oil over. The membranes are of a darker purple (less red) colour than yesterday, and there is a slight protrusion of whitish brain-matter from the laceration. The edges of the wound are quite quiet; discharge slight and serous.

26th.—Patient had a rigor this morning at 7.30 and another at eleven, each of which lasted only a few minutes. The pain in the head is, if anything, rather more severe than yesterday; he felt sick in morning, but has not vomited. The pulse is small and rapid; skin dry; tongue dry. The bowels acted twice in the night freely. On removing the dressings this morning there is a peculiar and offensive smell, reminding one forcibly of anatomical preparations. The hernia cerebri has more than doubled in size since yesterday, is of white colour, and evidently consists of brain substance. There is no appearance of granulation about the rest of the wound, which looks of a dark colour. The brain at one part is adherent. 1.45 p.m.: Pulse 128; respirations 40. He has been twice sick; is less conscious; pulse regular and hard. Aconite taken every half-hour. The cerebral hernia is much larger and loose. 3.10 p.m.: Temperature 107·6°; respirations 56. He is now quite unconscious. Respiration very quick and embarrassed. Has been sick twice. 4.40: He is nearly pulseless at the wrist. He died at 4.50.

Post-mortem, twenty-one hours after Death.—Rigor mortis remarkably great, so that it was impossible to straighten the fingers. Weather cold. The head was first examined. The hernia cerebri had shrunk to about half the bulk it had occupied before death, and it now formed a reddish-yellow mass, measuring some two inches and a half by two inches, occupying the greater part of the wound, and overlapping the pieces of lint which had been placed alongside it in its smaller condition on the previous morning, as well as in some parts the edges of the wound. On removing the skull-cap, the dura mater was found to be extremely adherent to the bone, but presented no abnormal appearances either inside or outside. A thin edge of purulent lymph surrounded the part exposed in the wound, and effectually prevented the extension of fluid between the dura mater and the bone. The tips of the hemispheres were shaved off, the sections passing through the middle of the two lateral ventricles, which contained, if anything, rather less than the normal amount of fluid. There was purulent lymph in the cavity of the arachnoid, over the upper and anterior part of the left hemisphere, but here only; the arachnoid cavity contained no excess of fluid. The vessels of the pia mater were injected all over the brain, and along the larger ones was an effusion of opaque fluid, and in some parts of actual lymph; this condition was found over the cerebellum, and even at the base of the brain. At some places the membrane was more injected than at others—being occupied, in fact, by patches of bright redness, in which the small vessels could be distinctly seen. The brain itself showed a remarkable absence of red points, and was notably paler than natural. The slight amount of contrast between the grey and white matter was very noticeable. There was no fracture of spine or ribs, and no extravasation of blood along the spine or vena cava. A little purulent lymph was found over the muscles in front of the thyroid cartilage, for which no reason could be found. Heart large, soft, full of blood. Spleen large, dark; weighed seven ounces. Kidneys congested. Bladder full.

NORTH-EASTERN HOSPITAL FOR CHILDREN.

CASE OF EMPYEMA—PARACENTESIS ON SEVERAL OCCASIONS—DEATH—AUTOPSY.

(Under the care of Dr. SANSOM.)

George P., aged twelve years, was admitted as an in-patient, under the care of Dr. Sansom, September 26, 1875, with the following history; having, up to that date, been under medical treatment elsewhere. Was taken ill last June with symptoms of pleurisy; then followed effusion into the right side of the chest. At the end of the month, paracentesis of the chest was performed with the aspirator. Fifty ounces of clear straw-coloured serous fluid were withdrawn. On August 8, the chest was again full of fluid, and there was urgent dyspnœa. Paracentesis was again performed, and fifty-one ounces of slightly purulent serum were evacuated. Much relief followed each operation. On September 11, the right chest being again distended with fluid, paracentesis was for the third time performed, and on this occasion fifty ounces of pus were drawn off. The chest was afterwards washed out with solution of tincture of iodine. Some of the pus was extremely thick, and blocked the canula of the aspirator. Percussion over the lung was dull after the operation, and the respiratory sounds, though audible, were very feeble.

State on Admission.—Body much wasted; great anæmia; frequent hacking cough; marked dyspnœa. Pulse 160; respirations 40; morning temperature 100°, evening 102°. Urine contains lithates, but there is no albumen. The right chest is markedly larger than the left. Circumference of chest at nipple-level 27½ inches; right side measures 14½, the left 13 inches. The intercostal spaces are bulging, and the apex of heart beats two inches outside nipple-line. The right side of the chest is dull from apex to base. The breathing is very feeble, but everywhere audible. There is diminished vocal fremitus. Voice ægophonic. The left side of the chest is hyper-resonant, and the breathing exaggerated. The edge of the liver can be felt two inches below the ribs.

September 27.—Paracentesis of the chest was performed with the aspirator, and twenty-five ounces of fetid pus were withdrawn. After the operation the breathing could be heard generally, but it was very feeble at the right base and in the axilla.

29th.—Again tapped with the aspirator, and seventeen ounces of very offensive pus were withdrawn. The chest was then washed out with solution of tincture of iodine.

October 1.—Canula of aspirator introduced through old

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puncture. Ten ounces of fetid pus were withdrawn. Chest again washed out with solution of tincture of iodine—ʒj. to ℥j.

2nd.—Dulness of right chest below third rib level. Circumference of chest at upper part of axilla, 25½ inches—right 12½, left 13; at nipple level, 26½ inches—right 13¼, left 13 inches.

6th.—Six ounces of fetid pus drawn off. The drainage-tube was then inserted between the seventh and eighth ribs, below the axilla.

7th.—Four ounces of fetid pus drawn off through drainage-tube. Solution of iodine then injected.

8th.—About ten ounces of very fetid pus withdrawn through the drainage-tube. Solution of iodine then injected and withdrawn.

10th.—Three ounces of pus drawn off through tube by introducing a canula. The drainage-tube had to be taken out, as it produced such great constitutional disturbance and intense pain that the patient could not bear even to move, or have it touched. The evening temperature is generally about 101·4°; the morning, one or two degrees lower. There is no albumen in the urine. A poultice ordered to chest, over the opening.

11th.—Pus escapes freely from the chest into the poultice. There is now a great deal of sweating at night-time. Ordered to take a powder containing four grains of quinine every night.

16th.—The discharge from the chest has ceased. A canula connected with the aspirator was introduced through the old opening into the chest. No pus was, however, drawn off. Ten ounces of a solution of sulphurous acid (1 in 5) were then injected, but could not be withdrawn owing to the canula becoming blocked with inspissated pus.

17th.—Canula again introduced with a like result. It became blocked in a minute, and, although constantly cleared, only an ounce of fluid could be extracted. Poultice to be repeated.

18th.—Slight discharge from puncture. Patient begins to get very feeble. His appetite, which has hitherto been good, begins to fall off.

20th.—There is now considerable resonance over the front of the chest in the recumbent position. The left lobe of the liver can be felt in the epigastrium.

28th.—Patient is getting gradually weaker, and he is now unable to sleep at night. Emaciation increases. No discharge from chest. Ordered twenty grains of hydrate of chloral at bedtime when necessary. Temperature keeps between 101° and 102°. Night-sweats continue.

November 9.—Much feebler. Scarcely able to move or speak. Weakness has progressively increased. Is unable to take his nourishment. Condition of chest remains the same. He complains of severe pain in chest. There is gasping respiration, leaden hue of countenance, and œdema of feet. Still no albumen in urine.

The patient gradually sank, and died on November 11.

Autopsy.—The left lung was found to be quite healthy, except that its tissue was rather tough. The heart was normal. The viscera generally showed venous congestion, but there was no disease. The liver was large and fatty. In the cavity of the right chest was found rather more than half a pint of extremely thick membraniform pus. (It is quite obvious this could not be removed by any canula.) The whole surface of the pleura was covered by purulent exudation. Over the costal pleura were irregular patches of ulceration. The pleura itself had enormously thickened, so that in some parts it measured one-eighth of an inch. The lung was retracted close to the spinal column, so that it might seem at first glance that it had wholly disappeared. Its size was that of a small lemon; it was completely collapsed, except at the base, from which a little air could be squeezed.

CASE OF EMPYEMA—PARACENTESIS—SUDDEN DEATH.

(Under the care of Dr. SANSOM.)

Arthur P., aged seven years, was admitted as an in-patient on October 13, 1875. Patient had been ill three weeks, and had lost much flesh. His bowels had been relaxed, and he had a hacking cough.

On admission, the right side of the chest was found to be dull from apex to base. The intercostal spaces were obliterated. The breath-sounds were not audible in front; in the axilla and at the back of the chest they were feeble and tubular in character. The apex of the heart was beating one inch and a half outside the nipple line. Circumference of chest at nipple level, twenty-four inches and a half; right side, twelve inches and a half; left, twelve inches.

October 15.—Paracentesis of the chest performed below the axilla. Sixteen ounces of odourless pus were withdrawn. After the operation there was severe coughing. The breath-sounds could then be heard feebly, but the chest was not resonant on percussion except at apex.

20th.—Paracentesis again performed. The puncture was made near the angle of the scapula. Twelve ounces and a half of thick, slightly fetid pus were drawn off. The chest was then washed out with a weak solution of tincture of iodine (ʒj. ad aq. ℥x.).

23rd.—There was dulness on percussion over the right chest from the third rib downwards in front, and the angle of the scapula behind. There was also complete dulness in the axilla. The breathing in the right infra-clavicular region was tubular, except at the extreme apex, where it was vesicular. Succussion gave a splash of a metallic character. The breathing, though comparatively feeble, could be heard all over the chest.

31st.—7 p.m.: Half an hour ago patient was suddenly taken with sickness. The face was pale, and covered with a cold sweat, and had a very anxious look. He was obliged to sit up in bed to breathe. Complained of pain in the right side of the chest when he coughed. Pulse extremely feeble; extremities warm. 11.30 p.m.: Much worse; extremities cool; dyspnœa greater; diffusible stimulants were ordered.

The patient never rallied, and died at 8 a.m. on the following morning. Unfortunately no post-mortem examination was allowed.

[For the notes of the above cases we are indebted to the House-Surgeon, Mr. T. Burtonshaw, M.R.C.S.]

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Medical Times and Gazette.

SATURDAY, DECEMBER 18, 1875.

THE WHITECHAPEL MURDER CASE.

The identity of the subject having been made out so clearly in this particular instance, the cause of death was not far to seek. Indeed, the medical examiners seem to have confined their attention rather too exclusively to this particular part of the inquiry. The finding of two bullets in the brain was quite

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enough to account for death, altogether apart from the cut in the throat, which was, undoubtedly, inflicted immediately after death. This cut was on one side of the neck only, and was described by Mr. Bond as extending from the larynx to the angle of the jaw. It would have been interesting to know on what grounds he founded his opinion as to its direction. It was on the question as to the particular mode of death that the defence for Henry Wainwright was founded; and anything more absurd than attempting to support a theory of suicide in face of such evidence could hardly be conceived.

One point of considerable interest arises out of the medical evidence offered in the case—that is, the fatality of gunshot wounds of the head. It so happened that just about the time of the trial a case had been reported from America of a gentleman walking about and attending to his business with a bullet in his head; only about two weeks ago a man stood his trial, in one of our criminal courts, for murder, who has had a bullet within his cranium since June; and there can be no doubt that cases are not very rare where such gunshot injuries are not immediately fatal. But this is the exception; and when a bullet can be traced along a course extending from the front of the ear to the cerebellum, and again another to be found lying in the sphenoid, it is not to be supposed that death could have been long delayed, for the parts injured must have been those basal ganglia all-important to life, and not the hemispheres, which might have been considerably damaged without an immediately fatal issue, save for the shock inflicted by the wound. In fact, both wounds, gunshot and incised, were deadly, and on no supposition could they have been self-inflicted.

The evidence as to the post-mortem changes was also singularly deficient. Neither of the gentlemen concerned seemed to have much experience in such cases, though, as a kind of counterbalance, Mr. Bond could boast of having dissected an Egyptian mummy. The various stages of putrefaction were evidently unfamiliar to the witnesses, and the transition from what was described as the stage for the production of combustible gases to that of adipocere and mummification was most hazily defined. But even the final stage seems to have been imperfectly understood. Much was said about adipocere, but we question whether there was any such development in the body. In decomposition, all bodies become more or less greasy; but that is not adipocere—which is not very often seen. It is a white, waxy-looking substance, with a fusty smell much more like that of rotten wood than of a decaying body, and is much more frequent when decomposition has taken place in water than on land. Indeed, the whole question was in this case complicated by the use of chloride of lime, about which there seems to be a good deal of misconception. Chloride of lime is a disinfectant only by virtue of the free chlorine or low compound of chlorine given off by it. This would undoubtedly, in the first instance, tend to the decomposition of a body; but when it has attained to what we might describe as the neutral or saturated condition it would no longer act as a disinfectant, nor, probably, have much more influence than so much chalk.

THE CORONER FOR CENTRAL MIDDLESEX.

We find ourselves, with great regret, once more compelled to comment unfavourably on the conduct of Dr. Hardwicke in the discharge of the duties of the high office of Coroner for Central Middlesex. The office is one of no little dignity, and of great importance as regards the safety of the public. But it is of its essence inquisitorial; and the discharge of its functions is rarely anything less than unwelcome to the relations and friends of the individual upon whom the inquest is held, while it must but too often add great pain and distress to the distress and grief already brought into a household by death. It is, then, of the utmost importance that a coroner should be not only diligent and firm, and even zealous, in the discharge of his duties, but that he should also act with judgment, discretion, and consideration, lest he cause unnecessary pain, and bring unpopularity, and even contempt, upon his office. And we are glad to recognise that, as a rule, the office is exercised without reproach. At any rate, it must be allowed that Dr. Hardwicke's medical predecessors set him an excellent example. Mr. Wakley was very jealous for the importance and dignity of the office, but his zeal was ever tempered by judgment and discretion; and Dr. Lankester was no unworthy successor to him. We cannot, unhappily, accord the same praise to the present Coroner for Central Middlesex. We have always strongly insisted that coronerships ought to be held by medical men, and we did all in our power to insure the election of Dr. Hardwicke, as the best medical candidate. We have therefore been, naturally, more than ready to overlook or excuse any faults he has committed, when it has been possible to do so, rather than to blame him, though unfortunately it has not always been possible either to be silent concerning, or to offer a plausible excuse for, his proceedings; and now we are driven to fear that he will not even learn from experience to avoid repeating even grave mistakes. We need not remind our readers of the inquest on the late Sir Charles Lyell. They will remember only too well how Dr. Hardwicke's persistence in holding that inquest, early in this year, excited a storm of popular indignation, and drew upon him severe rebukes from the Lord Chancellor and the Home Secretary. We venture to say that everyone thought Dr. Hardwicke would at any rate never again be led into a similar mistake, but we do not see that it can be doubted that he has erred in the same way in insisting on holding an inquest on the body of the late Mr. Acton. The facts, as reported, appear to be very plain and simple; and we have neither seen nor heard any contradiction or correction of them. Mr. Acton, who, we hardly need say, was a very well known and eminent surgeon in a special department of practice, died suddenly on Tuesday, the 7th inst.; and on Thursday, the 9th, Dr. Hardwicke held an inquest on the body. Before the jury were sworn, the Coroner said that Mr. Acton was a very old friend of his, and that the relatives had a very strong objection to an inquiry being held. No official information as to the cause of death had reached him, and it would be for the jury to say whether an inquest was necessary. The jury were unanimous that an inquiry should be held. Mr. W. J. Acton, son of the deceased, said that the deceased had not been in good health for some months, but no danger was apprehended. On Tuesday he missed his father at the breakfast-table, and on going into his bath-room found him lying on the floor, and apparently dead. He ran for Dr. Hall Davies, who lived opposite, and who came immediately, but the deceased was dead. A post-mortem examination had since been made by Dr. Murchison and Dr. Cayley, and the former certified that the cause of death was fatty degeneration of the heart. The Coroner asked to be allowed to see the certificate. Witness said he would read it, but it should not go out of his possession. The Coroner then read the document, the witness still holding it: it was to the effect that the deceased died while in a fainting fit caused by fatty degeneration of the heart. Witness said that the inquest ought never to have been held. The Coroner said that on the previous night the witness came with an improper certificate, and was told that if the registrar received it the inquest would not be held. Witness said the Coroner wanted to shift the responsibility on to the registrar. A juryman said he believed the inquest would not have been held unless the jury had wished it. Witness said the Coroner could have prevented

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it if he had liked. One of the jurymen asked the witness why he refused to part with the certificate (which was written on a piece of note-paper); and witness replied that he meant to bring the whole matter before the Home Secretary, and if he parted with the certificate he did not know what might become of it. The Coroner said he could not allow him to say that; the witness was keeping a public document from the Coroner, and rendered himself liable to heavy penalties for so doing. Dr. Hall Davies said he went on Tuesday morning to 17, Harley-street, but found the deceased had just expired. He knew that Mr. Acton had consulted Sir James Paget, Dr. Murchison, and Dr. Quain, and he surmised he had died of heart disease. At the post-mortem which followed, fatty degeneration of the heart was discovered, by means of a microscope, in the muscular fibres. In his opinion that was the cause of death. The jury then intimated that they believed the cause of death to be heart disease, and thought it proper that an inquiry had been held. The Coroner remarked that he would take the responsibility of having held the inquest. It was not possible for any medical man rightly to give a certificate of death in a case which he had not personally treated, and especially when a man died as the deceased did.

What the Coroner meant by an "improper" certificate we cannot pretend to guess; but, except on the wild supposition that he had remained till the inquest was actually opened entirely ignorant of nearly all the statements then given in evidence, we fail to find any justification for his proceedings. It must be taken that he knew at the least that Dr. Murchison, who, among other eminent medical men, had been consulted by the deceased, had, after post-mortem examination, given a certificate that death had been caused by fatty degeneration of the heart; and the knowledge should have been quite enough to prevent him from requiring to hold the inquest. Even had there been any doubt at all in his mind on this point, the directions or instructions he received from the Lord Chancellor —the head of all the coroners of England—on the discretionary powers of coroners were certainly clear enough and strong enough to guide him; and it is to be remembered that they were delivered to him after the Lyell inquest, and expressly in order to prevent the repetition of such a scandal. The holding of the inquest was not, however, the only great error Dr. Hardwicke committed on this occasion. By a strange confusion, or want, of judgment or knowledge, he actually put it to the jury to say whether or not an inquest was necessary! We cannot believe for a moment that Dr. Hardwicke does not well know that this is a question purely for the coroner to decide, and one with which the men who are to form the jury have nothing whatever to do; and we can only look on this part also of the proceedings as an instance of the strange want or failure of judgment, discretion, and temper that has, unhappily, not rarely marked his tenure of office. The natural effect of such procedures as Dr. Hardwicke's must be most lamentable: he will gradually but surely alienate from him his professional brethren, who placed him in the honourable position he holds; he will make the future election of a medical coroner all but impossible in the metropolis; and worse, and more important still, he will lower the dignity of the coroner in the eyes of the public, and make his functions mischievously unpopular.

THE VISITORSHIP OF CHANCERY LUNATICS.

On the 4th inst. we had occasion to announce the resignation by Dr. John Charles Bucknill, F.R.S., of the office of Lord Chancellor's Visitor of Chancery Lunatics. The circumstances under which Dr. Bucknill has, at a comparatively early age, been under the necessity of resigning so distinguished a position, call for wide and sincere sympathy. For some time his health has been failing, and a prolonged tour on the American continent, undertaken several months ago, has proved insufficient to restore to him the bodily vigour necessary for the performance of his duties; and a strenuous attempt to struggle through his labours, in defiance of his physical impairment, has been followed by his resignation.

It is scarcely necessary to state that Dr. Bucknill, both during his earlier career and while acting as Chancery Commissioner in Lunacy, has done work which commands the respect of the profession. His intimate knowledge of practical psychology, and his great command of general information, have enabled him to produce works on the subject of lunacy and psychology which promise to stand for a time pre-eminent in the literature of the specialty, even though the department of science is one in which rapid strides are being constantly made. The character of the work which Dr. Bucknill has already accomplished leads us to hope that though physical weakness has compelled him to relinquish duties which involve almost constant travelling, yet rest and retirement may enable him to enrich still further the literature of a branch of the profession of which he is the acknowledged head.

So distinguished an appointment as the office of Lord Chancellor's Visitor to Lunatics in Chancery could not fail to attract a large number of candidates, and the fact that the nomination to the office had to be exercised by one man opened the way to doubt that influence might oust merit from an office which may fairly be regarded as one of the prizes of the profession. If such a doubt ever existed it has been completely set at rest by the announcement of the Lord Chancellor's decision to appoint Dr. Crichton Browne, Medical Director of the West Riding Lunatic Asylum, to the vacant office. While Dr. Bucknill was recently absent on sick leave, Dr. Crichton Browne was temporarily appointed to perform his duties, and the presumption subsequently was that in the case of Dr. Bucknill's resignation he would receive the appointment. The contest, however, appears to have been very little influenced by this temporary service, and the competition, which has been close and keen, has been participated in by many men whose claims and capabilities were undoubted, as well as others who had little or nothing to recommend them as candidates for the office.

The appointment of Dr. Crichton Browne cannot fail to give satisfaction to the members of the medical profession. He has already secured for himself a high place in the general literature of medicine, and the special literature of lunacy. He has made the West Riding Asylum a model institution for the treatment of the insane, and an independent school for the prosecution of scientific research. The fact that he has studied lunacy practically almost from his childhood is sufficient guarantee of his eminent fitness for the office, and the time of life at which he enters upon the performance of his new duties justifies the anticipation that for many years he will be able to throw into his work such vigour, both of mind and of body, as is necessary for the performance of arduous and responsible labours.

Dr. Crichton Browne's promotion will leave at the West Riding Asylum a vacancy which it will be difficult to fill. For many years he has been not only an asylum superintendent in the ordinary sense of the term, but has been foremost in endeavouring to appropriate to scientific purposes the resources of a large public institution. As a consequence his influence is to be found not only in the contributions which he himself has made to science, but also in the inspiration which has stimulated those around him to engage in independent research. One who can maintain the prestige established by such a predecessor must be at the same time a man of great practical resources and a man of letters. It is to be hoped that by the appointment of one possessing both these qualities the character of the West Riding Asylum as an institution for the treatment of the insane and the prosecution of original observation may be fully maintained.

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THE WEEK.

TOPICS OF THE DAY.

The epidemic of cholera in Syria still continues, though happily in a much less degree, but, according to the latest reports, it threatens to extend into Mesopotamia. At Aleppo it appears to be over, as only one case occurred there between November 10 and 16, and none had been registered from the 16th to the 20th of that month. At Orfah, Aintab, and Bisnada there have been no cases since November 12; and at Lattakia, as well as in all the other seaports, it is stated that the public health is excellent. Kirsada—a village about three hours from Lattakia—is the only place in Syria where cholera is still prevalent; twenty-eight cases and fifteen deaths have been registered there from the 9th to the 19th ult. On the other hand, this disease has broken out in a virulent form at a place called Insni Mossul, and, unless the most stringent precautions be taken, it is to be feared that it will spread to other parts of the province. There were on an average from seven to eight cases a day at Insni Mossul from October 14 to November 4, and since the latter date the number of attacks had increased to about twenty daily.

Either the war of the rebellion or the decrease of immigration has had an effect in decreasing the steady advance in numbers of the population of the United States of America. We now learn from a report of General Walker, Superintendent of the United States Census, which has just been made public, that he expresses regret at the paucity of results in the State censuses of the year, but, after naming the few States which have taken the census, he says "enough is already known to indicate clearly that the progress of our population has received a temporary check."

An announcement has been made that there is no intention whatever to transfer the functions of the Hospital Saturday Fund to the Hospital Sunday Fund, and that every arrangement calculated to insure a successful collection for next year is in active preparation. We can only add that we are sorry to hear it. If the promoters of the former movement do not intend to abandon the scheme, they would have evinced a far greater desire to benefit the funds of the London institutions by handing over their collection to be distributed by the Sunday Committee than by continuing the expenses of a separate distribution. The Dublin Hospital Sunday Fund for this year now amounts to £3200, and when completed will, it is reported, exceed the sum collected last year.

The Sanitary Authority of Uppingham have published the following report of their medical officer and engineer:—"Hearing that the masters of the Uppingham School will probably shortly meet, when we presume they will take into consideration the re-opening of the school, we deem it our duty, as the reports we are preparing are not yet finished, to present an interim statement. We find that the condition of several of the school-houses is such as to necessitate material alterations in their sanitary arrangements. With a view to facilitate such alterations, Mr. Rogers Field has, in accordance with your resolution, placed himself in communication with Mr. Tarbotton, engineer to the schoolmasters, and he has every reason to believe that means are being taken by the school authorities to expedite the necessary works. Until, however, these are completely carried out, so as to enable us to report to you that each individual house in connexion with the school is in a perfect sanitary condition, we think it desirable that you should not in any way countenance a premature return of the scholars." Consequent upon the foregoing report, the head master of the school has requested the publication of a letter from Mr. Robert Rawlinson, in which he states that he has not yet seen the plans of either the Rural Sanitary Authority or of Mr. Tarbotton (acting for the school's trustees). He is therefore at present unable to publish any statement relative either to the state of the town or the state of the schools.

The Local Board of Hampton Wick have been summoned by the Thames Conservators for neglecting to divert their flow of sewage from the Thames. The summons is to be heard next week; meanwhile, heavy penalties are being incurred—viz., £50 a day; and it is said that the total penalties up to that date will amount to about £94,000.

In the Sanitary Report on the Health of India for the year 1873-74, it is stated that the important subject of a remedy for snake-poisoning has received more attention during the past ten years than at any previous period. Although no antidote has been discovered, much good work has been done in elucidating the physiological action of the poison; and the more that is known of its operation, the more likely will be the discovery of its antidote. The Bombay Government has authorised experiments with an alleged remedy recommended by a Mr. Richardson. The nature of this specific is a secret. Mr. Higgins claims credit for the discovery that all snakes themselves supply an antidote to their poison in their gall. The experiments instituted by direction of the Government were unsuccessful, but Mr. Higgins does not accept the result as conclusive. Dr. Reid suggests the internal and external application of a plant called *Impaticus fulva* as a sovereign cure for spider and snake-bites. Measures have been ordered to be taken to test the efficacy of this alleged antidote.

The Registrar-General's return for Ireland, for the third quarter of the year 1875, shows the number of deaths registered to have been 19,289, the population being estimated at a little over 5,300,000. The rate of mortality was somewhat above the average for that quarter of the year. Scarlet fever, though continuing to decline, was still very fatal and prevalent, and caused 788 deaths. The greater part of this mortality occurred in Ulster, and the same remark applies to the 212 deaths from measles; if we add to the foregoing the 131 deaths which occurred in Ulster from whooping-cough (the 328 deaths recorded from this disease), we find that no less than 846 of the 1328 deaths attributed to these three zymotic diseases occurred in that province, which, however, has not very much more than a third of the population in Ireland. Diarrhœa shows a total of 583 deaths, and 598 are set down as having occurred from fevers. The return bears testimony to the good results of works of improvement effected in various districts under the provisions of the Sanitary Act, whilst it also records the willing co-operation of the people in measures for promoting cleanliness and health. It would appear that emigration has greatly decreased; the returns show that the emigrants from Irish seaports during the quarter under notice were 13,033, which number is fewer by 4655 than that in the corresponding quarter of the preceding year. There is also a marked decrease in pauperism, the workhouse inmates showing an average of 41,342, a decrease of 442; and the outdoor average 28,467, being 146 below the return for a year before.

After much debate and consideration, it would appear that the method of improving the sanitary condition of Simla has at length been decided on. The bazaar will not be removed—doubtless on account of the enormous expense which such a step would involve,—but the drainage will be improved, and water will be brought in from a distance of eight or ten miles. These improvements, it is estimated, will cost about £100,000.

A warrant has been issued from the War Office, revising the regulations relative to the weight of personal baggage of officers to be ordinarily conveyed at the public expense by land or by sea, either at home or abroad, except when on service in the field. Medical officers, in addition to the weight allowed them by their relative rank, are to be permitted to carry two hundredweight extra.

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THE PROFESSION AND UNQUALIFIED COMPETITORS IN AMERICA.

We have recently had to chronicle proceedings in connexion with a movement in this country having for its object the restriction of the practice of medicine by unqualified persons. It has been shown that much confusion exists in the minds of the public as to the respective qualifications and attainments of the legitimate practitioner of medicine and the charlatan, or, as Dr. Richardson so happily put it at the meeting of those who are interested in the Defence Association, the tares are becoming indistinguishable from the wheat; and we may expect that, if a clearance be not made, both will one day be burnt together as unprofitable.

Although medical practice in this country is in such an unsatisfactory state, and so much licence is permitted to quacks and pretenders, we are far from being in such a deplorable condition in these particulars as are our medical brethren in the United States. In a masterly address delivered to the *alumni* of the medical department of the University of Pennsylvania, at their annual gathering a few months ago, Dr. Cornelius G. Comegys complained that in the States the practice of medicine is under no regulation. "Those," he said, "who have studied the art under the most favourable conditions, find themselves confounded in the community with those who have the least notion of it. The lives of the people are in the hands of greedy and ignorant men. The most dangerous empiricism and shameless charlatanism impose themselves everywhere upon credulity and good faith. No proof of knowledge or skill is required, and the cities and the country at large are infested with quacks who deal out poison and death with an audacity which our present laws cannot suppress. The most impudent and depraved men assume the title of doctor to cover their ignorance and greediness." This grievous state of things demands some remedy, and Dr. Comegys calls upon the profession in America to unite and exercise all their influence to obtain adequate legislation, so that all persons who propose to practise shall be obliged to prove satisfactorily that they have made the human organism and its diseases a systematic study. No one, not even in America, can practise the legal profession without having passed an examination to prove his fitness. Surely, then, if those who assume the care of property have to show that they have received a special education qualifying for the trust, it is not too much to ask that similar evidence should be exacted from those who assume the care of the lives of the community.

In order that laws for the protection of the public against quackery may be enacted, and adequate legislation adopted in all the hygienic and sanitary questions that are included under the heading of "State Medicine," Dr. Comegys urges the medical profession to secure proper representation in legislative bodies. The education and training of medical men are such that our ranks ought to furnish a large number who would not only prove wise and good legislators on all questions affecting the social order and general welfare of the people, but whose special knowledge would render their advice and counsel especially valuable in legislating on those subjects which legitimately come within the scope of medical practice.

Although the remarks of Dr. Comegys were addressed to a Transatlantic audience, they are applicable in an almost equal degree to the profession in this country. As a body we have kept out of the political arena, and that too when our active interference in political matters would have been attended with the happiest results. Had the medical profession been represented in Parliament, since the first Reform Bill, in anything like the same proportion as the legal profession, sanitary legislation would not have been so much neglected as it has been. It is only within the last few years that the necessity of making laws with a view to protect the public health has been recognised. Some good and useful measures have been passed, but much remains to be accomplished. The work would be materially hastened if those members of the profession who are qualified for the task would take a more active part in political matters, and endeavour to secure the better representation of medical interests in Parliament.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

On Friday last a meeting of the Council of the Hospital Sunday Fund was held at the Mansion House under the presidency of the Lord Mayor. A large number of the members of the Council were present. The Lord Mayor, in opening the proceedings, alluded to the fact of his then taking the chair for the first time at these meetings, and in expressing the warm interest he took in the movement, trusted that during his term of office the contributions to it would be as liberal as those collected during the mayoralties of his three immediate predecessors. They had, he said, to look to the clergy, as heretofore, for important assistance, inasmuch as congregations were very much influenced by the heartiness or otherwise of the appeals made to them. The Fund must be careful not to interfere with local charities, or it would itself be no charity at all; but, on the contrary, it ought to do as much good all over the metropolis as the money subscribed would allow. The secretary then read the report of the Council, which detailed the business done at the several meetings during the past year, and announced the gross receipts to have been £26,396 1s., or about £3000 less than the sum obtained last year—a result supposed to be in a great measure attributable to the wet weather on the day appointed for the collection. The Council desired, while conveying their cordial thanks to the clergy and ministers of all denominations in the metropolitan district for the most valuable co-operation they had again this year afforded, to keep prominently before the recollection of all that simultaneousness of action in making the several collections was most essential to success, and they ventured to repeat the strong hope, expressed last year, that in the future Hospital Sunday in London might be devoted exclusively in all places of worship to the aid of the Metropolitan Hospital Sunday Fund. Letters of recommendation for in- and out-patients to the various hospitals and dispensaries would be given, on their application, to ministers and others, so far as the supplies in the hands of the secretary would admit. The whole expenditure amounted to £1009, or about 3¾ per cent. on the gross receipts. The accounts had been audited gratuitously by Messrs. Hart Brothers. Mr. Jabez Hogg complained that two so-called "hospitals," which were unworthy, in his opinion, of any recognition or aid at all, had received small grants from the Fund; and Sir Sydney Waterlow, in reply, stated that in twenty-five instances the Distribution Committee had seen deputations from various institutions in explanation of their returns and balance-sheets, that the accounts had been subjected to close and minute scrutiny, and that strict and searching inquiries had been made into the details of management. Dr. Glover commented on the fact that local charities were suffering from the great diminution in church collections sent to them since the establishment of Hospital Sunday. The report of the Council was then unanimously agreed to, and the second Sunday in June next was mentioned as the probable date of "Hospital Sunday" for the year 1876.

WINTER PROSPECTS AT NAPLES.

The following is a report of the state of the weather at Naples, by a resident there, who communicated it to the *Times* on the 6th inst:—"A more wintry scene than that which lies before us you could scarcely have in England. As far as the eye can see, the several ranges of mountain are covered with snow, while here in the foreground, audible as well as visible, rises up Vesuvius as white as a sugar-loaf

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Here in the low grounds, however, snow does not fall, but something quite as cold and trying, for rain and hail are continued, and have scarcely ceased for the last fifteen days. The prospect before us is far from encouraging, according to a proverb much trusted in by the people, who say that when it rains on December 2 it will continue for upwards of forty days. The damage which has been inflicted on the country, from north to south, by the deluge which has poured down upon it is most serious. Every railroad in the kingdom has been more or less injured, and if communication has not been entirely impeded, it has been 'limited,' as the journals have officially announced almost every day. Fewer trains have left, and at certain points where bridges have fallen, or portions of the road have been washed away, passengers and goods have been transferred across the gap from one train to another. Further north, from Rome to Florence by Leghorn, and on the whole of the Maremma line, the state of things is as bad, or even worse. On Thursday and Friday no steamers could leave our half-constructed port, so that postal communication was interrupted between this and Sicily. Equally difficult was it for any steamers to enter, and a large vessel from Alexandria lay up under the lee of Capri for seven or eight hours until the gale abated and she could venture to cross. Indeed, the experience of this and every winter shows the imperative necessity of completing the long-delayed works of our port, and of forming a port of refuge at Capri, which acts as a breakwater to Naples. I am writing by lamp-light at half-past eight o'clock; there has been thunder and lightning all night, and the storm is still pealing and flashing awfully; while the ground, as if in correction of the statement at the commencement of this article, is white with mingled snow and hail. Of course all agricultural pursuits are suspended. Where the grain has been sown it has been washed all out. No foreigners are coming in, and the prospect for those in the country and the town who depend on the season is as bad as it can be. After giving such a deplorable report of the weather, however, it may be as well to say that the thermometer in the open facing the north stands at 44°, while in the house, without fires, it is 54°."

THE CASE OF MR. SPURWAY.

Our attention has been called to the case of Mr. Charles Spurway, late a Surgeon in the Medical Department of the Army. From a correspondence which has been placed before us, it would appear that Mr. Spurway considers himself hardly used by the authorities, and, so far as we are in a position to judge, the whole gist of the matter rests on the interpretation which is to be put upon one clause of the conditions of army service. Mr. Spurway, called upon to embark for foreign service, and not feeling himself equal to undertake his medical duties in India, submits himself to a Board of Medical Officers, and is by them placed upon six months' half-pay; at the expiration of that period a fresh examination results in a similar decision, and he is again recommended for half-pay for a period of six months, but without pay. The rules of the Army Medical Service do not admit of an officer receiving half-pay for a longer period than six months, unless the examining Board can certify that the disability of the person examined was caused *in* and *by* the service. This is the turning-point of the present case. Mr. Spurway does not seek to show that his malady was contracted *in* the service, although he, perhaps justifiably, argues that it was *aggravated by* his duties abroad; and whilst admitting that his case is decidedly a hard one, he having put in ten years of blameless service, we fear that it must be admitted the decision of the authorities is strictly in accordance with the letter of the law. No doubt it may be said that, with the present dearth of good men in the Army Medical Service, it would have been as well if his case had been more leniently treated at head-quarters; but it must also in justice be remembered that Government officials are always more or less haunted by the bugbear Precedent, and that having once admitted an excuse in the case of a really deserving man, they would have opened a door for the importunities of others whose cases are undeserving of lenient consideration. We must also, however reluctantly, express our opinion that Mr. Spurway acted with a much-to-be-regretted haste in this matter. However severely he may have felt the decision of his department, knowing that his duties had up to the present time been cheerfully and efficiently rendered, his case would have been much stronger, and his claim to some consideration infinitely greater, had he refrained from expressing himself in the intemperate manner, which, we much fear, has permanently injured his prospect of obtaining any redress.

THE WATER-SUPPLY OF HASTINGS.

The articles which have appeared in these columns on the water-supply of Hastings have attracted a good deal of attention in the town thus referred to; and we believe that the more reflecting and better class of the inhabitants agree with us in saying that it is high time to place the water-supply of this important watering-place on a permanently satisfactory footing. There are, however, those who wish to decry any attempt to improve the position of the town as regards its water-supply, and would even continue to lull the public into false security by loudly asserting that the present supply leaves nothing to be desired, either as regards quality or quantity. The same parties charge us with desiring to frighten the public by exaggerated statements and misrepresentations. We have no intention of entering into an argument with anonymous newspaper correspondents, who evidently are anxious to delude themselves, their neighbours, and the public as to the exact condition of Hastings as regards the vital question of water-supply. We have not assumed the character of alarmists, or made any statements that cannot be fully borne out. Had we wished to create alarm, we might have spoken of small-pox and other epidemic diseases which are now, we understand, prevalent in Hastings, and which must be expected to prevail as long as sanitary arrangements and water-supply are defective. The true friends of the town are not those who attempt to foster a sense of false security, but those who recognise its wants and endeavour to supply its deficiencies. As long as the water-supply of Hastings is an intermittent one, the town is in danger of an epidemic of fever. We have recently had to record severe outbreaks of fever in other places which clearly originated in consequence of intermittent water-supply. A *constant* supply is a prime necessity in every town, but especially is it needed in watering-places and health-resorts, and the Hastings Urban Sanitary Authority should not rest satisfied until they have secured a constant service of water, if it be possible to do so, at any cost. We shall watch their action in this matter with great interest. Something must be done, and that soon, if the health, lives, and prosperity of the town are to be preserved. The difficulties to be encountered are great, but the Urban Sanitary Authority will, we may hope, prove equal to the occasion, especially if the outside pressure brought to bear upon them is assisted ever so little by those who have a more direct personal interest in the prosperity of the town.

DR. RICHARDSON ON THE INFLUENCE OF OCCUPATIONS ON HEALTH AND LIFE.

At the rooms of the Society of Arts, yesterday week, Dr. Richardson, F.R.S., gave his second lecture on "Industrial Pathology; or the Influence of certain Injurious Occupations on Health and Life." Dr. Richardson first proceeded to consider the sources of injury arising purely from industrial labour. These he divided into seven classes. The

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first was inhalation by the lungs of fine particles of solid matters, and of dust and noxious gases and vapours. The other causes were—exposure to soluble chemical substances, mechanical impact of foreign bodies, physical injuries from unnatural postures, sustaining and bearing loads, undue atmospheric pressure and mechanical concussions, exposure to damp and to impure air, contact with organic parasitic forms, excess of muscular work, and variations of temperature. In treating in detail the first part of the first cause, viz., the inhalation of dusts, the lecturer said that the number of trades whose followers suffered from this source of injury was very large, viz., from twenty to twenty-five distinct callings, among the occupations being file and saw making, knife grinding, stone cutting, paper making, and tobacco manufacturing. He then proceeded to enumerate and to describe in detail the effects of the various trades, giving a list of maladies consequent upon the different callings, which comprised pulmonary consumption, chronic bronchitis, asthma and emphysema, gastric irritation and dyspepsia, and caries of the teeth. Nervous depression and disturbance were the general consequences of engaging in the manufacture of tobacco and snuff. He then proceeded to treat of the injuries caused by the inhalation of noxious vapours and gases, and promised to pursue the subject in the next lecture.

THE HÆMATIMETER OR BLOOD-GLOBULE MEASURER.

On Monday evening last, December 13, Dr. Henry Lawson exhibited to the Medical Society of London M. Hayem's novel mode of counting the blood-globules, the apparatus being manufactured by M. Nachet, the celebrated optician of Paris. Dr. Lawson described the apparatus very fully, and exhibited a specimen of blood which showed that there were about 4,455,250 red blood-globules in a cubic millimetre's space. The method of conducting the enumeration was, shortly, as follows:—On the stage was an ordinary plain glass slide, on which was cemented a piece of thicker glass whose central part was removed, which was exactly one-fifth of a millimetre in height, and when a covering glass was placed on it contained precisely a quantity of liquid whose depth was one-fifth of a milimetre. Then in the eyepiece of the microscope was a micrometer which was divided into sixteen squares, which in their entirety were equivalent to one-fifth of a millimetre squared. By this means was provided a measure by which on looking down through the microscope one could estimate the number of red globules in the cubic one-fifth of a millimetre. But Dr. Lawson showed that there was a further difficulty, for the blood-globules, if placed in the ordinary method, would have been infinitely too numerous to count them. Therefore, he showed another instrument by which exactly two cubic millimetres of blood could be taken from a wound, and then, by another somewhat like it, but larger in size, a half a cubic centimetre (*i.e.*, 500 cubic millimetres) of serum—of which he had a bottle, the contents of which had been obtained from a dropsical patient—was taken up and mixed with the blood thoroughly. Then this liquid was placed on the prepared slide till it filled it exactly when the cover was placed upon it. On then looking through the microscope it was found quite easy to enumerate the globules, which were found to number 142. This then multiplied by 125 to bring it to the cube, gave 17,750, which, multiplied by 251, or quarter of a centimetre *plus* 1, gave a total of 4,455,250. The entire apparatus, including the microscope and the various measures, were sold at an extremely low price by M. Nachet, of Paris.

PATHOLOGICAL SOCIETY OF DUBLIN.

At the meeting of the above-named Society on December 11, the President in the chair, Dr. Thomson showed the bladder and kidneys of a man aged seventy-four, who was admitted into hospital with symptoms of urinary fever and retention of urine caused by an enlarged prostate. At the autopsy, evidences of chronic cystitis were found, and a large calcium oxalate calculus lay in the bladder. It had apparently been encysted in a pouch, which communicated through an opening with the cavity of the pelvis. The kidneys, and especially the left one, were studded with small abscesses resembling pustules. Dr. James Little presented a striking example of Farre's tubercle of the liver. The disease was secondary to a cancer of the stomach. The left lobe of the liver was in a state of sphacelus. There was an encysted purulent pleuritis. The mental apathy, which so often attends malignant disease, was well marked in this case Dr. Bennett showed the hip-joint and neighbouring bony parts of a young man aged twenty-five, who died after prolonged morbus coxæ. A large intra-pelvic abscess had formed and been evacuated; and before death, œdema—first of the affected limb, then of the sound limb, and lastly of the body generally—occurred. The acetabulum was the chief seat of the disease. Its cartilage hung in fringes, and small sequestra lay in its cavity. The abscess did not, as is usual, spring from the foot of the acetabulum, but was the extension upwards of a small abscess invading a group of lymphatic glands along the track of the iliac vessels. The cause of the œdema was also discovered. The external iliac vein, in passing through a cluster of diseased glands, became the seat of thrombosis. The lesion at last extended into the common iliac vein of the affected side.

THE CARE OF DELIRIOUS PATIENTS.

A case which has excited great interest among the medical profession in Dublin was tried in the Court of Queen's Bench for Ireland last week. The plaintiff sought to recover £4000 damages from the defendants, Dr. James Duncan and others, who are proprietors of the Maison de Santé in Charlemont-street, Dublin—an institution for the care and treatment of patients suffering from delirium tremens,—for not having taken proper care of him whilst he was a patient in the above institution suffering from delirium, in consequence of which he jumped out of window and broke his leg. At the time that the patient jumped out of window he was supposed to be sufficiently recovered to be allowed to take his discharge. The plaintiff endeavoured to show that the treatment adopted by the defendants—opium and the free administration of stimulants—was improper. Among the medical witnesses examined were Mr. G. H. Porter, Surgeon to the Queen; Dr. B. F. McDowell; Dr. W. H. O'Leary, M.P.; and Dr. Quinan. The jury were unable to agree, and were ultimately discharged without giving a verdict. Dr. James Duncan, one of the defendants, was until recently President of the King and Queen's College of Physicians.

THE LOCAL GOVERNMENT BOARD, IRELAND.

The Medical Commissioner, a member of this Board, Dr. John McDonnell, is likely to resign his office. He will carry into his retirement the goodwill of all his colleagues and of a host of friends. Among the candidates spoken of to succeed Dr. McDonnell are Dr. Malachi Burke, who already occupies a position in State Medicine as Medical Superintendent in the office of the Registrar-General of Ireland; Dr. Croker King, one of the medical inspectors of the Board; Dr. Rawdon Macnamara, Surgeon to the Meath Hospital, and formerly a Poor-law medical officer; and Dr. Thomas Wrigley Grimshaw, a diplomate in State Medicine of Trinity College, Dublin, and a foremost sanitarian. There has been a report that it is intended to suppress the post hitherto occupied by Dr. McDonnell, but in the interest of the public and of science alike it is to be hoped that such a rumour is unfounded. Besides, the post is held by statute under the Medical Charities Act, and, so far as we know, cannot be abolished without an Act of Parliament.

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WEST KENT MEDICO-CHIRURGICAL SOCIETY.

THE third meeting of this Society was held on Friday, December 3, at the Royal Kent Dispensary, Greenwich-road; Dr. Prior Purvis (in the unavoidable absence of the President, Dr. J. N. Miller) in the chair. Dr. Tilbury Fox's paper on Ringworm was (in his absence) postponed until Friday, February 4, 1876. Dr. J. C. Thorowgood (Cavendish-square) was balloted for, and unanimously elected an honorary member of the Society. Mr. E. J. Burroughs (Lee) brought before the members a typical case of congenital syphilis treated by mercurial inunction. Mr. J. B. Saundry showed a fine specimen of gelatinous polypus, removed by him from the nares of a woman. The rest of the evening was spent in discussing secondary syphilis and its treatment, in which most of the members present took part, illustrating their remarks by appropriate cases. Dr. Peacock will read a paper on Friday, January 7, 1876.

RECENT DEATH FROM CHLOROFORM.

ANOTHER death from chloroform is reported as having recently occurred at Smethwick, Staffordshire. The deceased was about to have the operation of extirpation of the eyeball performed by Mr. Chesshire, of Birmingham, assisted by Mr. W. F. M. Jackson, of Smethwick. Mr. Chesshire first gave about fifty drops of chloroform, and then commenced the operation; but as the patient was not sufficiently under the influence of the anæsthetic, an additional fifty drops were administered, and the operation resumed. Almost immediately after the operation began, Mr. Jackson noticed failure of the pulse. He at once seized the patient by the feet, and lowered the head, with a view to facilitate the circulation of the blood through the heart. Artificial respiration was resorted to, and other means tried to restore animation, but in vain. The deceased was forty-two years of age, and was said to have been perfectly healthy up to the time of the operation.

THE HEALTH OF BRIGHTON.

THE Medical Officer of Health for Brighton, Dr. Taaffe, reports that during the quarter ending September 30 last, 469 deaths were registered in the municipal borough, which gives a death-rate of 18·7 per 1000 per annum of the estimated population. Sixty-four of the deaths were those of non-residents, which, if deducted from the above, reduces the death-rate to 17·0 per 1000 per annum for the *resident* population. The seven principal zymotic diseases were represented by a total of 93 deaths during the quarter, of which 77 were referred to diarrhœa, 7 to whooping-cough, 4 to different forms of fever, 3 to diphtheria, and 2 to scarlet fever. It is gratifying to learn that in Brighton there was no death from small-pox last quarter.

THE LORD MAYORALTY OF DUBLIN.

THE year 1876 will yield to none of its predecessors in the number of medical mayors who will throughout it preside over our cities and boroughs. Dublin, we are glad to see, has chosen as her chief magistrate a most worthy member of the profession—Dr. George B. Owens, who will enter upon his duties on the 1st prox. We heartily congratulate Dr. Owens on his unanimous election to fill this distinguished post, and the citizens of Dublin on their choice of a new Lord Mayor.

THE TRAGEDY AT NORWICH.

THE particulars of the tragedy which occurred in the Norfolk and Norwich Hospital on Monday morning last are doubtless well known to our readers. We deeply sympathise with the managers and all the authorities of the hospital in the distress that such a terrible occurrence must cause them; but the case being still *sub judice*, we must postpone commenting on it until after the termination of the inquiry before the coroner.

THE ROYAL VENTNOR HOSPITAL FOR CONSUMPTION.

THE President of the Royal Ventnor Hospital for Consumption (Lord Eversley) makes another appeal to the public on behalf of the institution. Since last year an additional block of houses has been opened, and by the end of the present month the two last blocks contemplated by the original design are expected to be completed. It will, however, be impossible to open or maintain these additional blocks without further aid, as the Hospital is encumbered with a debt of £1000. We have no doubt that when the necessities of the Hospital are known to the charitable public, Lord Eversley's appeal will meet with a liberal response.

THE BRITISH MEDICAL DEFENCE ASSOCIATION.

A GENERAL meeting of the members of the above Association was held at the Wellington Hall, Islington, on the 10th inst., when the following officers were elected for the ensuing year, viz.:—*President:* Dr. B. W. Richardson, F.R.S. *Vice-Presidents:* Dr. Alfred Meadows, and Mr. James R. Lane, F.R.C.S. *Honorary Secretary:* Mr. George Brown, M.R.C.S. An adjourned meeting is to be held at the Guildhall Tavern, Gresham-street, City, on Tuesday afternoon next, when it is proposed to elect the Council and remaining officers of the Association.

MORE NOTES ON WINE.

(*Continued from page 607.*)

DIVISION OF FERMENTED AND DISTILLED DRINKS INTO CLASSES—NATURAL WINE—PRODUCE OF THE EARTH IN WOOD, SUGAR, AND VEGETABLE TISSUE—PLENTY OF GRAPE-JUICE—ALCOHOLIC VALUE OF CHEAP WINE—THE COMING CONFLICT OF TEETOTALISM WITH SCIENCE AND MORALITY.

FERMENTED and distilled liquors may be divided naturally into three orders—those that are *beverages*, such as natural wine, beer, ginger-beer, and the like; secondly, those that are cordials or liqueur wines, of which port and sherry are the commonest examples (these differ from natural wine in being fortified by the addition of extraneous spirit, and in round numbers are twice as strong); thirdly, spirits, such as brandy, of which I shall speak in my next. Common custom points out the respective doses of each, by the size of the glasses out of which they are imbibed. The spirit glass holds from half an ounce to an ounce; the sherry glass two ounces; the natural or light-wine glass four or five ounces. We *drink* the natural wine; *sip* our sherry; and for undiluted spirits employ a mode of imbibition which the French call *humer*, as I shall describe in my next.

In my last I spoke of good sherry, and vindicated its use as a cordial. It is specially adapted to middle-aged people, and to those whose stomachs are incompetent to deal with the bulk and acidity of natural wine. Now for a few words about natural wine.

When I began to write upon wine, twelve or fifteen years ago, it was under the idea that light natural wines were more wholesome for young people of good health; and that light wine was less likely to lead to abuse than the stronger; to say nothing of the greater refinement and delicacy of taste. It is very cheering to see that light wine bids fair to triumph. The use of *all* wines has increased; but whilst the imports of Portuguese are doubled, and of Spanish trebled, in round numbers since 1859, that of French wine has increased tenfold, and France is still the mother-country of natural wine.

Still, the use of cheap, light, natural wine might be increased fourfold with immense benefit to the health, habits, morals, and ultimately the pockets, of the people. We do not breathe a word against good beer for those with whom it agrees; but there is a large section of the population with whom beer does not agree, and yet who refrain from the use of light wine. Old-fashioned prejudice is partly to blame, for some people remember the days when claret was denounced as a costly extravagance; but, strange to say, now that it is to be had plentifully, its very plenty and cheapness are used as an

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argument against it. People sneer at cheap claret, and affect to wonder what it is made of! It cannot, they pretend, be the genuine juice of the grape. This is a matter that deserves a very few words.

Grapes, to an Englishman untravelled, seem a costly luxury. He knows them as they are grown under glass at a great cost, and in the gardens of the rich man, and hears of hot-house grapes at ten shillings or more for the pound. When grown in the open air he knows that it is not every summer that will ripen them; and the notion of a wine made of such unripe fruit is enough to raise a feeling of disgust. But if the wine is to be made of grapes ripe and sweet, he cannot conceive of it as cheap. He has but little notion of the fertility of the earth in general, and especially of the exuberant production of grapes under climate and soil fitted for it, which those of England are not.

We may go for a few figures to an impartial witness, the illustrious Baron Liebig, in his "Chemistry applied to Agriculture,' &c. (London, 1842, page 16):—One Hessian acre of woodland produces annually 2920 lbs. of dry firwood. (Reckoning the Hessian acre as $\frac{77}{74}$ of an English acre, and the Hessian pound as nine-tenths of an English pound, this would be 4283 English pounds of wood from an English acre, or not much under two tons.) The same acreage of land (Hessian) would yield 22,000 lbs. of beet-root, of which 9 per cent. are sugar, without reckoning the leaves; or 2755 lbs. of hay, or 1961 lbs. of straw with 881 lbs. of rye.

In another part of the same book, Liebig describes the vineyards as bearing a vine stock in every square metre, or 10·8 square feet English, and each vine producing one litre of wine, which would equal 2500 litres to an English acre. The readers of the reports of agricultural shows in the *Times*, who learn that forty-six tons of mangold have been raised per acre, and so much as eighty-three under sewage, need not deny the long-noted fertility of the vine. For instance, we read of a vine at Valentines, in Essex, which in one season yielded 2000 bunches of one pound each; the vine occupies a space of 147 square yards. The celebrated vine at Hampton Court is said to produce 2200 clusters of one pound each. That is nearly a ton from a superficial area of 2160 square feet, or less than one-twentieth of an acre. Now, 1000 parts of grapes contain nearly 750 of grape-juice, so that it is difficult to say why wine should not be plentiful, considering the number of acres allotted to it. I don't want to make too much of the argument from abundance, because it is not the best wine which is yielded in greatest profusion, and it pays better to produce fine wine in small quantity than poor wine in greater abundance. I only wish to show that the great productiveness of the vine is only one example of the enormous quantities of organised vegetable matter, with its sugar, its potass, its woody fibre, and bioplasm, which will grow on a properly prepared soil, in a suitable climate, and with due care in cultivation. When anyone asks, then, What is cheap claret made of? we most unblushingly answer, *Grape-juice*. That the traders and retailers in large towns, in the wine-shops frequented by the lower orders, may water their wine or colour it, is no argument against the purity of wine in general; and of all colouring matter in a grape country there is none so cheap as that of the purple grape-skins. Even milk has been known to be coloured and watered, but is that any argument against milk?

But we must go on to another point. People, when they talk about "alcohol," are apt to forget their multiplication table, as well as the other elements of sober judgment. They are apt to forget that sugar, in fermenting, splits into half carbonic acid and half alcohol; and that this happens alike with malt, and corn, and sugar, and grape-juice, and every other sweet juice. When the thirsty teetotaler brews ginger-beer, he makes an alcoholic liquid, whether he will or not. Good home-brewed and other beer must contain alcohol. If small beer contain 2½ per cent. of proof spirit, the person who drinks a quart will get an ounce of spirit; if light wine contains 15 per cent., and he drinks six ounces, he will get the same. This cuts at the root of another prejudice—viz., that light wine has *nothing in it*. There is no stronger argument for its wholesomeness than the fact that its alcohol is so combined as to produce, if taken at the proper time with food, no effect on the head, and no other alleged ill-consequence of alcohol, immediate or remote.

The immediate effect of an alcoholic drink depends much on its state of combination. It is not quantity of alcohol that is any test of excellence in wine. The labourer may peradventure prefer a coarse, sweetish beer from some country beer-shop to the finest produce of Burton-on-Trent, although there may be much more alcohol in the latter. Between fine dear wines and cheap wines the difference is not one of alcoholic strength. "A man's a man"; it is the cultivation, training, and refinement that differ. Shilling claret and Château Margaux are alike in alcoholic strength, and alike the fermented juice of the grape.

But it may be asked, Why trouble your readers with these remarks, which peradventure have been made before and better? For two reasons. The medical practitioner has in the multiplicity of wines which can be procured from the wine-merchant in the towns, and from the tradesman-agent in almost every village, a vast storehouse for relieving debility and illness; and by suggesting the use of it instead of the stronger potations for young people, he will be naturally aiding the progress of refinement and sobriety. Who would not prefer for young people a bottle of sparkling Saumur to the old-fashioned bowl of punch? Lastly, the independence of the medical practitioner is threatened by the teetotalers. These have of late been joined by some of the less wise of the clergy, who, despairing of combating the sin and bad education which are at the bottom of habitual intemperance, turn upon alcohol, which they denounce as a vile creation, more the work of the devil than of God. Efforts are made to taboo the use of wine, and to discredit the practitioner who prescribes it. If you will allow me space, I will in my next letter vindicate the use of spirits—yea, even of the much-abused gin, in proper limits,—and will show how the line of argument used by the teetotalers against alcohol would, if followed out, reduce all science and morality to folly and Manichæism.

(To be continued.)

LECTURES ON CLINICAL MEDICINE,

DELIVERED AT THE LARIBOISIÈRE HOSPITAL, PARIS.

By S. JACCOUD, M.D.

TRANSLATED (WITH SPECIAL PERMISSION)

By Mr. C. J. CULLINGWORTH, of Manchester.

CHOREA.—RHYTHMIC SPASMS.

(Concluded from page 663.)

Connexion between Chorea and Rheumatism and Lesions of the Heart—Publications of Cyon, Spitzmüller, and Roger—Inconstancy of this Connexion and Mode of its Existence—Narration of some Autopsies.

I COME now, gentlemen, to the connexion between chorea and rheumatism.

The best method of explaining this will certainly be the historic method, which, whilst acquainting you with the subject to its very foundation, will at the same time be the means of making you aware of certain writings which, in our country at least, have been unfortunately allowed to pass unnoticed, or have been imperfectly appreciated.

Alluded to by Bouteille and by Bernat, the relation between chorea and articular rheumatism had not been overlooked by Copland, Scudamore, and Abercrombie; but I believe Bright was the first to deduce from the study of numerous clinical facts the existence of an etiological connexion between the two diseases; he no longer speaks, as previous writers had done, of an accidental and casual connexion; he asserts a principle of pathogenic dependence. Nor is this all: in his view it is not with the articular manifestations of rheumatism that the relation must be laid down, but with the inflammations of the serous membranes of the heart, especially with pericarditis; in fact, according to Bright, rheumatic pericarditis is the most frequent cause of chorea. The question, gentlemen, was placed from that moment upon a true basis; and it is surely very strange that this point of view was almost immediately, and for a length of time, abandoned. An exception must be made in reference to the cases recorded by Senhouse Kirkes, which were well calculated to prove the correctness of Bright's conclusions. Amongst thirty-six cases of chorea, that physician noted, in fact, thirty-three patients in whom rheumatism and heart disease co-existed, and three cases in which cardiac disease alone was present. Then, proceeding to generalise, he came to the conclusion, as I pointed out in my lectures at La Charité, that rheumatism owes its etiological influence to the cardiac complications, and that

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consequently it is the heart itself, with or without antecedent rheumatism, to which the cause must be attributed.(a) But cardiac disease so often originates in articular rheumatism that this coincidence caused the above-mentioned distinction to be lost sight of, and in France at least, owing to the powerful influence of Germain Sée's work, the pathogenic action was exclusively referred to the rheumatic diathesis, to the rheumatic principle itself, without any reservation as to the condition of the heart.

Matters went on in this way up to the year 1865, when Cyon's memoir made its appearance. In that work, a large part of which is devoted to the consideration of the choreic movements themselves, the author, in speaking of the manner in which chorea is generated, recognises three forms—namely, sympathetic chorea, produced by anæmia, chlorosis, and onanism; symptomatic chorea, caused by inflammations of the cerebro-spinal meninges, and by tumours, inflammatory affections, and softenings of the nervous centres; reflex chorea, due to pericarditis, endocarditis, articular rheumatism, disorders of the internal organs of generation in the female, intestinal worms, and probably also to skin diseases. As to the connexion between rheumatism and chorea, it is only indirect, the rheumatism first giving rise to pericarditis or endocarditis, which is the real source of the neurosis.(b)

Soon afterwards Spitzmüller claims, on behalf of the rheumatism itself, one part of the influence, and he points out a new fact which deserves the closest attention on the part of the clinical observer. In the course of an attack of chorea, irregularity of the heart's action, and even a murmur, do not afford an adequate proof of the existence of a lesion within the heart. These phenomena may result from disordered co-ordination of the papillary (valvular) muscles, the direct effect of the chorea itself. The proof of the fact is furnished by the liability of these symptoms to vary, and chiefly by the observations of Benedikt, who has seen the cardiac ataxy and murmur disappear even before the cure of the neurosis, under the influence of galvanisation of the vagus and sympathetic in the neck. You readily perceive the practical importance of these facts: when cardiac troubles are contemporaneous with chorea, or, still more, when, for want of sufficient information, you are obliged to leave the question of their priority in doubt, you are not justified in referring them at once to a lesion of the endocardium, to a previous endocarditis, and you must cautiously suspend your judgment until the neurosis is cured, when the problem will be solved by the disappearance or the persistence of the cardiac phenomena.(c)

So then, the restrictions of Spitzmüller being excluded, the question as to the relation between chorea and rheumatism was, at the close of the year 1865, solved in the same manner as it had been solved by Bright. The causal relation is established, not with rheumatism as a diathesis, not with the articular manifestations of that disease, but with its cardiac complications; whence arises the logical necessity of attributing a like influence to lesions of the heart of non-rheumatic origin.

In a paper published in 1866-68, Henri Roger(d) again deals with the question upon the basis on which it had been left by Begbie, Sée, and Todd; but he speaks still more positively: he uses the ambiguous term "cardiac chorea" in reference to chorea which exists along with heart affection; and when the trilogy (articular rheumatism, heart disease, and chorea) is complete, he employs the designation of rheumato-cardiac chorea; but as he states that even in those cases where there is no articular rhematism the rheumatic diathesis is the point of departure of the cardiac chorea, it is clear that the foregoing distinction has no foundation, and the chorea spoken of as cardiac is no less rheumato-cardiac than the other.

Further, the explanation given by Roger of the influence of diseases of the heart is different from that of his predecessors. This influence is not exerted by diseases of the heart considered as such, but only in so far as they are a manifestation of rheumatism; and, in fact, the rheumatic diathesis is the sole cause of chorea with cardiac lesion. The chorea itself is just as much one of the manifestations of the diathesis as inflammation of the membranes of the heart. This preliminary conclusion involved a consequence which the author did not shrink from accepting. As soon as chorea is allowed to be a direct manifestation of the rheumatic diathesis, it becomes possible for it to make its appearance earlier than its wont, and, instead of springing up third in order, after the joint and heart affections, to precede both of these, so as to constitute the first actual sign of the existence of the rheumatism; in which case, the chorea provokes the heart affection, with or without implication of the joints. I look with suspicion on this statement: it would seem that Spitzmüller had some presentiment of it when he cautioned his readers against the error of interpretation to which the fact of cardiac mischief appearing later than the chorea may give rise; and besides, this is truly begging the question, for it does not in the very least follow that, because in a given case endocarditis and articular rheumatism come on after the chorea, therefore the chorea itself is a manifestation of the rheumatic diathesis, differing only in point of time. The domain of coincidence is very vast, so much so that, even with reference to the development of chorea in an undoubtedly rheumatic individual, the relation of cause and effect may be spoken of as probable, but not as certain. Although this is so, Roger's paper, while demonstrating by numerous facts the intimate relation between chorea and rheumatic lesions of the heart, carried back the question of theory to the very point where it stood before Cyon's memoir appeared, inasmuch as he claimed for the rheumatism the pathogenic influence attributed to the cardiac lesion.

As regards the coexistence of chorea with an endopericardia lesion, it is probably not so frequent as is indicated by the cases brought forward by the able observer whose conclusions I have just recalled to your mind. These cases are, I agree, so numerous that, at the first, one might suppose oneself sheltered by this series from mistakes hitherto made, and yet, if these results are compared with those to be found in the contemporary or later writings of others, there is ascertained to be a want of agreement which prevents our accepting as universally true the conclusion arrived at by the distinguished Physician to the Children's Hospital.

Truly, the connexion between chorea and lesions of the heart—I do not say rheumatism—is frequent, but it is far from being so common as to be erected into a law. If, instead of examining clinical facts, the explanation of which in matters of this kind is debateable ground, you confine yourself to anatomico-pathological facts, you will learn a very different lesson. In 1868, Ogle(e) published an important paper based upon the observation of ninety-six cases of chorea at St. George's Hospital, London. Sixteen of these were fatal cases, and were examined after death. In ten instances only were cardiac lesions met with, consisting of fibrinous deposits, sometimes membraniform, at another time granular, upon the valves or other parts of the endocardium. In three out of these ten cases the lesion was compound; along with the endocardial deposits there was once old pericarditis, once recent pericarditis, and in the third case considerable effusion of serum into the cavity of the pericardium. Six times intense congestion of the nervous centres was found; and in a girl of seventeen, who was pregnant, and died from maniacal chorea, along with hyperæmia of the surface of the brain, there was ascertained to be softening of its central parts, and swelling of the anterior columns of the spinal cord in the lower portion of the dorsal region, on a level with the ninth vertebra. Lockhart Clarke found, on examination with the microscope, softening of the white substance, and in two or three spots extravasations of blood surrounded with granular exudation. The respective ages at which these cases died were as follows: one at seven years, one at ten, two at eleven, one at twelve, two at fifteen, one at sixteen, three at seventeen, one at nineteen, one at twenty, one at twenty-three, and one at twenty-six; in one case the age was not stated. Thus, gentlemen, amongst sixteen cases in which the anatomical verification prevents any doubt being raised, only ten presented lesions of the heart: so that the connexions between

(a) W. S. Kirkes, "On Chorea: its Relation to Valvular Disease of the Heart" (*Medical Times and Gazette*, vol. i. 1863, pp. 636 and 662).

(b) E. Cyon, "Die Chorea und ihr Zusammenhang mit Gelenkrheumatismus Peri- und Endo-karditis" (*Zeits. der K. K. Gesellsch. der Aerzte in Wien.*, xxi. Jahrg., I. Band., Wien., 1865, p. 115). In his study of the mechanism and physiological signification of choreic movements, Cyon has entirely adopted my views as to the motor co-ordination, and the anatomical arrangements which, throughout the whole length of the spinal cord, insure its production. I regret that he was unaware of, or that he omitted to mention, the work wherein this doctrine was set forth for the first time (S. Jaccoud, "Les Paraplégies et l'Ataxie du Mouvement," Paris, 1864).

(c) Spitzmüller, "Verhältniss der Chorea zum Rheumatismus" (*Wochenblatt der K. K. Gesells. der Aerzte in Wien.*, 1866).

(d) H. Roger, "Recherches Cliniques sur la Chorée, sur le Rheumatisme, et sur les Maladies du Cœur chez les Enfants" (*Arch. Gén. de Méd.*, Decembre, 1866; Janvier à Avril, 1868.)

(e) J. W. Ogle, "Miscellaneous Contributions to the Study of Pathology," Chapter I. "Remarks on Chorea Sancti Viti" (*Brit. and For. Medico-Chir. Rev.*, vol. xli.; London, 1868, pp. 208 and 465.)

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the two may be properly said to be frequent; but it is impossible to establish therefrom such a law as that by which acute articular rheumatism and cardiac affections are governed.

In the same year, Steiner(f) published an account of fifty-two cases of chorea observed at the Franz-Joseph Hospital in Prague (Children's Hospital). It is easy to premise, from his opinions as to the etiology of the disease, that his observation of these fifty-two cases has led him to assign to rheumatism, as a cause, a subordinate position; and this reservation is fully justified by the three autopsies which he narrates: one of them only exhibited endopericarditis following upon acute articular rheumatism; in the other two there were only found grave lesions of the central nervous system—namely, in a boy eight and a half years old, cerebro-spinal anæmia, with effusion of limpid serum in the spinal canal, and in the upper half of that organ a marked proliferation of the connective tissue (sclerosis); and, in a girl of nine, considerable hyperæmia of the brain and spinal cord and their membranes, serosity in abundance within the spinal canal, and at the point of exit of the nerve-roots (chiefly in the upper half) a marked accumulation of semi-fluid blood. In these two cases the chorea was traumatic, having supervened upon an accident (fall, strain); there was no previous endocarditis or rheumatism. Steiner declares, moreover, that for four years he has specially devoted his attention to studying the relations between chorea and rheumatism and that he has been unable to convince himself of the correctness of this statement of Roger, in which chorea is said to be a form of rheumatism. You know, gentlemen, that in cases where chorea is quite positively dependent upon rheumatism it very rarely breaks out during an attack. This fact is notorious. But Steiner has furnished statistics which accurately determine the rarity of this: in 252 cases of chorea from every cause, only four times did the neurosis declare itself during acute articular rheumatism.

Spencer has recorded the history of a man of forty years of age, who died at Guy's Hospital of chorea which had existed for two years and three months, originating in consequence of a great fright. The lesions of the nervous system in this case were not well marked; the most striking fact was atrophy of the brain, but it is expressly stated that the heart was healthy.(g)

Lastly, in the chorea of pregnancy, the inconstancy of cardiac lesions is not less certain; for, side by side with the affirmative cases of Levick and Senhouse Kirkes, may fairly be placed the negative autopsies of Lawson Tait and Barnes: these last afforded occasion for an interesting discussion at the London Obstetrical Society.(h)

What conclusion can we agree to draw from these cases, in which theory takes no part? The proof must appear to you, as it does to me, complete: the pathogenic influence attributed to rheumatism must be transferred to lesions of the heart; but this relation, although occurring frequently, does not exist in the majority of choreic cases—it cannot, then, be erected into a law. In the cases where the connexion exists, the cardiac lesion acts as such on its own account. The rheumatic diathesis has nothing to do with the production of nervous complications. This last statement might be disputed to-day, as in Bright's time, if no material bond of connexion were known between lesion of the heart and chorea; but on this point, again, important progress has been made. Already facts of considerable number, and from various sources, have thrown light upon the mechanism by which a cardiac lesion gives rise to chorea, and have taught us that this mechanism is effected by any endocardial lesion, whatever be its origin.

CONSIDERATE MEDICAL OFFICERS.—The Medical Officers of the Holborn and Clerkenwell districts of the Holborn Union have voluntarily offered to attend at the dispensary on Sundays, and prescribe for such cases as need immediate attention. The offer has been accepted.

(f) Steiner, "Klinische Erfahrungen über Chorea Minor" (*Vierteljährs. für die prakt. Heilk.*, xxv. Jahrg., III. Band., Prague, 1868, p. 45).

(g) C. H. Spencer, "Chorea in a Man aged Forty; Death,"—under the care of Dr. Wilks, Guy's Hospital (Reports of Hospital Practice in the *British Medical Journal*, vol. i. 1868, p. 195).

(h) Levick, "On Chorea," *American Journal of Medical Science*, 1862. W. S. Kirkes, *loc. cit.* Lawson Tait, Communication on Chorea, *Dublin Quarterly Journal*, vol. xlv., 1868, p. 203. R. Barnes, "Chorea in Pregnancy," *Transactions of Obstetrical Society of London*, vol. x., 1868, p. 147. See also *Medical Times and Gazette*, vol. ii. 1868, p. 137.

FROM ABROAD.

DIPSOMANIA IN RELATION TO INSANITY.

DR. MANN, Medical Superintendent of the Emigrant Insane Asylum, recently read a paper upon this subject (reported in the *New York Medical Record*, November 13) before the "American Association for the cure of Inebriates." After adverting to the frequency of the connexion between intemperance and insanity (which he believes statistics of asylums in Europe and America prove to be due, in fully a fourth of all admissions, either proximately or remotely, to intemperance), he defines dipsomania as "an uncontrollable and intermittent impulse to take alcoholic stimulants, or any other agent, as opium or haschish, which causes intoxication—in short, a methomania." This condition must be distinguished from that in which the individual merely chooses to indulge in liquor to excess. We should examine the case for primary disease of the nervous system, and for the existence of hereditary influence capable of producing this. The great diagnostic point in this disease is the irresistible impulse by which the patient is impelled to gratify his morbid propensity, being during the paroxysm blind to all the higher emotions, and pursuing a course against which reason and conscience alike rebel. The paroxysms are frequently preceded by considerable disturbance of the nervous system. The patient perspires, and is sleepless, uneasy, and prostrate—and so craves for a stimulant. He differs from the common drunkard between the paroxysms in often disliking exceedingly all stimulants, and then may be a useful member of society. Dipsomania may occur in the acute, periodic, or chronic forms. The first is very rare, the periodic being much more common, and often hereditary. It often runs on, if not checked, to mania, and lapses into dementia. The chronic is the most common and most incurable form, the patients being incessantly under the irresistible desire for alcoholic stimuli. Prolonged inclusion in an asylum is requisite if these patients are to be saved from renewed intoxication; and, in fact, insane impulses to drink, which overcome all the efforts of the individual who inherits a tendency in this direction, present the same indications for treatment as do the suicidal and homicidal impulses—namely, seclusion from society, and the necessary restraint of an asylum.

"The terrible insane craving for alcoholic stimulants is often the result of a lowered vitality or abnormal organic development of the nervous system that has descended from generation to generation, gaining in intensity until it manifests itself by the complete loss of self-control and active inebriety in the children or grandchildren after they once taste intoxicating liquors and indulge in them. The blunted moral perception which so many inebriates exhibit, and which renders them peculiarly liable to a relapse after they leave an asylum, is to be regarded in the same light, I think, as the perverted moral sense in moral insanity. In every institution for the insane we find inmates who exhibit no obvious intellectual aberration or impairment, the moral faculties being deranged, while the intellectual remain apparently in their normal condition. The manifestations of moral insanity may be a simple perversion of some sentiment or propensity under certain exciting causes; and I think this exactly comprehends cases of dipsomania with loss of self-control and perversion of the moral sense. The person, of course, is aware that the act is wrong in both instances, but the control which the intellect exercises over the moral sense is overborne by the superior force derived from disease. I have been told many times, by both insane patients and dipsomaniacs, that the feeling on the one hand to commit some insane deed, and on the other to give way to alcoholic appetite, was contemplated in both instances with horror and disgust, and at first successfully resisted, until at last, having steadily increased in strength, it bore down all opposition. What can be a more powerful argument in favour of the disease-theory of dipsomania?"

After describing what is known concerning the intimate cerebral pathology of the disease, Dr. Mann thus speaks concerning its treatment:—

"I am strongly opposed to inebriates being confined in lunatic asylums, as they are very numerous, rapidly increasing, and a troublesome class of patients, and are a disturbing element among insane patients. They need to be in an asylum

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adapted in construction, location, and surroundings to their special wants. Most of this class of patients do not think that they should be placed in an insane asylum, and do not adapt themselves to their position. They are constantly demanding privileges which cannot be granted, and chafe under the restraint which is imposed upon them. They do not assimilate readily and pleasantly with the other class of patients, but domineer over and ridicule them. They are full of mischief, and interfere materially with proper discipline. Dipsomania is more troublesome to manage than simple insanity, and requires, I think, more perfect discipline, both moral and physical. We have, primarily, to build up and restore shattered constitutions and broken-down nervous systems. We have a class of persons to deal with whose digestion is weakened, whose appetite is impaired, whose muscular system is enfeebled, and whose generative function is often decayed; the blood is impoverished and the general nutrition disordered. They are indirectly predisposed to the acquisition of nearly all diseases, as they have, by long indulgence in alcohol, lessened the power of resisting these causes. We have to deal with the results of a toxic poison, which has resulted in more or less pathological change in the nervous centres. We have also to deal, at times, with various complications proceeding from the abuse of alcohol, such as cirrhosis of the liver, gastritis, epilepsy, various forms of dyspepsia, and, in some cases, with Bright's disease. We must place our patient under the most favourable hygienic influences, provide for him pleasant, tranquil, and cheerful surroundings, repress cerebral excitement, procure sleep for him, and we must also give him plenty of good nourishing food, and an abundance of fresh air and exercise. I believe that to this disease, as to insanity under other forms, the remarks of Sir James Cox are equally applicable, that 'purgatives, hypnotics, anodynes, and tonics are useful auxiliaries, but a comfortable meal is the best of sedatives, and abundance of exercise the best of hypnotics.' All remedial measures, I think, are inferior to wholesome exercise of body and mind in this disease. We must provide amusements of every kind, and encourage patients to work. We must stimulate inertia, resist every kind of perverted feeling, and check morbid impulses; and at last we may, if we exercise a wise care and discrimination, restore our patients to their homes and to society, permanently cured."

The Professor of Clinical Surgery at Liége.

As we have already noticed, the appointment of Prof. Gussenbauer, one of Prof. Billroth's assistants, to the above post has been received by a storm of indignation by the profession throughout Belgium, whereas, in our opinion, it ought to have been welcomed as a step in the right direction, tending to emancipate the teaching there from the mere feeble imitation of that which prevails in France. Judging from what is published in that somewhat over-sensitive State, medical and surgical science in Belgium will only benefit by that German invasion which has acted so advantageously for countries of far greater importance. In the present day no greater mistake can be made than confining appointments of this kind to limited spheres of selection. And this view seems to have induced the "calling" a professor from a distance—a practice that has exerted so excellent an effect in keeping up the professorial status in the German universities. For when M. Crocq brought the question before the Académie de Médecine, and declared, in the high-flown style usual on such occasions, that it was most damaging to science in Belgium, as well as for the whole medical profession of the country which found itself thus stigmatised with incapacity and powerlessness, M. Vleminckx, the President of the Academy, explained that the responsibility of the nomination did not entirely weigh upon the Minister who had made it, but lay greatly with the Liége Faculty itself, which had declared that neither among its own old pupils nor among those of other Belgian universities had it been able to find a suitable occupant for the chair.

We understand that Dr. A. R. Croucher, of St. Leonard's-on-Sea, has been appointed a magistrate for the borough of Hastings.

The Paris Faculty of Medicine.—As the final issue of the prolonged and often renewed deliberations, the Faculty has chosen Prof. Vulpian as Dean, and Professors Sappey and Broca as his assessors.

REVIEWS.

Essays and Papers on some Fallacies of Statistics concerning Life and Death, Health and Disease, with Suggestions towards an Improved System of Registration. By Henry W. Rumsey, M.D., F.R.S. Pp. 322. London, 1875.

The title of this book perhaps hardly conveys to the mind a true indication of its contents, which consist of a series of communications made to various scientific associations on subjects connected with State medicine, especially in reference to an improved system of registration of births and deaths in the United Kingdom. It is a matter of general notoriety, and no less general regret, that Dr. Rumsey's useful labours on behalf of the community have been lately interrupted by illness, but it is gratifying to find that he has so far recovered as to be able to prepare the present volume for the press, and thus to offer to the public a collection of his essays and papers hitherto scattered through a variety of channels of information, and thereby made difficult of access. The occasion is not inappropriate for the observation that the British public owes a deep debt of gratitude to Dr. Rumsey for his researches (carried on through a long series of years) on sanitary science; and the perusal of the pages now before us will give some idea of the difficulties he has encountered in the course of his philanthropic and disinterested labours. Some few of his suggestions—and, we regret to write, but few—have been adopted by the State since he commenced his crusade against previously existing errors and defects in our sanitary laws; but even where better arrangements have been made, the amelioration has been only partial, and class-prejudices, not to say ignorance and selfishness, on the part of the public have been allowed to outweigh the teachings of experience and the deductions of science. The relations existing between the medical profession and the State have hitherto been far from satisfactory, but they have evidently been deeply studied, with a view to their improvement, by Dr. Rumsey, and a great part of his writings and his speeches have had for their object the elevation of our profession in the public mind and the recognition of the services of medical men by the Legislature.

It must be admitted that many of the subjects so ably treated, and many of the improvements so warmly urged by Dr. Rumsey, are not of a nature to excite much general attention on the part of the community, or even, perhaps, of the great mass of the medical profession. It is a matter of no great interest to the general reader to be told of what particular diseases the people around him have died; and to many medical men it is sufficiently important to keep their patients alive rather than to make minute, and often troublesome, investigations as to the causes of their deaths. Nevertheless, as Dr. Rumsey would justly insist, it is precisely because these and similar topics are either uninteresting or unremunerative in the ordinary sense, that they ought to be pursued under the auspices and with the assistance of the State. It needs, indeed, no serious argument to show that in a national point of view, both in order to afford materials for the history of the progress or decline of nations, and to secure the welfare and promote the improvement of families and communities, the collection of accurate returns of births, deaths, sickness, population, and the like, is of the deepest importance, and every attempt to expose existing defects, and every suggestion towards introducing a better system than at present exists, ought to meet with the willing help of every enlightened statesman.

These observations will sufficiently indicate the direction towards which Dr. Rumsey has pointed the whole of his valuable contributions to statistical and sanitary knowledge; and although we do not assert that all his reasonings are equally valid, or that all his suggestions are capable of adoption, yet there is so much good sense in his views, and, we may add, so much learning and research in all his premises, that even those who do not altogether agree in the conclusions must admit the strength of his facts and the cogency of his arguments.

Want of space, unfortunately, prevents us from following Dr. Rumsey in detail through the many subjects which are discussed in his pages. We may state, however, that the exposure of the "Fallacies of Statistics concerning Life and Death, Health and Disease," occupies comparatively only a small part of the volume, but is characterised by the laborious

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collection of facts and the general closeness of reasoning which Dr. Rumsey's other contributions would lead us to expect at his hands. Still, it must be admitted that many of his remarks are hypercritical, and that an ingenious disputant might easily find fault with the collection of any statistics whatever, but more especially with those relating to such variable and elastic events as the births and deaths occurring in different communities, placed, of course, under the most diverse and even opposite conditions, dependent often on exceptional and transient causes. Nevertheless, it is unquestionable that the present system of registration is exceedingly defective, and might be most materially improved. The machinery is in the hands, for the most part, of incompetent persons, and the results are consequently, in general, fallacious. In the strenuous efforts made by Dr. Rumsey to entrust the collection and the superintendence of birth and death registers only to skilled and scientific officers, and to remunerate the labour so performed out of the resources of the State, every statesman and every intelligent citizen must warmly sympathise.

Statistics of Births, Marriages, and Deaths in the City of Philadelphia for the Year 1874. Compiled by WILLIAM H. FORD, M.D., Secretary of the Board of Health. (Extract from the Report of the Board of Health for the year 1874.) Philadelphia: E. C. Markley and Son, 422, Library-street. 1875.

THIS pamphlet of statistics, which consists of 133 pages, contains most elaborate details of the subject upon which it treats; the tables and charts are accurately calculated and admirably drawn, and if it is to be taken as a sample of the manner in which health statistics are compiled in all the large cities in the United States, our American cousins are to be congratulated upon the efficiency of their registrars and health officers.

Dr. Ford has prepared a very interesting table, showing that during the fourteen years, 1861-1874, 240,688 births were quite evenly distributed in the different months, with the exception of April, May, and June. The decrease in the number of births in these months he attributes to influences operating in the preceding summer and in the commencement of autumn. The diagram shows very clearly that a high birth-rate prevails during the early part of the year, and is succeeded by the lowest birth-rate of the year, which occurs invariably in the month of April. It again increases in the third quarter of the year, and continues above the average rate through the remaining months of the year. The same results, Dr. Ford states, were obtained by Dr. Emerson from an examination of the birth statistics of Philadelphia for the ten years 1821-1830; and Dr. Villermé, of Paris, who has collected and analysed a very large number of birth-rates, has called particular attention to the notably small number of births in these very same months when compared with the other months of the year. Both writers agree in attributing these results to the influence of the seasons upon conception.

GENERAL CORRESPONDENCE.

THE EYESIGHT OF ENGINE-DRIVERS.

LETTER FROM MR. W. SPENCER WATSON.

[To the Editor of the Medical Times and Gazette.]

SIR,—Since my communication of last week, I have been informed that all the engine-drivers and firemen in the company to which I alluded will be forthwith examined as regards their eyesight. It is to be hoped that the tests applied will be searching and exact, otherwise they may be worse than useless, as tending to encourage a sense of security by no means well founded. It will not be sufficient to test the men as to their power of appreciating colours: the engine-driver, whose case I adduced last week, has a fair power of discriminating between various colours at considerable distances. The tests should be such as are employed at ophthalmic hospitals, without, however, insisting on the necessity of absolutely perfect vision. Some defects, such as uncomplicated presbyopia, are not important, and do not render an engine-driver incompetent. On the other hand, hypermetropia, myopia, astigmatism, nebulæ, opacities of the lens or vitreous, and defects of the retina or optic nerve, are such as may be met with in this class of artisans, and are among the most dangerous in their probable consequences if undetected. If the examination of these men is conducted only by unskilled officials, there is a likelihood that men who are blind, or nearly blind, with one eye only will be passed as sound in both eyes. This would be a source of great danger, for in the event of any accident to the sound eye while on duty the driver would be quite helpless. Railway travellers, however, will not be satisfied with being told that the engine-drivers and firemen on one particular line have all been examined as to their visual powers; they will naturally ask, "Which class of *employés* are examined? Why not station-masters, pointsmen, and signalmen, as well as the engine-drivers and firemen? Is there to be any periodical examination of these men? What tests are they to be put through? Can any precautions be taken against injuries likely to occur to the eyes of men thus employed? Lastly, is the examination of the men's sight a rule in all companies, or only an occasional and exceptional practice in one?" Unless all these questions are satisfactorily answered, it will always be open to doubt whether railway accidents have not been due to these and similar causes, plainly pointed out, and against which the responsible authorities have been already warned. I am, &c.,

W. SPENCER WATSON, F.R.C.S. Eng.

7, Henrietta-street, Cavendish-square, Dec. 14.

REPORTS OF SOCIETIES.

OBSTETRICAL SOCIETY OF LONDON.

WEDNESDAY, DECEMBER 1.

WILLIAM OVEREND PRIESTLEY, M.D., F.R.C.P., President, in the Chair.

THE following gentlemen were elected Fellows of the Society:—G. R. Cundell, M.R.C.S.; J. F. Eyeley, M.R.C.S.; J. J. Gawith, M.R.C.S.; A. J. Miles, M.D.; J. Musgrave, M.R.C.S. A. H. Orpen, A.B., L.R.C.P.; and Tyler Smith, M.B (Hounslow).

ANENCEPHALIC FŒTUS.

Mr. OLIVER BARBER, of Sheffield, exhibited a specimen where the calvaria was altogether absent, and the base of the skull formed simply by the basilar portion of the occipital bone. The laminæ and spines of the upper cervical vertebræ were undeveloped, leaving the spinal canal open. There was no appearance of any spinal cord on dissection, the canal itself being lined by a thin fibrous membrane. There was an enormous quantity of liquor amnii present; the open spinal canal closely simulated the anal aperture.

Dr. WILTSHIRE thought the specimen one of considerable rarity, as well as of great practical importance. It answered mainly to the description given by Geoffroy St. Hilaire of the variety of anencephalic fœtuses called der-encephalic; and, as specimens of this were extremely rare, he hoped Mr. Barber would present this one to the Society. The aperture in the upper part of the spinal canal had very naturally caused embarrassment in the diagnosis of the presentation. He praised the practical manner in which Mr. Barber had dealt with the case.

In reply to a question from Dr. Cleveland, Mr. BARBER stated that no fœtal movements were noticed during pregnancy.

The PRESIDENT inquired if any dissection had been made of the cranial and spinal nerves, with the view of ascertaining how they terminated in the skull and vertebral canal respectively. Some years ago he had seen an anencephalic child, born alive, which had breathed and sucked for some days. The malformation was less extreme than in the specimen before the Society, for the spinal cord was present, but there was no roof to the skull, and the brain-substance was represented by a flattened mass of cystic structure, into which the cerebral substance had degenerated, and which had been developed there, instead of the brain. He had made a careful dissection of the cranial nerves in that case, and found that outside the skull, instead of terminating in loops, the nerve filaments gradually merged, and were lost in the cellular tissue which lay between the small cysts composing the mass which represented the brain in the base of the cranium. In the preparation shown there was no opportunity of ascertaining the termination of the spinal nerves in the spinal canal when the cord itself was absent.

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Irregular Pigmentation.

Dr. Godson exhibited a drawing of the breast of a girl aged eighteen, pregnant seven months, affected with chorea. The inner half of the areola of each nipple was entirely free from pigmentation—that of the outer portions being unusually dark, and crescentic in form. The girl was present for the Fellows to inspect.

Dr. Barnes said the case was extremely interesting. The symmetrical defect of pigment might be explained by like areas of nerve-distribution. In all probability the altered nervous condition of pregnancy had much to do with pigmentation. Respecting the chorea, he (Dr. Barnes) had long since called attention to the fact that under the exalted nervous tension wrought by pregnancy, aided probably by some change in the constitution of the blood, any pre-existing disposition to chorea or other nervous disorder was apt to be evoked. Thus pregnancy was an exciting cause of chorea.

The President inquired whether there was any history of injury from a scald or burn. The case presented the usual characters of some skin eruptions, in that it was symmetrical.

Dr. Wiltshire thought the case peculiar and interesting, and worth preserving in the *Transactions* of the Society, if Dr. Godson would give the coloured drawing.

Dr. Godson stated that there was no hereditary tendency to such a condition. The girl's mother had two nipples on one breast.

Dr. Hayes thought the fact of chorea and pregnancy existing together was one of much interest. He had seen 100 cases of chorea, and had noted the very marked relation between chorea and rheumatism.

Epithelioma of the Cervix Uteri in Pregnancy.

Dr. Edis exhibited the specimem removed post-mortem from a patient. She was thirty-three years old, married six years, two children, youngest three years, which she nursed for one year and nine months. Dr. March, of New Wandsworth, had sent the case up to Dr. Edis at the Middlesex Hospital in the latter end of June. She was then found to be the subject of epithelioma of the cervix uteri, and was, as near as could be judged, between seven and eight months pregnant. She had had frequent floodings and a more or less continuous offensive watery discharge. As the patient could not be admitted at the time, the nature of the case, and the difficulty likely to occur when labour set in, were explained to her, and she was desired to report herself later on. On August 7 she presented herself, stating she was in labour. The disease extended in a crescentic manner round two-thirds of the os uteri; the remaining healthy portion seemed disposed to dilate, and as the pelvis was roomy, it was thought the risks to the mother and child would not be greater than if Cæsarian section, which had previously been contemplated, should be resorted to. Dilatation of the cervix was facilitated by means of Barnes's bags, and at 10 a.m. on August 8, the cervix having dilated sufficiently, chloroform was administered and the long forceps applied—a living female child weighing six pounds and a half being extracted. With the exception of some diarrhœa, the patient progressed fairly well for the first week, when the temperature rose to 105° Fahr., and the patient died on the 21st, a fortnight from the date of delivery.

Dr. Routh thought that Cæsarian section ought to be more often performed in these cases; it gave the best chance of life to the child. Where labour was allowed to take place naturally the death of the mother usually resulted from puerperal fever and sloughing.

Dr. Barnes could not assent to the conclusion that the Cæsarian section should be resorted to in every case of cancer of the uterus. The cases cited by Dr. Routh occurred in the Vienna Hospital, where many other causes of puerperal fever were rife. He had himself seen women survive labour complicated with cancer; one woman had been delivered twice. It was not advisable to lay down a general rule.

Dr. Meadows stated that his experience entirely corroborated that of Dr. Routh, that the risk to the mother in cases of extensive cancerous disease of the cervix was so great that the Cæsarian section was preferable to any other mode of delivery. He had seen four cases of this kind, and all ended fatally to the mother, while only one child was saved. In one, craniotomy had been performed; in two, premature labour was induced. He believed that the Cæsarian section gave a better chance to both mother and child, in cases where the disease was so far advanced that an operation of some kind was necessary for delivery.

The President thought this statement should be qualified by the extent of the disease. He inquired if Dr. Meadows really meant that he would perform Cæsarian section in *all* cases of labour complicated with malignant disease of the cervix uteri, for if so, he believed this was an opinion which most practitioners would think required some qualification. While not doubting the propriety of this operation in cases where the passages were much obstructed by morbid growth, or where serious laceration of the parts must ensue if delivery was effected through the natural passages, he could not concur in regarding it as necessary in all cases where disease was less advanced, and he was sure the Society would be glad to hear the opinions of men with such practical experience as Dr. Barnes and Dr. Routh.

Dr. Aveling thought that the operation of Cæsarian section would not be justifiable if only one lip of the uterus were involved.

Dr. Rogers stated that in thirty-five years only two cases of this nature had occurred. The question of Cæsarian section was one of much importance.

Dr. Barnes, in reference to Dr. Meadows' assumption—that if all the cases were analysed it would be found that the results would be as in those observed by himself—replied that this analysis had not been made; and it was not safe to frame a general law upon an assumption. The best plan at present was to consider each case as it came before us on its individual merits. In cases where the disease was of small extent, it might be safer to let delivery take place in the ordinary way. Speaking from memory, he thought Dr. Oldham had published in the *Guy's Reports* cases which showed that it was better to take this course—*i.e.*, not to induce labour, but to let pregnancy go on to term, and then to act according to indications.

Dr. Routh stated that in the cases he had seen it was impossible to deliver except by craniotomy.

Dr. Edis explained that he brought forward the present case, not with the view of advocating similar treatment in all cases—each case required to be treated on its own merits,—but as an instance of delivery *per vias naturales* where the disease was very extensive. Nature herself took the initiative, and seemed to indicate that delivery was possible, and for this reason Cæsarian section was not resorted to.

Note on the Post-mortem Diagnosis of a Nulliparous Uterus.

Dr. Alfred Meadows, referring to the now celebrated trial of the brothers Wainwright for murder, remarked on the extreme importance of being able to diagnose post-mortem whether or not a uterus had ever borne a child, and on this point he invited the opinion and experience of the Society. In the case referred to, he thought it was probably not too much to say that if any absolute test existed, whereby a decided opinion in the negative could have been given, the whole case for the prosecution must have failed on the first indictment, for it was well known that the person alleged to have been murdered had borne children. He, however, knew of no such test, nor did he think it could be affirmed on the contrary that this uterus had ever been gravid so far as appearances went. The thinness of the uterine walls, which in this case barely exceeded a quarter of an inch, and the distinctly convex shape of their internal aspect, induced him to the opinion that this was a nulliparous uterus. Accordingly, the evidence which he gave at the recent trial was to the following effect:—First, that as a general rule no absolutely certain opinion can be given by post-mortem examination only, even under the most favourable circumstances, on the question whether or not a woman has borne a child. Secondly, that on the question of probability some reliance may be placed on the internal appearance of the uterine walls, especially with reference to their convexity. Thirdly, that so far as this particular uterus was concerned, there was certainly no proof that it had borne a child; but that, on the contrary, the evidence, doubtful and unreliable as it was, tended rather in the opposite direction, and justified an expression of opinion to that effect. The author then referred to a very delicate question of a medico-ethical character—viz., as to whether a scientific witness is at liberty to allow his private judgment on the general merits of a case to influence his opinion on a purely scientific question. Upon this point also he invited the opinion of the Society.

Dr. Edis inquired whether any notice had been taken of the

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condition of the ovaries. He thought some inference might have been drawn from their appearance.

Dr. PALFREY wished the discussion to be postponed, as he was collecting statistics bearing upon the subject. He had taught and been taught that the condition of the cervix was some guide as to previous pregnancy or not; but he was rather inclined to believe that the condition of the os was not so clear in deciding the question. It was far too important a matter to be discussed in a few minutes; he therefore proposed an adjournment.

Dr. AVELING suggested that the presence of a large polypus or other morbid growth in the uterus would modify the condition of the cervix.

Dr. BARNES seconded the proposal to adjourn the discussion upon the scientific question as to the evidences of pregnancy; but he wished to express his satisfaction at the course taken by Dr. Meadows in laying a formal statement of his views before his professional brethren in a form that would be understood and appreciated, instead of trusting to the garbled reports of newspapers, and the distortions to which scientific evidence is liable under the manipulations of counsel.

The discussion was then adjourned to a future meeting.

NOTES OF A CASE OF RUPTURED VAGINA DURING LABOUR, WITH RECOVERY.

Dr. HEYWOOD SMITH narrated the particulars of a case of premature labour at the seventh month, where rupture occurred, and the patient recovered. The case was complicated by placenta prævia, and turning was resorted to. In similar cases he thought it important to keep the patient lying in such a position as that the uterus should lie above the seat of the rupture, and to administer opium for the first forty-eight hours.

SPONTANEOUS RUPTURE OF THE VAGINA: RECOVERY.

Dr. WILTSHIRE also narrated a case where the promontory of the sacrum projected more than usual. The head, with the right leg, right arm, and funis, presented. The laceration was transverse at the junction of the vagina with the cervix uteri, and extended into the peritoneal cavity. Intestines were felt, but none prolapsed. Delivery was safely effected by turning, and the patient made an excellent recovery. The paper concluded with remarks on the nature, causation, and treatment of the accident.

Dr. BARNES wished to state his objection to accept in its absolute sense the doctrine that the uterus never ruptured unless its tissue was diseased. He himself had seen cases where no disease could be detected. He might distrust his own competency as an observer, but he had submitted specimens of one case to examination by Drs. Bristowe and Montgomery, who confirmed his observation. The conditions under which the uterus sometimes burst were quite compatible with the hypothesis of sound structure. Sudden violent contraction of the uterus upon fluid contents would, as in the case of the Florentine experiment of hydrostatic pressure inside a golden globe, cause rupture, unless the fluid escaped by a natural opening.

Dr. PALFREY had met with cases. He objected to the use of the syringe in these cases. In one instance immediate collapse had occurred in consequence; nothing would induce him to sanction it again. The irrigator answered every purpose where it was necessary to wash out the vagina. If the rupture favoured prolapse of the intestine, he advocated sutures.

Dr. EDIS referred to a case where turning and attempt at extraction had been resorted to in a primipara, the antero-posterior diameter of the pelvis being less than two inches. After prolonged efforts the body was extracted, the head being left behind. When Dr. Edis examined the patient the hand passed readily through a large rupture in the upper part of the vagina and neck of the uterus into the peritoneal cavity, the head of the fœtus lying close under the liver. The patient died. He mentioned the case as illustrating the necessity of carefully determining on first examination the exact condition of the pelvis.

Dr. BARNES inquired if in Dr. Wiltshire's case the child was dead before rupture took place, because death of the child was often a cause of rupture.

Dr. WILTSHIRE replied that the funis had ceased to pulsate before the rupture. The patient had been kept on her back to prevent the descent of intestine.

CASE OF CESARIAN SECTION.

Dr. J. W. J. OSWALD communicated the particulars of a case where the pelvis was very deformed from rickets. The patient died on the fourth day. The antero-posterior diameter of the pelvis was only three-quarters of an inch.

Dr. H. SMITH inquired how far through the walls the sutures were put, what quantity of opium was given, and what was the cause of death. There seemed to have been an absence of peritonitis, and the temperature was never very high. Did death result from septicæmia from the fluid effused into the peritoneal cavity? It was a question whether the abdominal wound should not have been re-opened, and the fluid sponged out. He had seen this done in one case successfully.

The PRESIDENT remarked that the value of the paper would have been considerably increased if the measurements of the pelvis, the curvature of the spine, and the length of the extremities had been given more in detail.

Dr. PALFREY inquired whether sutures had been placed in the uterine walls.

Dr. ROUTH, who performed the operation on the patient, stated that catgut ligatures had been employed; they were of the best kind, and had been kept in carbolised oil. They were securely tied, but had loosened, and finally untied themselves, allowing effusion of a quantity of fluid into the peritoneal cavity, and so poisoned the patient. Had silk or metallic sutures been employed, possibly the patient might have recovered.

Dr. HAYES called attention to three loose catgut ligatures being inside the specimen then going round.

Dr. MEADOWS remarked that this was certainly the second case in which death had resulted entirely from the use of catgut sutures in the uterus. He had himself lost one case, which at first seemed to be doing perfectly well, when collapse suddenly occurred, and death ensued. The stitches were found to have given way, and the wound in the uterus was seen to be gaping. In future he would employ wire for the uterine stitches.

Dr. CLEVELAND alluded to the common form of weather indicator, constructed on the principle of catgut possessing the property of relaxing in a moist and contracting in a dry atmosphere. Was there no method of preparing it properly beforehand?

Dr. ROGERS questioned whether sutures at all were requisite in the uterus. In two cases he had seen, where none were employed, one recovered and one died. One distinguished obstetrician never uses sutures, and others use silver sutures with success.

Dr. OSWALD, in reply, stated that opium in one-grain doses had been given every four hours, and nourishment in form of milk, beef-tea, brandy, etc. The patient was only four feet high; there was no curvature of the extremities, and the pelvis was flattened. He would give a fuller report of the case for the *Transactions*.

PATHOLOGICAL SOCIETY.

TUESDAY, DECEMBER 7.

Mr. GEORGE POLLOCK, F.R.C.S., President, in the Chair.

MOLLUSCUM CONTAGIOSUM.

MR. HUTCHINSON exhibited drawings of three remarkable cases of molluscum contagiosum. In the first, a man of fifty, who had suffered for some months, the disease affected nearly the whole of the upper extremities and the trunk, and part of the legs. There was no history of contagion, and the case at first sight was mistaken for lichen. A peculiar feature in it was, that from a number of the molluscous spots there projected a small horn, formed of dried sebaceous matter. The two other cases were also in adults, and the disease very copious; but the individual spots were not so small. The interesting point in all these cases was the adult age of the subjects and the great copiousness of the disease. Mr. Hutchinson said that such cases were liable to be mistaken for syphilides; in one of these three, mercury had been given for some time on this suspicion.

The PRESIDENT asked whether there was any history of the origin and further spread of the disease; and also what treatment was adopted.

Mr. HUTCHINSON replied in the negative to the first query. As regards treatment, he stated that in the first case the spots were too numerous to be subjected to the usual treatment of snipping. Some were, however, so treated, and mercury and sulphur ointment was rubbed into the others; the result was

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doubtful. The second case disappeared from observation And in the third 200 molluscous spots were cut out, and the patient got quite well. The disease presented the usual microscopical appearances.

Dr. COUPLAND referred to recent German researches on molluscum contagiosum, according to which the pathological change does not affect the sebaceous glands, but consists in the appearance of a peculiar material in the epithelium of the rete Malpighii.

Mr. HUTCHINSON replied that he was aware of the description of the disease just referred to; but that nothing could be more plain than that the molluscous nodules are sebaceous follicles with fatty matter and hypertrophy of the gland-substance. He never saw spores in the disease.

DILATATION OF THE BILE-DUCTS AND GALL-BLADDER.

Mr. MORGAN showed this specimen, taken from the body of a man aged fifty-two, a plumber, who died with chronic jaundice. No gall-stones or blood had been passed, nor were there signs of hepatic enlargement. Post-mortem, the liver proved to be above the normal size, and presented superficially cystiform enlargements, which were found to be the extremities of dilated ducts. The gall-bladder was distended with dark-green bile. At the junction of the hepatic and cystic ducts a structure was found corresponding with an adhesion to the base of a perforating ulcer of the duodenum. A second ulcer existed in the immediate neighbourhood. The heart was fatty.

CONGENITAL DEFICIENCY OF THE COMMON BILE-DUCT.

Dr. WICKHAM LEGG exhibited this specimen. An infant, which had been jaundiced from birth, died at the age of five months and a half. None of the other members of the family had suffered from this condition, and this child had not had umbilical hæmorrhage. Post-mortem, the portal vein, round ligament, and hepatic artery were found to be normal. The common bile-duct was represented by a fibrous band: this ended superiorly in a cyst as large as a marble, and into it the cystic and hepatic ducts opened. The hepatic ducts, followed upwards, were of irregular calibre and thickness. The liver was very granular, dark olive-green, very hard and tough. In section it presented, both to the naked eye and microscopically, islets of green tissue, surrounded by white connective-tissue, much as in ordinary cirrhosis, except as regards the colour and the absence of the usual nuclei in the fibrous tissue. The spleen was large, with prominent Malpighian bodies. The present case was the twelfth on record. Dr. Legg argued that the cirrhosis was secondary to the defective condition of the duct, and the results of experiments supported this view. There was no evidence of syphilis in this case. It was related to the cases of congenital jaundice with hæmorrhage from the umbilicus; but, unfortunately, in the records of this disease it was the exception to find a trustworthy account of the condition of the ducts.

ANEURISM OF THE AORTA.

Dr. FRED ROBINSON showed a specimen of aneurism of the ascending portion of the aortic arch from a soldier of forty-six years of age and eighteen years' service. The man died suddenly a few weeks after the discovery of serious chest disease, which had been diagnosed cardiac rather than vascular. Post-mortem, an aneurism as large as a walnut was found projecting backwards above the middle segment of the aortic valves; no visible communication existed between it and the pericardial cavity. The pulmonary veins were compressed, and the left auricle was large. The man had had slight syphilis thirteen years before. With regard to the etiology of aneurism in soldiers, Dr. Robinson said that there were several causes, but *par excellence* three—intemperance (especially), syphilis, and the pressure of dress and accoutrements. The last factor leads to cardiac disease, however, rather than to aortic.

OCCLUSION OF THE SUPERIOR VENA CAVA.

Dr. HABERSHON brought forward an instance of occlusion of the superior vena cava in a man of thirty-seven, who had enjoyed good health as a coal-heaver until seven years before his death, when swelling and great congestion of the face and upper extremities came on, with much distension of the superficial abdominal veins. He was partially relieved, but sank from ascites, paracentesis affording only partial relief. After death it was found that the superior cava was obliterated; its position in the right auricle was marked by white puckering of the endocardium. The innominate vein ended in a *cul-de-sac*. Large communicating veins passed in front of the pericardium into the mammary veins; others into the smaller and greater azygos veins; and by these means the blood was carried downwards into the inferior cava, and reached the heart. There was much fibroid thickening around the aorta, and in the position of the superior cava. The pulmonary valves were imperfect, being represented by two valves and the rudiments of a third on a somewhat lower level. There was some peritonitis, but no disease of the abdominal viscera. The man had never had syphilis. Dr. Habershon believed that the case was unique.

Dr. POWELL inquired whether there was any history of cyanosis in early life. He believed from the appearance of the specimen that the condition must have been congenital.

Dr. CURNOW inquired how the blood from the left side of the body reached the auricle.

Dr. HABERSHON replied to the former question, that there was no cyanosis whatever or other symptom before the thirtieth year, the man having worked hard as a coal-heaver. To the latter question Dr. Habershon replied by reading the description that has just been given.

ULCERATION OF THE DUODENUM, INVOLVING THE VENA PORTÆ.

Dr. HABERSHON also brought forward a case of fatal hæmatemesis in a woman, where the hæmorrhage was due to a chronic ulcer in the first part of the duodenum. A sloughing cavity extended to the fissure of the liver, and the vena portæ was perforated; inflammation extended in the course of the same vessel, and there were several abscesses in the liver. The cystic duct was partially destroyed.

Dr. WICKHAM LEGG asked whether the patient had been jaundiced.

Dr. HABERSHON replied that the bile-ducts were cut off but not obliterated; bile flowed into the sloughing cavity, and some into the intestine. There was no jaundice.

DISEASE OF THE PULMONARY AND TRICUSPID VALVES.

Dr. ALEXANDER MORISON showed a heart in which the pulmonary and tricuspid valves were greatly diseased. A man of twenty, with cardiac symptoms, had had scarlatina at six, and was known to have heart disease when eight years of age. His family history was rheumatic, cardiac, and phthisical, but he had never had rheumatism, and he had enjoyed fair health till eighteen. When seen he had a regular pulse, and the physical heart-signs were—a systolic bruit close to the left edge of the sternum, near the ensiform cartilage, not traceable round the left chest; upwards and along the left edge of sternum this was replaced by a harsh, grating, double murmur, most distinctly heard over the cartilage of the third left rib and in the second left intercostal space; the murmurs were not conducted into the systemic arteries, but towards the left shoulder. There were also found increased transverse dulness; bulging of the præcordial region; well-marked visible systolic pulsation, especially in the second and third left intercostal spaces; supra-sternal pulsation; regurgitation into the external jugulars; epigastric pulsation; and harsh *frémissement cataire*, especially over the second and third left spaces. Other symptoms and signs were—hurried respiration; hepatic enlargement; albuminuria with granular tube-casts and hæmaturia; several attacks of purpura while under treatment, and a few days before death; œdema of the face and scalp, which disappeared before death; well-marked angina of the right arm. Post-mortem, the pulmonary valves were found much altered and distorted by warty growths, and the tricuspid valves also misshapen from the same cause. Both the right cavities were hypertrophied and dilated; the left ventricle and auricle were normal. All the organs behind the seat of obstruction were engorged. There was no effusion of consequence into the serous cavities. Digitalis, with rest, had somewhat relieved the symptoms. From the physical signs the pulmonary lesion was easily diagnosed, but it was thought that the apex systolic murmur might be mitral.

The case was referred to the Morbid Growths Committee.

CIRRHOSIS OF LIVER IN A CHILD.

Dr. T. D. GRIFFITHS, of Swansea, exhibited a specimen of cirrhosis of the liver in a female child of ten years, who died on November 14. Family history: Parents respectable tradespeople; both healthy; married eleven years ago, and have had seven children; no suspicion of syphilis in either. A most careful inquiry was made on this point in the father's case. The mother first of all miscarried at three months; in the next place she gave birth to a fine healthy child, which died, according to her account, of "inflammation of the brain"

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while teething, at the age of from ten to twelve months. The child was ill for a few days only. The second child, also died about ten months old "from the effects of measles and bronchitis." The third child was delicate, "had inflammation of the lungs and bronchitis, and at last died of consumption" about the age of two years and a half. The patient was the fourth child. The youngest three children are living, and fairly healthy. The patient had all the ordinary infantile diseases—viz., whooping-cough when she was about a year old, scarlet fever at three and a half, measles and chicken-pox at six, and mumps at seven years of age. She suffered from infantile paralysis for three or four weeks when about two years of age. Early in 1870 she suffered very severely from sickness for about a week or more, and then became jaundiced for about a fortnight. After this attack she enjoyed good health until the latter end of 1871, when her appetite failed, and she had another mild attack of jaundice, which lasted about three or four weeks. Before the jaundice had entirely disappeared, Dr. F. T. Roberts, of University College Hospital, saw the patient with Dr. Griffiths. The liver was then greatly and uniformly enlarged, extending as low as the level of the umbilicus, the surface smooth, the margin hard and well defined, not tender on pressure—in short, the organ appeared to have all the physical signs of a large lardaceous liver. The heart and lungs were considered healthy; there was no albumen in the urine, no ascites or anasarca. The little patient had never suffered from rickets, diseased bones, or a chronic abscess; she was slim, and tall for her age; very intelligent and quick at her lessons; face oval; teeth regular, well shaped, but rather large, and ivory-white in colour. No enlargement of lymphatic glands, or any indication of anæmia; never suffered from any affection of the eyes; never took alcoholic drink (a most careful inquiry was made on this point) or made use of any irritating food more than children generally of her age. There was no history of tuberculisation or of pleurisy. The object the author had in showing the case to Dr. Roberts was to point out the difficulty felt in coming to a conclusion as to the cause and real nature of the enlargement of the liver. The history of the case excluded the probabilities of the enlargement being tubercular, leukæmic, hydatid, fatty, or lardaceous. They were also satisfied that the enlargement was not due to cancer or simple congestion; and thus were left for the time in the dark. Early in 1872, when every trace of the jaundice had disappeared, the liver remained *in statu quo* as to size and hardness. The child had now recovered her appetite, and was improving in health. As a matter of curiosity, Dr. Griffiths called to see the child in the early part of the summer of 1872. She appeared in fairly good health; but, on examination, the liver was found to have diminished but little in size. From that time until the latter end of last September the little patient enjoyed good health; her appetite was always good, and her spirits were buoyant; she never missed a day's schooling through ill-health. Towards the end of September last the mother sought medical advice for a swelling in the child's belly, which she declared had come on in the course of a few days. Now the case had assumed a very different aspect. The hepatic dulness was *nil* in the mammary line when the patient lay on her back; the spleen was greatly enlarged; the peritoneal cavity was distended by fluid; no anasarca in the lower limbs. In the course of a fortnight the skin assumed a yellowish tint, and in another week the child was decidedly jaundiced. The ascites was on the increase, and the superficial veins on the abdomen and front of the chest were well marked. The jaundice had disappeared entirely by October 25, when paracentesis was first resorted to to relieve the distressing symptoms which threatened life. The operation was performed a second time on November 15, and death took place two days afterwards. On post-mortem examination the liver was found to be an excellent specimen of a small, contracted (cirrhosed) liver, weighing only fifteen ounces. The peritoneal covering was smooth and shiny; the whole of the organ was hard, very tough, and irregularly lobulated, and granular on the surface. On section, it appeared to the naked eye to consist chiefly of tough areolar tissue; interspersed with irregular lobules (varying in size) of the true liver substance, in different stages of strangulation and degeneration. The portal veins were greatly enlarged. The spleen was as large as the liver, hard and tough. Both lungs were healthy; there were no pleural adhesions. There was a slight cloudy swelling on the edge of the mitral valve—the parts corresponding to the attachment of the chordæ tendineæ.

Dr. MURCHISON said that the specimen possessed a twofold interest. First, cirrhosis of the liver was excessively rare in children; and second, with respect to the etiology of the disease, the occurrence of cirrhosis in children had been cited as disproving the effect of spirit-drinking in this direction. He had himself been sceptical about true cirrhosis in children, and attributed such a disease in young subjects to syphilis. It was not until three weeks ago that he had seen a case—and this was an unquestionable one, in a child of nine. And the most interesting point about this case was that the child did drink. Its father was a publican, and the child craved for drink, and had free opportunity of taking it. In a child a small quantity of alcohol might be sufficient. Dr. Murchison urged Dr. Griffiths to make most searching inquiries regarding the case brought forward. The child, having been delicate, may have drank quantities of stimulants.

Dr. GRIFFITHS replied that he was confident the child did not drink.

Mr. THOMAS SMITH asked whether it had not drank steel wine. Taking a quantity of steel wine for a long period was simply drinking.

Mr. ROBERT W. PARKER had seen a boy of nine at the Sick Children's Hospital, with retracted liver and ascites. The patient had daily partaken of his father's grog at dinner.

SYPHILITIC GUMMATA.

Dr. GREENFIELD showed specimens of syphilitic viscera in the fresh condition. The subject, a woman of twenty-five, had had syphilis for several years. She died in a few hours, after sudden left hemiplegia, with coma, and spasm of the affected muscles. The cerebral arteries were found diseased, and there were gummata in the liver, spleen, and kidneys. Dr. Greenfield promised to describe the condition of the arteries on another occasion.

OBITUARY.

WILLIAM ACTON, M.R.C.S.

WE much regret having to record the death of Mr. Acton, so well known to the profession and the public as a metropolitan surgeon of eminence and celebrity in the special department of practice to which he had devoted himself. Educated at St. Bartholomew's Hospital, and a Member of the Royal College of Surgeons of England, Mr. Acton also studied in Paris, and was at one time Extern to the Female Venereal Hospital there. He was a devoted disciple, admirer, and friend of M. Ricord, and made his own reputation by pursuing the same line of study and practice as his celebrated teacher. After his return to London, he was for some time Surgeon to the Islington Dispensary, and he before long became known as a writer on the diseases of the urinary and generative organs, on prostitution, and on allied subjects. His "Practical Treatise on Diseases of the Urinary and Generative Organs in Both Sexes (Non-Specific Diseases and Syphilis)" has reached a fourth edition, and his work on "The Functions and Disorders of the Reproductive Organs in Childhood, Youth, Adult Age, and Advanced Life," a sixth edition. He also published works, or pamphlets, on "Prostitution considered in its Moral, Social and Sanitary Aspects, in London and other Large Cities and Garrison Towns, with Proposals for the Control and Prevention of its Attendant Evils;" and on the Contagious Diseases Acts. And he has supplied numerous papers to the societies and the medical journals on similar subjects—on "Illegitimacy," on "Unmarried Wet-Nurses," and the like topics. During the present year he had had much domestic sorrow, and this, in addition to hard professional work, unfavourably affected his health. In September he was seized with sudden faintness, for which, and other disagreeable symptoms, he consulted Sir James Paget, Dr. Murchison, Dr. Quain, and others of his professional brethren. On Tuesday morning, the 7th inst., he did not appear at breakfast at his usual hour, and on search being made for him, he was found lying dead on the floor of his bath-room. A post-mortem examination revealed marked fatty degeneration of the heart, and atheroma of the aorta and large arteries. He was admitted a Member of the College in 1840; and died at the age of sixty-two.

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MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—SCHOOL OF PHYSIC IN IRELAND.—At the Michaelmas Term examination for the degree of Bachelor of Medicine, held on Thursday, Friday, and Saturday, December 2, 3, and 4, the successful candidates were arranged in the following order of merit:—

Harrison, Thomas.
Armstrong, John H.
Wrightson, Richard B. } Equal.
Fetherston Haugh, Chas. }
Williamson, John F.
Blacker, Edward J.
Corcoran, Laurence. } Equal.
Browne, Charles, J. }
Jackson, James Albert.
Morewood, Samuel.

At the examination for the degree of Master in Surgery, held on Monday, Tuesday, and Wednesday, December 6, 7, and 8, the candidates passed in the following order of merit:—

Harrison, Thomas.
Montfort, Archibald H.
West, John R.
Williamson, John F.
Goodman, Francis G.
Hughes, George A.

At the examination for the diploma in State Medicine, held on Thursday, Friday, and Saturday, December 9, 10, and 11, the candidates passed as follows:—

Notter, James Lane, M.B.
Stanley, William, M.B.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary examinations, were admitted Licentiates in Midwifery at a meeting of the Board on the 15th inst., viz.:—

Benton, Samuel, Wakering Hall, Essex, diploma of Membership dated July 27, 1874, student of St. Bartholomew's Hospital.
Blake, Andrew Henry, Drury-lane, July 20, 1875, of the Dublin and Middlesex Hospitals.
Burgess, Edward John, Brentwood, Essex, July 24, 1873, of St. Bartholomew's Hospital.
Hosford, Thomas Stroud, Mornington-road, May 5, 1869, of the London Hospital.

The following gentlemen, not Members of the College, also passed, viz.:—

Jevers, Eyre, M.D. and C.M. Dub., Tonbridge, student of the Dublin School.
Pickburn, Thomas James, M.D. and C.M. Aber. and L.S.A. Lond., Sydney, New South Wales, of St. Bartholomew's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 9:—

Bickford, William, Ashburton, Devon.
Carey, John Thomas, 47, Trinity-square, S.E.
Cross, Philip Henry Eustace, Lancaster-road, Notting-hill.
Henbeck, Frederick Emanuel, Westbourne-terrace North.

The following gentlemen also on the same day passed their primary professional examination:—

Batchelor, Henry Thomas, London Hospital.
Harup, John Walton, Queen's Hospital, Birmingham.
Marsh, Joseph Henry, St. Thomas's Hospital.
Turner, Alfred Moxon, Guy's Hospital.
Welchman, Walter Henry Laurence, Guy's Hospital.
White, Robert Godfrey, London Hospital.

APPOINTMENTS.

*** The Editor will thank gentlemen to forward to the Publishing-office, as early as possible, information as to any new Appointments that take place.

NEWBY, CHARLES HENRY, M.R.C.S., L.R.C.P. Lond.—House-Surgeon to St. Thomas's Hospital.

MAPLE, REG, M.R.C.S., L.R.C.P. Edin., L.S.A.—House-Surgeon to St. Thomas's Hospital.

POTTER, HENRY PERCY, M.R.C.S., L.S.A.—House-Physician to St. Thomas's Hospital.

ROSSITER, GEORGE F., M.R.C.S., L.S.A.—Resident Accoucheur to St. Thomas's Hospital.

LOWNE, B. THOMPSON, F.R.C.S. Eng., F.L.S., F.Z.S.—Ophthalmic Surgeon at the Great Northern Hospital.

BIRTHS.

BUCKLE.—On December 7, at Cheltenham, the wife of R. T. Buckle, M.D. late of the 72nd Highlanders, of a daughter.

CUNNINGHAM.—On December 9, at Woolwich, the wife of J. P. Cunningham, M.D., Surgeon-Major Army Medical Department, of a son.

FEGAN.—On December 13, at 1, Charlton-park-terrace, Old Charlton, the wife of Richard Fegan, M.D., L.R.C.P., of a son.

HOGG.—On December 8, at Gunnersbury, Chiswick, W., the wife of W. B. Gordon Hogg, M.D., of a son.

JOHNSON.—On December 9, at 12, Albion-street, Hull, the wife of C. Hargitt Johnson, M.R.C.S., of a daughter.

NURSEY.—On December 4, at 1, Cambridge-terrace, Sunderland, the wife of Charles Fairfax Nursey, L.R.C.P. Edin., of a son.

PEACOCK.—On December 11, at Albion House, The Spa, Gloucester, the wife of Henry Peacock, M.R.C.P., F.R.C.S., of a son.

STEPHEN.—On December 12, at 58, Queen's-gate-terrace, South Kensington, the wife of Andrew Stephen, M.D., of a son.

TINDALE.—On December 13, at The Hollies, Hampton-on-Thames, the wife of Wentworth R. Tindale, M.B., of a daughter.

WOODMAN.—On December 8, at 5, Prospect-terrace, Ramsgate, the wife of Samuel Woodman, F.R.C.S., prematurely of a son, stillborn.

MARRIAGES.

CADMAN—DOUGLAS.—On December 7, at St. Peter's Church, Bournemouth, Reginald Cadman, Esq., of Broughton, Malton, Yorkshire, youngest son of William Cadman, Esq., of Wold Newton and Scarborough, to Charlotte Agnes, only daughter of the late George Mellis Douglas, M.D., of Quebec, Canada.

COCKSEDGE—CRAIG.—On November 20, at the parish church, Weston, Bath, T. A. J. Cocksedge, Surgeon Army Medical Department, to Eva Margaret, daughter of Robert M. Craig, Esq., of Garrane, Cashel.

COE—BORRETT.—On December 13, at Clifton parish church, Robert Wm. Coe, F.R.C.S., of Bristol, to Katherine Eliza Selwyn, eldest daughter of the late James Borrett, M.D., of Clifton, formerly of Great Yarmouth.

MCINTYRE—STIVEN.—On December 9, at St. Stephen's, Westbourne-park, Andrew J. McIntyre, M.B., C.M., of Odiham, Hants, to Mary E. M. Stiven, elder daughter of the late William Sutherland Stiven, M.D., H.E.I.C.S., and granddaughter of the late W. S. Stiven, Physician-General Bengal Army.

SMITH—GARDINER.—On December 8, at St. George's, Hanover-square, Ernest Louis Tyler Smith, B.A., M.B. Cantab., of Richmond House, Hounslow, second son of the late W. Tyler Smith, M.D., of Upper Grosvenor-street, W., and Seaford, Sussex, to Rose Eliza Catherine, elder daughter of William Gardiner, Esq., of Uxbridge.

WILKIN—SMITH.—On December 11, at St. George's, Campden Hill, Henry Cox Wilkin, L.R.C.P., second son of J. H. Wilkin, Esq., surgeon, late North Durham Regiment, to Isabel, daughter of the late William Charles Smith, Esq., merchant, of London, niece and adopted daughter of the late Dr. John Smith, of Torquay.

DEATHS.

ACTON, WILLIAM, M.R.C.S. Eng., at 17, Harley-street, Cavendish-square, W., on December 7, in his 63rd year.

CLARK, HENRY, M.D., M.R.C.S., F.S.A., and member of various learned societies, for many years a practitioner in Southampton, at 11, Cecil-street, Strand, suddenly, of bronchitis, on December 10.

DESMOND, LORENZO EDWARD, M.A., M.D., at his residence, 44, Irvine-street, Edge Hill, Liverpool, after a few days' illness, on December 10, aged 56.

HARRISON, ARTHUR ROBERT, M.D., M.R.C.P. Edin., at the Asylum, Douglas, Isle of Man, of which he was the Resident Medical Superintendent.

HASSALL, RICHARD, M.D., L.R.C.P., M.R.C.S. Eng., late of Richmond, Surrey, at 60, St. George's-square, on December 13.

HUNTER, CHARLES EDWARD, Captain Bengal Staff Corps, youngest son of the late Dr. Adam Hunter, of 18, Abercromby-place, Edinburgh.

LLEWELLYN, WILLIAM P. J., L.R.C.P. Edin., at 40, Newington-causeway, very suddenly, on December 14, aged 46.

PYWELL, AGNES SARAH, dearly loved wife of W. H. Pywell, L.R.C.P., M.R.C.S., at 244, Westminster-bridge-road, S.E., on December 3, aged 31.

ROSE, JOSEPH, M.D., Inspector-General of Hospitals, in London, on December 10, aged 54.

THORNE, JAMES, L.R.C.P., M.R.C.S., at his residence, La Mottée, St. Helier's, Jersey, on November 30, in his 31st year.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

BERKS COUNTY ASYLUM, MOULSFORD, WALLINGFORD.—Assistant Medical Officer. Candidates must be legally qualified, and unmarried. Applications, with testimonials, to Dr. Gilland, Medical Superintendent.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

DENBIGHSHIRE INFIRMARY, DENBIGH.—House-Surgeon. Candidates must be duly qualified, unmarried, and conversant with the Welsh language. Applications, with testimonials, to the Chairman of the Committee of Management, under cover to the Secretary.

GLOUCESTER INFIRMARY.—Surgeon and Assistant-Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Committee, under cover to the Secretary, on or before January 27, 1876.

KENT AND CANTERBURY HOSPITAL, CANTERBURY.—Assistant House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before December 31.

MALE LOCK HOSPITAL.—House Surgeon. For information apply to the Secretary.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House-Surgeon. Candidates must be duly qualified and unmarried. Applications, with testimonials, to the Honorary Secretary, on or before December 23.

SHEFFIELD GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before January 5, 1876.

WESTMINSTER GENERAL DISPENSARY, GERRARD-STREET, SOHO.—Honorary Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Secretary before December 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

VACANCIES.

Bellingham Union.—Mr. M. Brodie has resigned the Second District; area 9922; population 1699; salary £20 per annum.

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Burton-upon-Trent Union.—The Gresley District is vacant; area 4732; population 9610; salary £50 per annum.

Horncastle Union.—The Wragby District is vacant; area 19,080; population 3010; salary £44 per annum.

Wokingham Union.—Mr. Nathaniel Crisp has resigned the Shinfield District.

APPOINTMENTS.

Glanford Brigg Union.—Thos. Wm. Mawson, M.C. & B.M. Edin., to the Messingham District.

Hastings Union.—Charles L. Cunningham, L.R.C.S. Edin., L.S.A., to the Third District.

Henstead Union.—B. R. Boast, L.R.C.P. Edin., L.F.P.&S. Glasg., to the Third District.

North Witchford Union.—Reginald M. Willan, M.R.C.S. Eng., L.S.A., to the Fourth District.

THE next meeting of the Society of Medical Officers of Health will be held at the Scottish Corporation Hall, Crane-court, Fleet-street, on Saturday, December 18, at 7.30 p.m., when Dr. T. O. Dudfield will read a paper, entitled, "Observations on the Slaughter-Houses (Metropolis) Act, 1874, and the By-laws. London Cowsheds: the desirability of bringing them under the operation of a uniform code of By-laws." This paper will be commenced at 7.45. Mr. William Rendle will read a paper "On Water-supply by Private Companies, chiefly with reference to London." This paper will be commenced at 8.45.

REMOVAL OF A WOUNDED KIDNEY.—M. Marvaud, Surgeon-Major in an Algerian regiment, relates (*Rev. de Méd. Militaire*, October) the case of a young Arab woman who had been severely wounded in the right lumbar region by means of a long knife or yataghan. The instrument, cutting only on one edge, had a thick back, and on withdrawing it the right kidney was also drawn out of the wound, between the lips of which it remained strangulated. There was considerable hæmorrhage, but this soon stopped. A silk ligature was passed around the pedicle of the extruded organ, and at the end of some weeks the kidney was separated—the patient continuing in good health the whole time, and the secretion of urine being normal. She was discharged perfectly well two months after admission.

TESTIMONIAL.—At a late ball, given to Dr. and Mrs. Alexander Paterson, on November 8, by the British residents in Bahia, prior to their departure for Rio de Janeiro, Dr. Paterson was presented with the following address, accompanied by a present of silver plate, consisting of a handsome silver épergne and a chest of table silver:—"To Alexander Paterson, Esq., M.D.—We, the undersigned British residents in Bahia, cannot allow you to quit this city for a new field of labour without some slight acknowledgment of your unvarying kindness and courtesy during your residence amongst us. We therefore beg your acceptance of the testimonial of plate accompanying this address, as a faint mark of our esteem and affection for you. By your diligent attention, coupled as it has always been with unflagging energy and zealous care in the discharge of your duties, you have created amongst us a well-merited confidence in your professional skill which many of us have reason to remember with grateful thanks. We pray God to direct and bless your future, and trust that Mrs. Paterson and yourself may long be spared to comfort each other; and in the future, when you look at the past in calm retrospect, we venture to hope that you will not forget that you left many real and true friends in Bahia."

NOTES, QUERIES, AND REPLIES.

He that questioneth much shall learn much.—Bacon.

*** We decidedly refuse Dr. (*soi-disant*) Sturman's advertisement, and decline to have anything to do with him.

Fishguard.—Letter and newspaper received, with thanks.

Mr. McM.—The skeletons of Jonathan Wild and John Thurtell may be seen in the Hunterian Museum.

N.—We have ascertained since our last issue that the following is a complete list of the places under the Acts:—In England: Aldershot, Canterbury, Chatham, Colchester, Dover, Gravesend, Maidstone, Plymouth and Devonport, Portsmouth, Sheerness, Shorncliffe, Southampton, Winchester, Windsor, Woolwich. In Ireland: The Curragh, Cork, Queenstown. The Act applies to these places and ten miles round. London, Liverpool, Bristol, Hull, Cardiff, Swansea, and many other ports, are quite unprotected.

*** We have received a communication from Dr. Birkbeck Nevins, of Liverpool, on the subject of the working of the Contagious Diseases Acts. It is not our intention, nor, in fact, could it answer any good purpose, to enter into any further controversy on the subject. Dr. Birkbeck Nevins relies on figures to refute the beneficial working of these Acts, whilst we depend on facts as well as reason for upholding legislation in this direction. There can be no reason for prejudice in favour of the continuation of the Acts on the part of medical officers of the Army and Navy, and yet there is scarcely one who does not speak of the immense advantages derived from the introduction of these laws, many of them even recommending their extension to the civil population. This testimony comes direct from men who have the best opportunity of judging; and from the absence of motive it should have weight with the unprejudiced observer. Moreover, in many regiments in the protected districts the admission to hospital for venereal disease have fallen to less than one-half the number presenting themselves for treatment before the passing of the Acts. It is our knowledge of these facts which prompts the few remarks we feel called upon occasionally to insert in support of a continuance of this legislation; and we venture to think its importance can scarcely be understood by packed meetings of the other sex, who are carefully led on to regard the subject from a sensational and sentimental point of view. Dr. Nevins appeals to figures; but by what figures can he estimate the moral effects of these Acts? What statistics show the number of girls who are restrained from evil by a knowledge that their sin would find them out? How many young women have been restored to honest homes under their influence? Have not those who even now are to be found in the localities under the Acts been, in a considerable degree, rescued from that immeasurable degradation so prominent a feature in the lower parts of Liverpool, especially in what we think is called Blackman's-alley and its neighbourhood? When these things can be reduced to figures, statistics may be of some use in deciding a question which, if clamour could settle anything, would have been long ago settled by Mr. Stansfeld's epicene followers.

F.R.C.S., Southampton.—The retiring members in July next of the Council of the College of Surgeons are Messrs. Simon, Holden, Humphry, and Southam.

Mr. Andrews.—Professor Marshall, F.R.S., will deliver his last lecture this session, before the members of the Royal Academy, at Burlington House, this (Friday) evening, at eight o'clock.

St. Bartholomew's.—The election of the new members of the Board of Examiners will take place at the College of Surgeons on Monday next. We have already published the names of the candidates, and we think we may venture to prophesy that you will see the name you mention amongst those of the elected also.

Dr. Malcolm.—It is a Hebrew proverb that "when the sun rises the disease will abate," which originated from a tradition that Abraham wore a precious stone suspended round his neck, which preserved him from disease, and which cured sickness when looked upon. When Abraham died, God placed this stone in the sun.

An Old Subscriber.—Our publisher cannot supply you with a complete set. The first number of the *Medical Times* appeared on Saturday, September 28, 1839. You can refer to them in the Library of the College of Surgeons.

Hong-Kong.—The Chinese divide their prescriptions into seven categories—viz., 1, the great prescription; 2, the little prescription; 3, the slow prescription; 4, the prompt prescription; 5, the odd prescription; 6, the even prescription; and 7, the double prescription. They divide the body into a right and left portion and three regions.

Obstetrician.—You will find two cases recorded where a fœtus has been vomited, in the *London Medical and Surgical Journal*, vol. vii., p. 255, by Geoffroy St. Hilaire.

Mr. Perocchy.—Pesce, oglio, ed amico vecchio—"Old fish, old oil, and an old friend."

Mr. Brown.—The celebrated Coleridge, in the second volume of his "Table Talk," says that "there unquestionably ought to be a declaratory act withdrawing expressly from the St. John Long's [a notorious quack of his day, who was tried at the Old Bailey for manslaughter] and other quacks the protection which the law is inclined to throw around the mistakes or miscarriages of the regularly educated physicians."

Lux.—A very interesting case of evolution of light in the human subject is recorded by the late Sir Henry Marsh in the *Dublin Journal*, vol. xxii., p. 133 *et seq.*

BOOKS and PAMPHLETS RECEIVED—

Biennial Retrospect of Medicine, Surgery, etc., for 1873-4—Liddle's Report of the Sanitary Condition of Whitechapel—Report of the Public Analyst of Portsmouth—Hutchinson's Catalogue of the New Sydenham Society's Atlas of Portraits of Diseases of the Skin—Reid's Annual Report on the Health of Newbiggin—Jeffries' Reports of Sixteen Cases of Cataract Operations—Wilson on the Study of Zoology—Struthers on University Improvement—Haviland's Geography of Heart Disease, Cancer, and Phthisis—Tanner's Index of Diseases and their Treatment second edition, edited by Broadbent.

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PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Paris Médical—Deutsche Medicinische Wochenschrift—Journal d'Hygiène—Richmond and Louisville Medical Journal—Annali Universali di Medicina e Chirurgia, Novembre—The Morningside Mirror.

COMMUNICATIONS have been received from—

Mr. Chesshire, Birmingham; Mr. Woodhouse; Dr. Wolfe, Glasgow; Dr. Scatliff, Brighton; Dr. Sparks, Mentone; Dr. J. Rogers, London; Dr. Sheen, Cardiff; Our American Correspondent; Fishguard; Dr. Henry Lawson, London; Dr. Hughlings-Jackson, London; Dr. Griffiths, Swansea; Mr. W. G. Gray, London; Mr. Derry Jones, London; Dr. J. Hamilton, Sydney; Dr. Needham, Gloucester; Mr. Cartland, Windsor; Mr. A. L. Heale, Winchester; Mr. J. Brown, Dorchester; Mr. A. Seymour, Coventry; Dr. C. F. Nursey, Sunderland; Mr. H. Lloyd, Machynlleth; Dr. W. Wilson, Yankeetown; Mr. Hitchcock, Lewisham; Mr. J. H. Tuke, Boscastle; Mr. Lowndes, Liverpool; Dr. G. Johnson, London; Our Hastings Correspondent; Dr. M. Mackenzie, London; Dr. R. Lawson, Wakefield; Dr. Edis, London; The Registrar of Apothecaries' Hall, London; Mr. Burton, Hanwell; Dr. Birkbeck Nevins, Liverpool; Dr. Andrew Ross, Molong, N.S.W.; Dr. R. Harding, Wellington, New Zealand; Mr. G. Rossiter, London; Mr. C. F. Maunder, London; Dr. Wm. Strange, Worcester; Mr. W. J. H. Lush, Fyfield; Mr. W. E. Green, Neath, South Wales; Mr. W. Johnson Smith, London; Mr. Henry Morris, London; Mr. C. J. Chillingworth, Manchester; Mr. J. Chatto, London; Mr. W. E. Poole, London; Mr. Custance, London; Mr. V. Stone, Laurence Kirk; Dr. Heaton, Leeds; Mr. T. M. Stone, London.

APPOINTMENTS FOR THE WEEK.

December 18. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

20. ***Monday.***

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

Medical Society of London, 8½ p.m. Mr. Maunder, "Excision of the Elbow-Joint" (Discussion on Case of). Dr. Lauder Brunton, "On the Physiological Action of Alcohol."

21. ***Tuesday.***

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Pathological Society, 8½ p.m. Mr. Thomas Smith—Hæmorrhagic Periostitis. Dr. Gowers—Fatty Tumour of Spinal Cord. Mr. Nunn—1. Injury to Radius from Fracture; 2. Deformity from Rheumatic Gout. Mr. Godlee—Recurrent Epithelioma. Dr. Greenfield—Cancer of both Breasts and of Right Ovary. Mr. Walsham—Tumour of Clavicle. Dr. Fred Taylor—Aneurism of Aorta. Mr. A. Doran—Arrest of Development of both Forearms. Mr. Spencer Watson—Report of Sequel to Dr. Walker's case of Recurrent Sarcoma of Leg. Dr. Goodhart—Embolic Infarct in Heart Muscle. Dr. Wickham Legg—1. Aneurism of Heart; 2. Aneurism of Mitral Valve; 3. Displaced Kidney. Mr. C. Heath—1. Epithelioma of Chin (living specimen); 2. Epithelioma of Tongue. Mr. D. Balding—Sarcoma of Sciatic Nerve. Dr. Coupland—Cancer of both Breasts and of Ovaries.

Statistical Society, 7¾ p.m. Monthly Meeting.

22. ***Wednesday.***

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

23. ***Thursday.***

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

24. ***Friday.***

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 11.

BIRTHS.

Births of Boys, 1235; Girls, 1197; Total, 2432.
Average of 10 corresponding years 1865-74, 2137·9.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	960	896	1856
Average of the ten years 1865-74	808·9	816·0	1624·9
Average corrected to increased population ...	...	...	1739
Deaths of people aged 80 and upwards ...	...	...	81

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	17	14	2	11	...	3	1	1
North	751729	...	19	30	7	16	2	5	2	4
Central ...	334369	...	7	3	...	11	1	...	...	3
East	639111	...	10	26	1	15	...	1	1	4
South	967692	...	16	30	3	22	1	9	...	4
Total	3254260	...	69	103	13	75	4	18	4	17

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	30·068 in.
Mean temperature	33·2°
Highest point of thermometer	42·6°
Lowest point of thermometer	23·5°
Mean dew-point temperature	30·0°
General direction of wind	N.E., N., & N.W.
Whole amount of rain in the week	0·31 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 11, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Dec. 11.	Deaths Registered during the week ending Dec. 11.	Temperature of Air (Fahr.) Highest during the Week.	Temperature of Air (Fahr.) Lowest during the Week.	Temperature of Air (Fahr.) Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	Rain Fall. In Centimetres.
London	3445160	45·7	2432	1856	42·8	23·3	33·3	0·73	0·31	0·79
Portsmouth ...	122632	27·3	75	41	...	...	...	...	...	...
Norwich	82842	11·1	44	40	41·0	29·0	33·7	0·95	1·10	2·79
Bristol	196186	44·1	115	134	45·9	21·8	32·7	0·39	0·09	0·23
Wolverhampton ...	71718	21·1	41	46	43·0	22·7	32·5	0·28	0·13	0·33
Birmingham ...	366325	43·6	263	194	45·3	28·2	34·9	1·61	0·17	0·43
Leicester	109830	34·3	82	45	44·8	24·5	34·5	1·39	0·43	1·09
Nottingham ...	92251	46·2	60	55	42·4	24·9	33·7	0·95	0·35	0·89
Liverpool	516063	99·1	420	300	44·0	25·9	36·2	2·33	0·10	0·25
Manchester ...	356626	83·1	279	229	...	...	...	...	...	...
Salford	135720	26·3	121	85	45·2	23·0	33·8	1·01	0·07	0·18
Oldham	87437	18·7	74	59	...	...	...	...	...	...
Bradford	168305	23·3	123	69	43·6	25·2	33·8	1·01	0·11	0·28
Leeds	285118	13·2	232	140	45·0	27·0	35·4	1·89	0·20	0·51
Sheffield	267881	13·6	185	163	46·0	26·0	35·1	1·73	0·50	1·27
Hull	133932	36·8	107	58	45·0	30·0	35·1	1·73	0·37	0·94
Sunderland ...	106342	32·2	88	35	...	...	...	...	...	...
Newcastle-on-Tyne	137665	25·6	124	55	44·0	25·0	33·9	1·06	0·53	1·35
Edinburgh	211626	50·5	141	91	46·0	25·0	35·4	1·89	...	...
Glasgow	534564	88·6	381	317	...	...	...	...	...	...
Dublin	314666	31·3	173	202	40·6	15·5	31·6	−0·22	0·46	1·17
Total of 21 Towns in United Kingdom	7742889	37·0	5560	4214	46·0	15·5	34·1	1·17	0·33	0·84

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 30·07 in. The lowest was 29·77 in. at the beginning of the week, and the highest 30·34 in. on Wednesday at noon.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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ORIGINAL LECTURES.

CLINICAL LECTURE

ON DEFORMITIES AFTER HIP-JOINT DISEASE, AND CERTAIN OPERATIONS FOR THEIR RELIEF.

DELIVERED AT THE LONDON HOSPITAL, OCTOBER 26,

By C. F. MAUNDER, F.R.C.S.

GENTLEMEN,—At our last meeting I discussed with you the condition of certain patients then under care, exemplifying the progress of hip-joint disease up to a certain point. I shall now consider some of the more serious deformities resulting from this complaint, and the treatment. During the last few years I have endeavoured to deal with these distressing cases, with more or less success in individual instances. I will consider the most recent first.

Mary Ann I., aged eight, admitted June 8, 1874. There was the usual history of hip-joint disease.

Condition on Admission.—When the patient is lying flat on her back, the thigh is at a right angle to the line of the spine. The distance from the left antero-superior spine of the ilium (the diseased side) to the patella is two inches and a half less than on the sound side. When standing on the sound extremity, the left foot is many inches from the ground. On applying Nélaton's test, the left trochanter lies much above the line drawn between the antero-superior iliac spine and the tuber ischii of the same side; the head of the femur can be felt on the dorsum ilii. The acquired position is that of flexion and of slight abduction, as seen in this photograph. All the movements inherent to a healthy articulation are here very limited. The head of the bone can be rotated slightly. There is a small chronic abscess on the outer side of the thigh, but, with that exception, the progress of the disease seems to be quite arrested. What was to be done to rescue this child from her miserable condition? I had recently had under care a young girl, also the subject of great deformity, whose photograph I show you, and whose thigh was fixed at an angle of about 110° with the horizontal line of the body. Prolonged extension by a weight, and counter-extension, followed by subcutaneous section of the tensor vaginæ femoris, of the long head of the rectus, of the adductor longus, followed again by prolonged extension, failed to effect much improvement, and I was greatly disappointed. Such being the case, I determined to resort at once, in the present instance, to subcutaneous section of the neck of the femur. Subcutaneous section of the neck of the femur was originated and practised by Mr. William Adams under circumstances of anchylosis and deformity, but in which the head of the bone remained in the acetabulum, though without material loss of substance.

Operation, July 1.—Having by careful palpation ascertained the relative position of the head, neck, and great trochanter of the femur, I penetrated the skin with a narrow-bladed scalpel, and traversed the structures subcutaneously downwards, forwards, and inwards, in front of the neck of the bone, and cutting upon this. Having withdrawn the knife, I replaced it with a saw of similar dimensions, and slowly severed the bone. This was done with perfect ease; not a teaspoonful of blood was lost, and the wound was at once closed with a compress and strapping as after tenotomy. This done, the pelvis was firmly held by an assistant, and powerful attempts made to extend and abduct the thigh, but in vain. The position of the limb to the pelvis was scarcely benefited. The tensor vaginæ femoris being tense, I divided that subcutaneously. A long splint having been applied, the patient was put to bed.

July 3.—Patient feels well; takes her food; no irritation about wound, nor discharge.

7th.—The wound has healed by primary union.

8th.—I divided the tendon of the adductor longus and the straight head of the rectus, and replaced the long splint.

August 9.—The patient was discharged with a high boot.

A week subsequent to this, Mr. William Adams performed the same operation, also in a patient who had been the subject of strumous disease of the hip-joint. I saw Mr. William Adams' patient a few days after the operation. The wound was suppurating freely, great deformity still existed, the young woman was in considerable pain, and a successful result appeared to be far distant.

Well, gentlemen, I was greatly disappointed with the deformity which still persisted in these cases after operation, and I am not likely to repeat it under similar conditions. But there is yet another resource, illustrated by the following case:—

Elizabeth L., aged twelve, admitted May 19, 1875, under my care.

[Reported by Mr. JOHN JOB, House-Surgeon.]

The history is that four months ago the patient was quite well, when she caught cold and was laid up for three weeks with pains (subacute rheumatism), more especially about her lower extremities. Soon afterwards the pain settled about the right hip chiefly.

As she lies in bed she is all of a heap, with her legs flexed on the thighs, and the thighs at less than right angles to the pelvis, the right thigh being adducted and rotated inwards; it is also about two inches and a half shorter than its fellow, and the head of the femur can be felt on the dorsum.

May 26.—The patient was put under the influence of chloroform, and extension attempted. Very little could be done with the right extremity, but the left yielded somewhat, and a 5-lb. weight was attached to it. Mr. Maunder said that he expected to be able to extend the left extremity thoroughly by means of mechanical appliances only, but the right thigh would require tenotomy at least, possibly section of the bone to bring it down.

June 2.—Mr. Maunder divided the tendons of the adductor longus and rectus.

5th.—A 7-lb. weight applied to the right leg, and that on the left increased.

Operation, July 7.—Very little benefit having resulted to the right extremity, and the patient being under the influence of an anæsthetic, Mr. Maunder cut down upon the right femur just below the trochanters with the point of a scalpel; then with three chisels, each smaller than the other, and using the largest first, the bone being almost severed, was broken through by manual force. The thigh could then be brought perfectly straight and into its natural position. About a dessert-spoonful of blood was lost. The wound was closed with a compress and strapping. An interrupted long splint was applied.

July 8.—Weights were again attached to both limbs. The patient is feverish this morning. Evening: Temperature 103°; pulse 144. No pain about the operation-wound unless the limb be moved.

11th.—Discharge of pus from the wound for the first time. Scarcely any swelling about the hip.

13th.—The left knee-joint has become rapidly swollen, with effusion into it, and tender. Slight discharge from hip-wound.

18th.—Knee more swollen. Two ounces and a half of sero-purulent fluid were drawn off by the aspirator from it.

22nd.—Three ounces of purulent fluid were removed by the aspirator.

24th.—The left extremity was placed on a McIntyre splint, and Mr. Maunder laid open the knee-joint on the inner side by a free incision, giving exit to pus. Very slight discharge from the operation-wound.

29th.—Scarcely any discharge from operation-wound. Purulent fluid flows from left knee.

August 9.—Free discharge from left knee. Operation-wound all but closed.

12th.—Operation-wound absolutely closed, and the patient can raise the extremity from the bed, indicating that union has occurred between the ends of the bones.

P.S.—In Mr. Maunder's absence from town, the mother of the patient chose to remove her child from the hospital, and I understand she has since died.

The child that you will see to-day was alluded to in my last lecture as an illustration of a receding chronic abscess associated with hip-joint disease. I may remind you that last week I suggested that you might occasionally, in the case of chronic abscess, withhold your hand, and not open it, by reason of its possible receding, although, as a general principle, you must regard pus as a foreign body. You perceive how helpless this child is by reason of the deformity consequent on hip-joint disease; and I am only waiting for the abscess to disappear completely, as it has already done in great measure, before proceeding to make the patient an active member of society by subcutaneous section of the shaft of the femur.

It may be said that I propose a very formidable operation, and one which entails some risk. That is quite true; but if

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great ends are to be attained, the means must be proportionate. I may be said to have already tested this child's capacity for resisting operative interference, having divided the neck of her thigh-bone with impunity. I should sever the shaft of the femur with equal confidence. Suppose I do nothing for her. Just picture her lifelong misery, cripple as she is!—and will it not be worth her while to run the gauntlet of osteo-myelitis, of necrosis, of pyæmia, and of erysipelas, in order once more to stand and walk erect?

I proceed now, gentlemen, to draw your attention to the case of Elizabeth L., already narrated; and the first fact I wish to impress upon your minds is that great distortions of the limbs can be remedied by gentle, steady, and prolonged extension, conducted partly by splints, partly by a weight and pulley. This child may be said to have had her knees up to her chin, with her heels on her buttocks, and you observed that after the lapse of a few weeks, and by gradually increasing the weight from five to fifteen pounds, and without section of tendons, the left extremity was straightened. The right could not be so treated by reason of the existing bone-displacement. Some two or three years ago a girl of fifteen was in the hospital under my care with a similarly contracted condition of the lower extremities, but without bone-displacement. By the steady use of weights and pulleys she was enabled to walk out of the hospital.

In the case of Elizabeth L., I selected a method of operation on bones which has been practised by Professor Volckman (antiseptically). The operation as above described had for its object the least possible amount of injury to the bone consistent with severance, in order to allow the operator to complete it by fracture. Now, the most striking fact is—and it is encouraging for the future—that these two patients were weakly children, subjects of hip-joint disease, and yet formidable operations could be performed upon them without serious consequence. In the latter case, an unfortunate *contretemps* was what I believed to have been a recurrence of rheumatic inflammation in the left knee three days subsequent to the operation. Rheumatism had previously crippled her.

I will conclude by saying that a very great deal can be done to remedy crippled joints by patience and perseverance in the use of simple mechanical appliances, and often without tenotomy.

P.S.—The lad alluded to (Case 3 in former lecture) is up and about the ward, wearing a Thomas's splint. This apparatus bids fair to be of great service in many cases, as it will allow a patient to get air and exercise, and yet maintain the joint at rest.

ORIGINAL COMMUNICATIONS.

ON ABSCESS OF THE FRONTAL SINUSES.

By W. SPENCER WATSON, F.R.C.S. Eng.,
Surgeon to the Great Northern Hospital, etc.

(*Continued from page* 328.)

Fractures of the bones forming the walls of the sinus do not generally lead to what is strictly an abscess, though, if the injury be compound, suppuration will almost always follow, and the extent of the mischief will depend greatly upon the position of the lines of fracture with regard to the cranial contents. If the upper or posterior walls of the sinus are not involved, very transient effects may be produced, and the simplest treatment only will be required in the majority of such instances. An open suppurating sinus, with discharge of clotted mucus and blood, has sometimes been mistaken for an injury involving protrusion of brain-substance; but a careful consideration of the anatomical relations of the injured parts and a microscopic examination of the discharged matters will soon clear up the apparent difficulty of diagnosis. There is another possible source of error,—when the integument and bony portion of the anterior wall of the sinus has been removed or displaced, leaving the periosteal lining exposed. Under these circumstances, the air entering the nasal passages will give rise to movements of a rhythmical kind in the membrane in question; and this movement is so similar to that of the cerebral convolutions that it has been mistaken for the latter (see S. Watson's "Diseases of the Nose," p. 130). In these cases auscultation and percussion might be employed if the other means of diagnosis failed to eliminate the possible sources of obscurity, and further evidence might be afforded by the use of concentrated light brought to a focus on the protruding membrane. A membrane distended by air has a certain amount of translucency which would be entirely absent from protruded brain-substance.

The remote effects of injuries in the region of the frontal sinuses are sometimes more serious than the abscesses of traumatic origin already alluded to. The immediate effects of a blow on the forehead may be so trifling that the injury after a few days is forgotten, and months or years may elapse before the attention of the patient or his friends is called to the part by the occurrence of alarming symptoms, perhaps indicating intracranial mischief; or, in other instances, by the occurrence of swelling and pain in the region of the sinuses. The late occurrence of symptoms was well marked in an instance recorded by Demarquay ("Diseases of the Nose," by the author; translation of Demarquay's case on page 391), in which the patient had been struck on the forehead by a fragment of iron two years before any serious mischief showed itself. At the expiration of that time, enormous swelling came on, rapidly followed by drowsiness, aphasia, and paralysis, and in less than a week the patient was a dead man. After death it was found that an abscess of the frontal sinus had burst through the posterior wall into the cranial cavity, and a large abscess had formed in or under the cerebral hemispheres. An early opening of the abscess in this case would, in all probability, have saved the patient.

Foreign bodies sometimes set up great irritation in the sinuses, and occasionally cause suppuration, though remarkable instances are recorded of the slight amount of mischief caused by the permanent lodgment of bullets and large pieces of metal in this cavity (see cases in appendix to "Diseases of the Nose," pp. 399 and 449, by the author of this paper). But in the case of living foreign bodies, *e.g.*, insects, flies and maggots, the amount of irritation set up is so great that ulceration and destruction of the walls of the sinus, and of the bones of the nose, is sometimes observed in various parts of India, in Demerara and Cayenne (see *Medical Times and Gazette*, January 30, 1875; the *Indian Medical Gazette*, August, 1871; and *Annales de la Société Entomologique de France*). It is very difficult to dislodge these troublesome guests when once they have taken up their quarters. Injections of various kinds have for the most part failed. Dr. W. R. Lawson states that he has succeeded in one case in removing a number of maggots from the nostrils of a white soldier in Demerara by employing snuff by insufflation, the tobacco acting as a poison to the insects. Among the less common causes of abscess in these cavities glanders may be enumerated. Glanderous nodules and subsequent ulcers are almost always found in the frontal sinuses after death from glanders. During life, severe typhoid symptoms, with frontal pain and a discharge of sanious pus from the nostril, are the leading features of this disease in the human subject. The use of injections of solutions of creasote has been followed by cure in some cases; in any case the use of antiseptic solutions by means of the douche apparatus, and a supporting diet with quinine, are the chief points of treatment likely to be attended with success.

Chronic abscess of the frontal sinuses sometimes arises from accidental occlusion of the passage into the nasal fossæ. The diagnosis of these cases is somewhat difficult, on account of the very slow rate of expansion of the walls of the cavity, and the striking resemblance of the swelling, when formed, to that of an osteo-sarcomatous or malignant tumour of the same region.

The swelling commences imperceptibly, and goes on increasing slowly for months (and in one case for twelve years), until at length considerable deformity is produced, with exophthalmos from encroachment of the tumour upon the orbitar cavity. To the touch the swelling presents in the early stage a nodulated uniformly bony surface; later on there are interspaces between bony islets, where a softer and fluctuating surface is perceived. Ultimately pointing takes place through one of these softened parts, and the abscess either discharges itself or is opened by the knife.

In a case under the care of Mr. H. A. Reeves and myself conjointly at the Central London Ophthalmic Hospital, a woman of forty-six years of age had such a swelling, with displacement of the eyeball, which had been coming on for three months at least before admission. It was punctured, and a quantity of muco-purulent fluid in stringy masses escaped. An opening of communication was then made between the cavity of the sinus and the nostril of the same

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side, and this was kept open by probing and syringing with iodine lotions from time to time. The cavity gradually contracted, but the eyeball retained its abnormal position for a considerable time afterwards, and a fistulous opening lying at the bottom of a funnel-shaped depression above the orbit was very troublesome, and resisted all attempts to close it permanently. The employment of a tube or seton carried down through the infundibulum into the nostril, and retained in position until a free communication had been established, would probably have enabled the fistulous opening to close; but to this proceeding the patient declined to submit.

In dealing with any disease of the frontal sinuses, we ought to be aware of the danger of the mischief extending backwards towards the cranial cavity. Among the earliest symptoms of involvement of the cranial cavity, anosmia and optic neuritis are, perhaps, the most formidable. It is well, therefore, to test the sense of smell and to examine the eye with the aid of the ophthalmoscope in all cases. The well-known appearances of optic neuritis may be present with scarcely any subjective indications of impaired vision, as Dr. Hughlings-Jackson has conclusively shown, and as I have myself verified on several occasions. Hence, it is not sufficient to test vision only, for in some of these cases the ophthalmoscope alone will guide us to the evidence of intracranial mischief. In a case of enlargement of the frontal sinuses, recently under my care, associated with purulent discharge from the nostrils and anosmia, well-marked optic neuritis was also present. The prognosis of this case is, therefore, very unfavourable. Practically, the treatment must be proportionately active; and it becomes a question whether trephining of the sinuses would not be justifiable under such circumstances, though in the case alluded to the evidence of the nature of the contents of the sinuses was too vague to justify the operation.

A CONTRIBUTION TO THE ETIOLOGY OF INFANTILE DIARRHŒA.

By WILLIAM STRANGE, M.D.,
Senior Physician to the Worcester Infirmary, and Medical Officer of Health for the City.

THE excellent address of Dr. Buchanan, delivered to the Associated Medical Officers of Health, as reported in your issue of the 30th ult., I had not the good fortune to hear. That address must commend itself to the whole of our body, as a model of careful, logical thought, worthy not only of imitation, but of imitation of the best kind—viz., by inducing others to look at the subject-matter of the address from the same philosophical point of view.

As an old sanitarian, the chief point in Dr. Buchanan's address—viz., the inquiry why do infants die in large numbers of diarrhœa in the months of July and August—has frequently presented itself to my mind for solution. It has done so again now, previously to reading Dr. Buchanan's address, from the fact of my finding in the returns of this city, without any evident epidemical influence, not less than one-fourth (forty-two out of 170) of all the deaths in the quarter last past set down to diarrhœa; and I deemed it incumbent upon me to make a closer inquiry into the circumstances of these deaths than had hitherto been done. This necessitated a house-to-house visitation, which was made in company with my Inspector of Nuisances. The following extract from my report to the Sanitary Authority will show the result. I may premise that the southern half of the city is that in which the larger number of the working classes reside, and it contains many narrow streets and courts, together with some newer dwellings, very closely packed together. The northern half of the city is not so densely inhabited; it possesses wider streets, and more space unbuilt upon. The density of the population in the thickest parts of the southern half is certainly double that of the densest part of the northern half the city. Out of a total of forty-two deaths registered as from diarrhœa, forty were those of children under five years of age. In fact, with one or two exceptions, they were all under one year of age, the average being about eight months.

The following facts were elicited during the inquiry:—

As to Season.—Five deaths occurred in July, fifteen in August, and twenty in September (September was here an unusually hot month).

As to Age.—They range from thirteen days to two years and a half,—the average being eight months.

As to Condition in Life.—Four only were children of persons in good circumstances; thirty-six of the poor.

As to Maternal Care and Medical Aid.—In no instance, not even in the case of illegitimate children, did we find any decided wilful neglect on the part of the parents; and medical aid was obtained—whether early enough I cannot say—in nearly every case.

As to Locality.—It is a striking fact that, dividing the city into the two halves mentioned above, only four deaths occurred in the northern and less densely populated part, and thirty-six in the southern or more crowded part. Seven deaths occurred in places that were tolerably open and airy, and thirty-five in densely inhabited streets and courts; and nearly half of the deaths occurred in a part of the city called the Block-house, which is the most densely peopled of all.

As to Condition of Dwelling.—The parents of these children were not found to be destitute, or poorer than their immediate neighbours, nor were their houses particularly dirty; and, lately, a great deal of scavenging and increased attention to the condition of closets, etc., have been going on in the city.

Now, what circumstance have we left which is so applicable to the whole, or nearly the whole, of these deaths as to be entitled to be considered as their efficient cause? Allowing for the *predisposing* causes of poverty, dirt, ignorance, early marriages, etc., as well as of heat and season, we come to the fact of *overcrowding* as the one element affecting the whole of the cases. Not to overcrowding in the house alone, but to the number living on a given area—the density of population per acre—must we look as the efficient cause of summer diarrhœa. This cause was put forward as long ago as 1845 by such men as Chadwick, Southwood Smith, and Playfair; and my own labours at that time convinced me of the truth of their dictum. Small houses, closely packed together in narrow streets, without the accompaniment of warehouses, etc., to lessen the density, together with the necessary complement of privies, cess-pits, and other receptacles for filth in abundance, tend to vitiate the atmosphere of such districts, and to make it unfit for the tender lungs of infants and young children. In the district in this city to which I have alluded, all these elements were combined, together with another circumstance equally pregnant of evil consequences. In these small houses I often met with a number of persons working in a single room, much smaller than was necessary for their health. In a corner of this room, in order to be under the mother's eye, in the midst of a heap of dirty rags, lay "the baby." With such surroundings, what chance has "baby" of prolonged existence? The mothers and older children, it was alleged, had no leisure to take their infants into the fresh air, as persons in a better class of life are so careful to do. What follows but that diarrhœa in summer, and disease of the respiratory organs in winter, make their easy victims here?

Dr. Buchanan would say that here we have no specific cause, no special *materies morbi*, to set up the special train of symptoms which we call infantile diarrhœa. The doctor is not very clear as to the existence of any such specific virus, and very properly directs our attention to the necessity of further investigation in this direction. By all means; but are we not all the while begging the question by presuming that this so-called diarrhœa *is* a specific disease, characterised by a train of symptoms sufficiently regular and pronounced as to entitle it to that name? We know that in the mortuary returns made by busy medical men there are frequent errors, if not of diagnosis, at least of exactness. I am afraid that this want of exactitude is especially frequent in reputed deaths from diarrhœa. Convulsions—a term formerly, as Dr. Buchanan states, as now in conjunction with diarrhœa, frequently used to designate the cause of death in infants—are known to be only a symptom, and therefore this term is less often used than formerly. But is not diarrhœa a symptom only, and are not the real morbid processes which have led up to death *with* diarrhœa too often cloaked under this convenient term? If you inquire, as I have just done (on a limited scale, it is true), into the symptoms accompanying the onset and progress of the disease of which these infants die, it will be found in many cases that there have been other symptoms than those which can be covered by the word "diarrhœa." Some of these are affections of the brain, with or without convulsions; teething, with its numerous irritations; loss of appetite, with vomiting; feeble circulation, dysentery, etc. Does not all this point rather to a blood-taint, a slow poisoning by foul air, than to any *specific* irritation of the digestive canal? But if the disease (as I believe) is not of a specific character, it may, never-

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theless, in some way be occasioned by heat. And how? If heat *per se*, as Dr. Buchanan has pointed out, only provokes diarrhœa when July and August have arrived, what is there in the heat of those months that can act in a special manner? Only this: By the time that July arrives, the excrementitious and other filth so thickly spread around the dwellings of the poor begins to ferment from continuous high temperature, and to exhale into the atmosphere its poisonous effluvia. These, in hot weather, with a stagnant atmosphere, penetrate into the dwellings, and are *not* let out again by proper ventilation. Baby lies all day in his heap of rags, inhaling this compound, until his young blood is poisoned up to the dying point.

I am aware that these are generalities, and that it is open to us, as Dr. Buchanan directs, to "try to discover the means by which heat and filth operate (co-operate?) with regard to other diseases (enteric fever especially) known to be intimately associated with excremental conditions." But, from my point of view, as medical officers of health, the knowledge we already possess is quite sufficient, pending those inquiries to which Dr. Buchanan has alluded, to enable us to keep an eye upon these plague-spots of diarrhœa, and to urge us to use such means as the law places in our hands for the abatement of these grievous evils.

Worcester.

REPORTS OF HOSPITAL PRACTICE IN MEDICINE AND SURGERY.

SEAMEN'S HOSPITAL, GREENWICH.

CASES UNDER THE CARE OF MR. W. JOHNSON SMITH.

Case 1.—*Rodent Ulcer of Lower Eyelid—Extirpation of Eyeball.* John B., aged thirty-eight, a tall and rather spare man, was admitted into the hospital on September 1, 1874, with slowly spreading ulceration of the lower eyelid on the right side.

According to the patient's statement, there was no history of cancer in his family, and he had never had syphilis or any venereal affection. He had been in the habit of drinking freely. His general health had always been good, and for the two years previous to admission he had increased somewhat in weight. In August, 1872, he noticed, for the first time, a small red pimple near the edge of the right lower eyelid. This pimple soon broke down into a small ulcer, which, as it spread persistently and slowly, was generally covered by a scab. At the end of fourteen months, during which period the ulcer had involved about half the eyelid and spread towards the upper part of the face, he applied to a medical practitioner of Liverpool, who applied red precipitate ointment and nitrate of silver. This treatment arrested the progress of the ulceration for a time, but soon ceased to be of any service, and the disease continued to spread slowly up to the time of his admission. There had never been any pain in the ulcer.

At the time of his admission the outer half of the right lower eyelid had been quite destroyed; and below the outer canthus was a round ulcer of the size of a shilling, with a smooth and glazed surface, and rounded and sinuous edge of a pale colour. The integument beyond this edge was quite healthy in appearance. The discharge from the surface of the ulcer was thin and scanty. The ocular conjunctiva of the right eye was red and congested; no glandular enlargement could be made out.

For the first three weeks of the patient's stay in the hospital, black-wash was applied to the sore, and a mixture containing iodide of potassium and arsenic given three times daily. As this treatment was not followed by any good results, and as the ulceration continued to involve more and more of the eyelid and conjunctiva, the whole of the ulcerated part was excised, and at the same time the eyeball was removed. Very little hæmorrhage resulted from this operation, that from the bottom of the orbit being readily arrested by temporary irrigation of cold water. The wound closed speedily at first, but at the end of a fortnight suspicious-looking granulations appeared at the lower margin of the orbit. These were treated by frequently repeated applications of chloride of zinc paste. On January 16, 1875, when the sore had almost quite closed, the patient insisted on leaving the hospital, as he felt well, and quite able to go to sea.

On June 14, 1875, the patient was readmitted. The old form of ulceration had commenced shortly after he had left the hospital, and had since spread slowly and continuously over the upper part of the right cheek. He presented an ulcer of the size of a half-crown piece, the upper edge of which corresponded to the outer half of the lower edge of the orbit. The contents of the orbit in front were red and swollen, and the ulceration had extended for some distance along the lower portion of this cavity. In the centre of the large circular ulcer on the cheek was a small speck of bare bone. General health very good. No glandular enlargement.

On June 22 the whole of the circular ulcer was removed by the knife, and also the affected portions of the orbital contents.

During the month of July, frequent applications of chloride of zinc paste were made to the open surface, until at last all doubtful parts were removed, and the ulcer presented nothing save healthy granulations.

During the latter half of August the wound closed speedily by healthy granulations and the formation of a thin, supple cicatrix.

At the beginning of September the parts were quite healed, and there was then but little tendency to cicatricial retraction or deformity.

Patient discharged cured on September 5.

Case 2.—*Excision of Wrist for Disease of Carpal Bones.*

James M., aged thirty-two, a muscular and healthy-looking sailor, was admitted into the Seamen's Hospital on June 10, 1874, with long-standing disease of the left wrist. In consequence of a fall on the hand when the patient was seventeen years old, the wrist became painful and inflamed, and subsequently remained weak for eighteen months. Seven years later an abscess formed on the back of the hand, and a discharge of pus was kept up for several months. Eight months before admission, another abscess formed on the back of the hand, and from this date to the time of the patient's application to the hospital there was free and continuous suppuration.

At the time of the man's admission the dorsum of the left hand and wrist was much swollen. The congested integument of this region was marked in its centre by a small depressed cicatrix, and near this by the orifice of a sinus leading down to bare and rough bone in the midst of the carpus. The wrist-joint was very stiff, but all the digits save the fourth could be freely moved by the patient. Pressure on the dorsum and attempts to move the hand gave the patient much pain.

The hand was placed on a straight palmar splint, and kept at rest for one month, but at the end of this period no satisfactory change in the above-mentioned state of things was observed.

On July 15, after Esmarch's bandage and ligature had been applied, the wrist was excised. Through two incisions—one near the outer, and the other over the inner surface of the wrist and forearm—made according to the instructions of Mr. Lister, the whole of the carpus save the pisiform bone and the hooked process of the unciforme, the extremities of the radius and the ulna, and the upper ends of all the metacarpal bones, were removed. The carpal bones were soft and broken down, and the articular cartilage had been partially destroyed. On the removal of Esmarch's band from the forearm there was profuse hæmorrhage from many parts of the wound, especially near the radial incision, and it was found necessary to apply many ligatures. After a drainage-tube had been placed across the seat of operation, and the external incisions had been closed by sutures, the hand was placed on a splint furnished with a large and firm pad near its lower extremity, on which the fingers were disposed without any bandage. Shortly after the operation, recurrent hæmorrhage came on, but this was readily and effectually controlled by external pressure.

On the evening of the day after the operation the temperature (axillary) was 103°, and the pulse 130. From this date (July 16) to July 22, both temperature and pulse gradually declined, and afterwards remained normal whilst the patient was in the hospital. The wounds closed speedily by granulation. During the process of healing, passive movements of the fingers were practised daily.

On August 11 a straight wooden splint was applied to the front of the hand and wrist, and this at the end of the month was replaced by a palmar splint of guttapercha. The patient was then able to move his fingers, and the wound, with the exception of a small part of the ulnar incision, had quite closed.

On September 30 the patient was discharged as convalescent, and sent to Bognor.

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Early in November the parts about the seat of operation were quite sound, and free from open sores. The fingers could be freely moved, and the patient was well able to grasp objects. The movement of supination was much restricted. There was no tendency for the hand to incline towards the ulnar side.

In the course of the month the man resumed his occupation as a sailor.

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Medical Times and Gazette.

SATURDAY, DECEMBER 25, 1875.

ANNUS MEDICUS 1875.

Very few people, if any, can be found, we suspect, to say a good word for the passing year from the weather point of view. There was no "good" summer weather, or but very little, and up to the present there has been but little "good" winter weather—but little "seasonable weather," in short, except, indeed, in the spring, and then no one, however healthy and "well-to-do," regards seasonable weather with any pleasure. But from the Registrar-General's stand-point the year has on the whole been a very favourable one, the absence of any long continuance, or great degrees, of heat or cold having, as usual, been accompanied with, and causal of, low rates of mortality. We have had, however, to note the prevalence of local outbreaks of fevers in many places—typhoid fever at Oxford, in Glasgow, in Uppingham School, on board the *Cornwall*, and in other places which we have not space to mention here; diphtheria at Woolwich; scarlet fever in London, in Islington, on board the training-ship *Mars*, at Dundee; and so on—all occurrences showing how far sanitary science is from overtaking hygienic necessities. It is specially satisfactory, therefore, to note how actively the universities have taken in hand the teaching and examining in "State Medicine"; and it will be remembered that at Cambridge a most successful examination has been held in "Sanitary Science," so far as relates to the functions of medical officers of health. Many well-known and distinguished men offered themselves for examination, and nineteen received the "Cambridge Certificate in Sanitary Science." The examinations ranged over a large number of subjects, were practical as well as scientific; and the syndicate appointed to superintend them reported in highly satisfactory terms of the knowledge displayed by the candidates.

Has the dying year been a great and memorable one as regards Sanitary Legislation? Well, things are great or small by comparison, and, as compared with former years, the year 1875 will, at any rate, be remarkable for the prominence given to sanitary measures in the Queen's Speech, and in the speeches and proceedings in the House of Commons during the first nights of the Parliamentary Session which opened on February 5. In her Majesty's Speech it was stated that Bills would be laid before Parliament for facilitating the Improvement of the Dwellings of the Working Classes in large towns, for the consolidation and amendment of the Sanitary Laws, and for the prevention of the Pollution of Rivers. The President of the Local Government Board also gave notice that he intended to introduce a Bill to repeal the Adulteration of Food Acts, and to make better provision for the Sale of Food and Drugs in a pure state. And so early as the second sitting of Parliament, on February 8, Mr. Cross, the Home Secretary, introduced the promised measure relating to the dwellings of the working classes, now known as the Artisans' and Labourers' Dwellings Improvement Act; and on February 11 Mr. Sclater-Booth, the President of the Local Government Board, laid on the table of the House the Public Health Bill. The same day the Chancellor of the Exchequer also introduced a Bill for consolidating and amending the Acts relating to Loans for Public Works—a matter of great importance in aiding the execution of sanitary works; and very shortly after, the Sale of Food and Drugs Bill was introduced. The vigour and earnestness with which the Government thus took up the work of sanitary legislation were highly satisfactory; and it was very gratifying and promising, as further indicative of the reality of the intentions of Government in this direction, to note also the tone and spirit in which the mover and seconder, in the House of Commons, of the address on the Queen's Speech, and the Home Secretary referred to sanitary matters. Mr. Stanhope, who moved the address, spoke on the subject with admirable breadth and clearness of view. He remarked that the welfare of a nation depended largely on the physique of its population, and that during the last quarter of a century there had been a great depopulation of our agricultural districts; and he went on to say—"The country could no longer expect to draw from that quarter any reserve of strength and energy. Our rural population was migrating into the towns, where, from the inability of the sanitary machinery to keep pace with the demands upon it, they were placed under circumstances most unfavourable to physical health and development. To cope with this evil was a truly gigantic task, because it would be necessary not only to improve the condition of the people, but also to educate them to a conviction of the importance and necessity of such an undertaking. Every step in sanitary improvement meant the expenditure of money. At every step the sanitary reformer encountered local prejudices, which it took a great deal to overcome, and which could hardly be overcome at all until it came to be generally realised that sanitary improvement meant not only better health, but also, possibly, decreased pauperism, increased self-independence, and the shooting of some bright gleams across the sombre existence of the mass of the people." Mr. Whitelaw, in seconding the address, also spoke of the pressing necessity for sanitary legislation, and dwelt, though briefly, on the importance of dealing with country places as well as towns; while the Home Secretary exhibited a masterly grasp of his subject in the speech with which he introduced

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the first of the proposed sanitary measures—the Improved Dwellings Act. He showed that he had endeavoured to make himself practically acquainted with the subject-matter on which he proposed to legislate, and had visited Liverpool, Glasgow, and Edinburgh, in order that he might there personally study the operation of local Acts which contained powers similar to those he proposed to extend to large towns in general. It was especially satisfactory to note his declarations of the spirit in which the Government promoted the Act, and of their view of the position medical men should hold in sanitary work. "We proceed," he said, "entirely on sanitary grounds. It is only sanitary purposes we have in view; *therefore we think the Act should be put in motion by the medical officer.*"

All this gave excellent promise of sound and extensive sanitary work. It seemed as though Mr. Disraeli's Government was fully determined at last to justify the expectations formed of an administration, the Prime Minister of which had declared that he thought "public attention ought to be concentrated on sanitary legislation," and that "the first consideration of a Minister should be the health of the people."

Now, what was actually done in the way of sanitary legislation during the Parliamentary session of 1875? Mr. Cross's energy, determination, and tact carried "The Artisans' and Labourers' Dwellings Improvement Act, 1875," safely through, and it is undoubtedly *the* measure of the session. Looking to its importance, it is a short Act; and its preamble sets forth, as its *raison d'être*, that "Whereas various portions of many cities and boroughs are so built, and the buildings thereon are so densely inhabited, as to be highly injurious to the moral and physical welfare of the inhabitants; and whereas there are, in such portions of cities and boroughs as aforesaid, a great number of houses, courts, and allies, which, by reason of the want of light, air, ventilation, or of proper conveniences, or from other causes, are unfit for human habitation, and fevers and diseases are constantly generated there, causing death and loss of health, not only in the courts and alleys, but also in other parts of such cities and boroughs;" and that various difficulties often stand in the way of making such alterations as are necessary for public health; and "whereas it is necessary for such public health that many such houses, courts, and alleys should be pulled down, and such portions of the said cities and boroughs should be reconstructed; and that whereas in connexion with the reconstruction of such cities and boroughs it is expedient that provision be made for dwellings of the working classes who may be displaced in consequence thereof, it is enacted that—in the City of London, the Commissioners of Sewers; in the metropolis, the Metropolitan Board of Works; and in urban sanitary districts of England and Ireland, with populations of 25,000 and upwards, the urban sanitary authorities, may purchase such unwholesome portions, and effect requisite improvements thereon." An official representation of the unhealthiness of the houses to be dealt with must be first made to the authority; and the official representation must be made by the medical officer of health, or in the metropolis by a medical officer, or medical officers, appointed for the purpose; and it must set forth all the reasons for condemning the houses or district. All the details of the Act have been duly given and commented on in our pages, and need not be repeated here; but it may be observed that in Holborn, and other parts of London, in Liverpool and Birmingham, operations have been commenced under the Act, and that if its powers are exercised with judgment, tact, and decision an immense improvement will undoubtedly be effected in the sanitary condition of London, and of the large towns included under the Act. We may also add that there can be no doubt that the late Dr. Anstie's action in moving the College of Physicians to memorialise Government on the great and urgent evils with which the Bill deals, had no little effect in inciting the promoting and passing the valuable Act of which we have been writing. Would that he were still here with us, to rejoice over this fruit of his labours!

The "Act for consolidating and amending the Acts relating to Public Health in England (August 11, 1875)," or, to use its shorter title, "The Public Health Act, 1875," is also undoubtedly a valuable and very creditable piece of work. Though it seems formidably lengthy, containing 343 sections and sundry schedules, its arrangement is considered, we believe, to be so excellent that it is really a very handy Act; and no doubt it is a very great gain to have all the provisions of the many previous Sanitary Acts brought within the grasp of a single Act; while, further, it constitutes a clear and defined starting-point, from which a still more finished and concrete Public Health Act can be shaped. It was avowedly brought forward as almost purely a consolidating Bill, and as such will do very much to simplify sanitary work, and render it easily comprehensible to urban, suburban, and port sanitary authorities. Its new clauses were, chiefly at any rate, for the purpose of empowering the authorities in one sanitary district to take action against nuisances existing in contiguous sanitary districts. It must, however, be noted that, excellent as the Act is, in its way, experience has already hit one serious blot in it. A wholesale confectioner was lately summoned for having in his possession, and intended for human food, a quantity of butter in a putrid state and unfit for food. The defence was that a certain clause in the Act empowered the authorities to take proceedings only for the possession of any "animal, carcase, meat, poultry, game, fish, fruit, vegetable, corn, bread, flour, or milk"; that the defendant was charged with having for sale "certain meat, to wit thirteen tubs of butter"; that butter could not be described as meat; and that the summons must fail. The magistrate who heard the case felt obliged to admit the defence, and to dismiss the summons.

The "Sale of Food and Drugs Bill" was passed; but it cannot be spoken of with any praise. It might, we fear, be in truth called a "Bill to protect manufacturers and vendors of food and drugs," rather than one to protect consumers, and to prevent adulteration.

An important Pharmacy Bill for Ireland, the tenor of which has been fully explained in our pages, also passed both Houses, and became law. The Royal College of Surgeons, England, applied for and obtained a Bill which gives them power, notwithstanding anything to the contrary in their charter, to join the other licensing bodies in forming a Conjoint Examining Board for England. The Royal assent was also given to the "Public Health (Scotland) Act Amendment Bill," and to some other Acts which may be considered to be "closed" in Mr. Disraeli's reading of the term sanitary reform as including "most of the civilising influences of humanity." Among the measures included in the "massacre of the innocents" were the Rivers Pollution Bill, Mr. Charley's Infanticide Bill, Mr. Cowper-Temple's Medical Acts Amendment Bill, and the Vivisection Bills. The latter were withdrawn on the understanding that a Royal Commission would be appointed to examine into and report on the subject with which the Bills were promoted to deal; and this Commission was afterwards appointed, and has held many sittings to collect evidence, but has not yet reported. Mr. Cowper-Temple's Bill was got rid of by Lord Sandon's declaration that the Government would consider the matter proposed to be legislated for during the recess, and state their decision with regard to it next session. The grievances of the Medical Officers of the Army were very ably brought before the House of Commons by Dr. Lush, and Mr. Hardy assured him and the House that he had the matter under his most earnest consideration. The work done for improving the health and general well-being of the people may, then, be regarded as

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large, when compared with legislation in the same direction under previous administrations; but it cannot be considered as great or good when judged as the work of a Government which has stated that sanitary reform is the "great object and need of the day."

We will only mention further, with reference to the proceedings in Parliament, Mr. Cowper-Temple's "Universities of Scotland (Degrees to Women) Bill." This measure had for its real object the giving to the authorities of the Scottish universities a discretionary power to admit female students to university teaching and degrees; and was undoubtedly promoted in the interests of female medical students. But, as Mr. Lyon Playfair (certainly not a "narrow-minded" man) remarked, in opposing the second reading, "Its object was to admit women to graduate in every faculty—Arts, Medicine, Law, and Divinity. It would alter the constitution of the Scottish universities in the most complete manner; yet it dealt with the question in the most trivial manner possible. With regard to the higher education of women, he should be inclined upon the general question to support it; but the Bill dealt with only a fragment of the question. In consistency, the preamble should have recited the expediency of admitting women equally with men to universities in all parts of the kingdom It only touched, however, the Scottish universities, and did not really legislate with regard to them; it merely set down the question to be decided by a body of irresponsible gentlemen composing the governing body of each university." The House, agreeing with the justness of these views, rejected the Bill, though Mr. Cowper-Temple succeeded in obtaining 151 votes. The Bill, also introduced by Mr. Cowper-Temple, for the Registration of Foreign Medical Degrees held by Women, was, in like manner, an attempt at patchwork legislation; but of this measure we shall say more hereafter.

The General Medical Council met, under the presidency of Dr. Acland, on June 17, and sat nine days, which seems now to be about the normal length of a session. As is usual, the proceedings were opened by an address, and a very able and suggestive one, from the President. In it he spoke, among other things, of the work done by the Executive Committee of the Council during the recess, and showed incidentally in some measure the influence and power for good possessed by the Council when they chose to exert them. They induced the Local Government Board to reconsider an article of the General Consolidated Order of the Poor-law Board, by which all surgeons not members of the Royal College of Surgeons of England were excluded from some important professional duties; they had with good effect addressed communications to the Government, expressing their objection to the opposition offered to the enabling Bill of the Royal College of Surgeons on the ground that it did not provide for the admission of women to the examinations; and they had stated to the President and Vice-President of the Privy Council their objections to Mr. Cowper-Temple's Bill to compel the registration of degrees in medicine granted to women by certain foreign universities, and had received the assurance that "no steps would be taken in respect of medical legislation except after the fullest communication with the Medical Council."

A very large part of the session was consumed by the consideration of the Reports of Visitations of Examinations; and certainly not very profitably so consumed, unless it is taken for granted that the licensing bodies read and digest the reports of the discussions published in the journals, for only in that way can those bodies learn at all fully the criticisms of the various members of the Council on the several reports, as the Council is, as a general rule, content in the end to send to each licensing body the report on their examinations for their "consideration and remarks." Dr. Andrew Wood, indeed, expressed his conviction that "the discussions which had taken place, when reported in the public journals, were calculated to be of the utmost importance"; and that "the great power of public opinion would react" on the licensing bodies. We believe that the Council has acted wisely in dealing very gently and considerately with the licensing bodies, and in trusting to the slow but sure effect of public opinion; but this trust in "moral suasion" may be carried too far and continued too long; and we venture to think that the time has now come when the Council should make a fuller and more active use of the reports of visitations of examinations, by much more positively and directly expressing to the licensing bodies their sense of the various imperfections reported to exist in the examinations. At any rate, it would surely be better if the Council acted in this matter with more consistency than they did this year. The examinations visited and reported on were those of the University of Oxford, of the University of Cambridge, of the Universities of Aberdeen, Edinburgh, and St. Andrews, of the Royal College of Physicians of London, of the Royal College of Surgeons of England, of the University of Dublin, of the University of Durham, of the King and Queen's College of Physicians in Ireland, and of the Apothecaries' Hall, Dublin. Defects of various kinds, and of various degrees of gravity, were pointed out in every one of these reports, and in some the deficiencies were both numerous and of great gravity. But the only body with regard to which the Council passed a resolution directing attention to particular defects in the examinations was the Royal College of Physicians of London. In this instance, a rider was added to the ordinary resolution, requesting that special consideration should be given to such part of the report of the visitors "as refers to the clinical examination for licentiates, and to the deficiencies in the department of medical jurisprudence." This was insisted on, in spite of great opposition, because of the importance and influence necessarily attaching to such a body as the Royal College of Physicians. But the visitors reported deficiencies in the anatomical and physiological parts of the examination of the Royal College of Surgeons of England, and in the examination in materia medica and medicine. These are surely grave defects, and, looking at the number of candidates every year examined and licensed by that College, it must be considered as being as important and influential a body as the College of Physicians? But the Council refused, though by only a small majority, to call the attention of the College of Surgeons to the defects and faults in its examination. The same kindness and leniency were extended to the Apothecaries' Hall, Dublin, though the visitors had pointed out that both the anatomical and the clinical parts of the examination were deficient; and to the University of St. Andrews, where the examinations were considered not at all satisfactory. The fairness and justice of thus singling out the London College of Physicians, and directing special attention to faults in its examinations, while faults, at the least as great, in the examinations of other bodies were, as far as the resolutions of the Council go, passed over in silence, are not apparent.

The only other great discussion during the session was on the fitness of the Medical Profession for Women, and the debate on this subject was, generally considered, highly creditable to the Council. Mr. Simon had, by the direction of the Lord President of the Privy Council, written a letter asking the opinion of the Medical Council on Mr. Cowper-Temple's Bill "to amend the Medical Act, 1858, so far as relates to the registration of women who have taken the degree of doctor of medicine in a foreign university," and also requesting the opinion of the Council on the general question raised by that Bill, "with regard, on the one hand, to women who desire to obtain legal status as medical practitioners in this country, and, on the other hand, to the examination rules or conditions which prevent them from accomplishing their wish." It will

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be remembered that the letter was remitted to a well-selected and strong committee in order that the matter treated of might be put into shape for discussion by the Council; and this committee presented a report, stating the reply which, in their opinion, should be sent to the letter. But Sir Dominic Corrigan, one of the members of the committee, presented, as an alternative report, a distinctly different reply; Dr. Andrew Wood, another member, presented a second alternative report not greatly differing from that adopted by the committee; Dr. Risdon Bennett laid on the council-table a third; and Dr. Storrar gave notice of motion "that the Council were not authorised to represent to the Government the views of the profession on the large social question of the expediency or otherwise of admitting women to practise medicine." There was no difference of opinion in the Council as to the reply to be made with regard to Mr. Cowper-Temple's Bill. Men are precluded from registering foreign degrees in medicine because the Council have no means of exercising over the education and examinations required for such degrees the supervision and control to which the licensing bodies of this country are subjected by the Medical Act of 1858; and to grant women the power of registering such degrees would be subversive of the main principle of the Act. The Bill bore on the face of it the fatal sins of partiality and injustice. But as to the manner in which the great question—the fitness or otherwise of women for the pursuit of the medical profession—should be answered, there was very considerable difference of opinion, and the whole subject was debated with the earnestness, gravity, and vigour equal to the largeness and importance of the question, and very creditable to the Council. The whole of the speeches during the debate were at the time reported and commented on in our columns, and here we need only record the result. Dr. Andrew Wood's proposed reply to the Lord President was to the effect that women are by nature unfitted for the stern duties, labours, and anxieties of the medical profession; and that, therefore, the law ought not to be so altered as to permit or tempt them to enter it. But this view, which he advocated in a most frank and manly speech, was not acceptable to the Council. The pith of their answer is contained in the following paragraph of the original report of the committee:—"The Medical Council are of opinion that the study and practice of medicine and surgery, instead of affording a field of exertion well fitted for women, do, on the contrary, present special difficulties, which cannot be safely disregarded"; and Professor Turner, the Professor of Anatomy in the University of Edinburgh, very strongly supported this way of putting the opinion of the Council. Dr. Rolleston, the Linacre Professor of Anatomy in the University of Oxford, however, argued with equal force in favour of female doctors; and Dr. Parkes, who fought, and with great effect, on the same side, proposed to add at the end of the paragraph the words, "but the Council is not prepared to say that women ought to be excluded from the profession." This was carried by fourteen votes to seven; and it is worthy of note that the majority was composed of the representatives of the English College of Surgeons, of the Universities of Oxford, Cambridge, Durham, Glasgow and St. Andrews, and Dublin, of the King and Queen's College of Physicians in Ireland, of the College of Surgeons in Ireland, of the Apothecaries' Hall of Ireland, and of five out of the six Crown representatives. The Council having thus admitted that they were not prepared to say that women ought to be excluded from the profession, added that, "should it appear to the Government and the Legislature expedient that women, who desire to obtain a legal status as medical practitioners in this country, should not be debarred from obtaining that status," they were of opinion that it should be under certain conditions and arrangements; the first, and last, and most important of which are, "That, in the interests of public order, the education and examination of female students of medicine should be conducted entirely apart from those of male students"; and "That the examinations of female candidates for a licence entitling their names to be placed on the Register should be equivalent to those of male candidates." This reply, and the speeches made during the debate, do not really afford any great encouragement to "medical women." No member of the Council advised or recommended women to enter the profession; but some felt that their legal exclusion could not be justified, and the majority agreed that they were not prepared to say they ought to be excluded. This, we believe, represents fairly and faithfully enough the opinion of the profession at large, though there may be considerable differences of opinion as to the degree in which they are by nature unfitted for it. The question whether or not it is expedient that women should be enabled, if they wish, to obtain a legal status as medical practitioners, rests now with the Government and the Legislature. When, however, the Government take the subject into consideration, we may expect that they will study the reply of the Medical Council more carefully than Mr. Russell Gurney could have done, when he stated in the House of Commons his pleasure in finding that the General Medical Council had expressed a decided opinion that women ought no longer to be excluded from the profession.

Very little more need be said here of the work done in the Council; but it may be noticed that, in the course of a long, irregular, and desultory conversation on a motion to inquire how far the various licensing bodies were carrying out certain recommendations of the Council with regard to professional examinations, Professor Rolleston seized the opportunity to deliver a very strongly and clearly expressed opinion in favour of free trade in medical education; arguing that the Council ought not to interfere with methods of education, except so far as to see that the outcome of it was properly tested by examination; and that, provided a candidate showed that he possessed the required knowledge, it did not matter how he came by it. This was ably supported by Sir William Gull and Sir Dominic Corrigan; and the question will, no doubt, be again raised in some more formal and regular manner.

No communication was received by the Council concerning any Conjoint Examining Board Scheme; but one of the members requested the President to inform the Council, if possible, of the position of the Joint Scheme for England, especially with reference to the rumour that the Royal College of Surgeons had virtually seceded from the scheme; and he received a very diplomatic answer. The President had had no communication on the subject with the Committee of Reference, or with the bodies who had sent representatives to that Committee; he had no evidence as to the truth of the report about the withdrawal of the College of Surgeons from the scheme, and had no reason for believing it; the College had always maintained or implied their right to secure the nomination of a certain proportion of the examiners in surgery and anatomy; the consent of the co-operating bodies and the Medical Council would be necessary should that right be still insisted on; and the negotiations so required would occupy some time; but that these circumstances did not indicate that the scheme would come to an end. With regard to the proposed Conjoint Scheme for Ireland, the representative of the Royal College of Surgeons in Ireland, in answer to a question from the President, stated that the Council of his College remained pledged to the scheme, but that during the past year the question had fallen into abeyance.

At the annual general meeting—an unusually large one—of the Fellows of the Royal College of Physicians, Sir George Burrows was for the fifth time elected to the high and honourable office of President, the Fellows thus again recording their sense of the diligence, efficiency, and courtesy with which he upholds the dignity of the office, and discharges its various

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and important duties. Before his re-election, Sir George gave, as usual, an admirable address on the matters with which the College had been concerned during the past year, including therein a condensed summary of the difficulties attending the efforts to establish a Conjoint Examining Board for England. The address was afterwards published, in compliance with the very rare compliment of a request to that effect by the Fellows. The Baly Medal was awarded with acclaim to Professor Claude Bernard.

Professor Lionel Beale's Lumleian Lectures "On Life and on Vital Action in Health and Disease," which we were fortunate in being able to publish *in extenso*, consisted of a lucid and admirable exposition of the doctrines he has so long, ably, and consistently taught. The Croonian Lectures, delivered by Dr. Headlam Greenhow, were on "Addison's Disease," a subject of which Dr. Greenhow is well known to be a master, having studied it with the minute and conscientious fulness and care that characterise all his work; and Dr. R. J. Lee chose for the subject of his Gulstonian Lectures "Puerperal Fever," a matter which largely occupied the attention of the profession during the year.

At the annual election of Fellows into the Council of the Royal College of Surgeons, the three vacancies were filled by the choice of Mr. Prescott Hewett, Mr. Birkett, and Mr. Cooper Forster. The first two were retiring members of the Council, and sought re-election, but Mr. Cooper Forster was a new candidate for a seat in that body. He was, however, already a member of the Board of Examiners, having been appointed by the Council to the vacancy created earlier in the year by the retirement of Mr. Hilton, and his election was considered as almost certain as soon as he came forward.

Our readers will remember that in July last year a "new difficulty," so called, though it had more than once been foretold and pointed out in our own pages, arose in the way of the completion of the English Conjoint Examining Board scheme: the College had announced, in accordance with new legal advice, that they could not under their charter legally take part in the proposed arrangements for the appointment of examiners in surgery. This year they obtained, as the University of London and the Society of Apothecaries had done before them, an enabling Bill; and in August the subject of the scheme, which, like the Irish scheme, had for some time been "in abeyance," was again before the Council. Some members expressed an opinion that the scheme was virtually defunct, but in the end the President and Vice-Presidents of the Council were requested to take such steps as "they thought proper for renewing negotiations with the other English medical authorities," with a view to the formation of an English Conjoint Board, and to report thereon to the Council. Accordingly, in October, the President addressed to the several universities and colleges engaged in the formation of "a scheme for an Examining Board for England," a letter proposing a conference, and suggesting that each of the bodies concerned should send two representatives. The suggestion was adopted by all the bodies concerned, and the appointed representatives have already held two meetings. There seems, we believe, so far, to be a fair promise that still existing difficulties will be overcome, and the scheme brought actually into operation.

A modification of very great importance has been made in the constitution of the Examining Board of the College. Early in October, Mr. Erichsen was elected a member of the Court of Examiners in the vacancy created by the resignation of Mr. Hancock; and, as it was understood that he had accepted the appointment on the clear understanding that the Examiners in Surgery and Surgical Pathology were in future to be distinct and separate from the Examiners in Anatomy and Pathology, his election was hailed with great and general satisfaction. The necessity for a reform in this direction had been for some time becoming more and more imperative, and Mr. Erichsen's appointment was rightly held to indicate that such a change had been determined on. At a meeting of the Council held in the first week of November, it was decided that there shall be two examining bodies—the one termed the Board of Examiners in Anatomy and Physiology, and the other the Court of Examiners in Surgery. The Board of Examiners in Anatomy and Physiology will consist of nine members, to be appointed by the Council, to conduct the examinations in anatomy and physiology for the membership and fellowship of the College. The examiners are to be elected from the Fellows of the College. One member, at least, of the Board must be a member of the Court of Examiners, and shall act as chairman of the Board; and in the event of more than one member of the Court being also a member of the Board, the senior of such members of the Court shall act as the chairman. The Examiners in Anatomy and Physiology are to be elected annually, and shall not hold office for more than five consecutive years, but, after an interval of one or more years, shall again be eligible for election. A committee of three members of the Council is to be annually appointed, to constitute, together with the President and Vice-Presidents, "The Committee on Examinations in Anatomy and Physiology"; and at least two of the members of this Committee shall be or shall have been members of the Court of Examiners. The duties of the Committee are to be to consider applications from candidates for the office of Examiner in Anatomy and Physiology, to report thereon to the Council, to recommend the candidates deemed fittest for election, to be visitors of the examinations in anatomy and physiology, and to make representations and recommendations to the Council respecting the examinations. The members of the Council appointed as members of the "Committee on Examinations in Anatomy and Physiology" will be ineligible for the office of Examiner in Anatomy and Physiology. A large number of the surgeons on the staffs of the metropolitan hospitals, and one or two of the surgical staff of the Birmingham Hospital, sent in their names as candidates for the new appointments; and on December 20 the Council elected from among them the following nine gentlemen members of the Board of Examiners in Anatomy and Physiology—viz., Messrs. Luther Holden, H. Power, W. S. Savory, F.R.S. J. Birkett, J. Cooper Forster, G. G. Gascoyen, Christopher Heath, Timothy Holmes, and John Wood, F.R.S.

The regulations as to the Court of Examiners are not yet published. Arrangements have been made as to mode of payment of the members of the Board of Examiners, and some alterations in the mode and rate of payment of the members of the Court of Examiners; and the regulations respecting the degrees, diplomas, licences, and certificates to be recognised as exempting candidates from examinations in anatomy and physiology for the membership and the fellowship are under consideration.

All these changes will make 1875, the period of Sir James Paget's presidency, a most memorable year in the history of the College.

With regard to the Society of Apothecaries, it must be noted here that they provided for the delivery, in their Hall, of a series of admirable lectures, by Surgeon-Major F. De Chaumont, M.D., on "State Medicine."

The forty-third annual meeting of the British Medical Association was held in Edinburgh on the 3rd and the three following days of August, and will certainly be counted as one of the most successful and most notable meetings, in every respect, that the Association has held. The Association was specially fortunate in meeting under the presidency of a man of such eminence, so highly honoured everywhere, of such vigour of mind, unflagging devotion to the interests of the public and the profession, and such clearness and power of exposition as Sir Robert Christison; and his address—on the

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question, "Whether any, and what, Change is desirable in the present system of Education and of Examination in the Medical Schools of our country?"—was excellent, and very remarkable for sustained thought and argument. Though very long, it was listened to with great attention and interest, all the more remarkable because his views did not coincide with what may be called the popular opinion on the subjects with which he dealt. All the chief addresses also were of exceptional excellence. Dr. Warburton Begbie's most learned, polished, and interesting Address in Medicine was on "Ancient and Modern Practice of Medicine," and was hailed as an answer to the sceptics in the progress made in medical science and art. Mr. Spence's "Address in Surgery" was eminently practical, and highly able and instructive. Part of it was listened to with special interest as expressing the opinion of the Professor of Surgery in the University of Edinburgh of the value and importance of antiseptic dressings; and this part attracted all the greater attention because a crowded audience had attended Mr. Lister's demonstrations in antiseptic surgery and the members of the Association were naturally desirous to hear something on the other side. Very able and noteworthy addresses were also given by Mr. Lyon Playfair, who presided over the Section of Public Health; by Dr. Matthews Duncan, in opening the Section of Obstetric Medicine; and by Professor Rutherford, in the Section of Physiology. Able papers were read, and good work done in the various sections; and as regards both work and play, the weather having been most kindly favourable, the members of the Association had an excellent and memorable meeting.

We will only observe further that the Association is now an incorporated Association, that it will meet in 1876 at Brighton, and that Sir J. Cordy Burrows was appointed President-elect.

The British Association for the Advancement of Science met at Bristol during the last days of August and the first days of September. Sir John Hawkshaw, the President, confined himself in his able address to a review of the origin and progress of engineering science and art, in which he has himself attained eminence and distinction. Professor Rolleston delivered an admirable and eloquent address on "Man and Human Progress," in his capacity of President of the Department of Anthropology. And among other addresses and papers of special interest to the profession may be mentioned Professor Cleland's, in the Department of Anatomy and Physiology; a paper by Drs. Brinton and Smith, on "Intestinal Secretion"; one, in the Section of Economic Science and Statistics, by Dr. F. J. Mouat, on "The Value of European Life in India," and two by Dr. Beddoe, on "The Mortality of Adolescence," and "On the Systematic Examination of the Physical Characters of Man in Britain."

During the meeting of the Social Science Congress, held in October at Brighton under the presidency of Lord Aberdare, the most interesting and (to use a rather "slang" phrase) the most telling of all the addresses was that delivered by Dr. B. W. Richardson, as President of the Health Department. He delighted, and at the same time instructed, them with a most originally conceived and admirably carried out vision of a model City of Health; which, while it will be looked upon no doubt by most men as but a dream, a poetical picture of the impossible, will yet, we suspect, do more to make the many think of and desire sanitary improvements that seem to them within reach, than any ordinary, and, as they would say, dry exposition on the science of hygiene. Many good and instructive papers were read, and ably discussed, in this departpartment, on the Construction of Houses, and the Sites of Houses; on English as compared with Foreign Watering-Places; on Water-Supply; on the Variations in the Composition of River Waters; on the Pollution of Rivers, and other important sanitary questions—by Mr. Collins, Mr. Eassie, Mr. Godwin, Dr. Macpherson, Dr. Fussell, Mr. Rendle, Professor Wanklyn, Dr. Cornelius Fox, Dr. Haviland, Mr. W. J. Cooper, Mr. Harry Leach, and other authorities and observers.

In October a new association, which, owing chiefly to the energy of its indefatigable secretary and promoter, Mr. George Brown, of Islington, had already done good and successful work in prosecuting unqualified practitioners, was formally and publicly established at a large meeting of members of the profession. It has for its objects the suppression of unqualified practice, secret quack medicines, indecent medical publications, bogus diplomas, and improper alliances between qualified and unqualified practitioners; together with the prevention of the registration of "non-certified" deaths, the correction of the abuse of out-patient practice at hospitals, the protection of medical men from vexatious prosecutions, and the obtaining for medicine a firmer political basis in the House of Commons. It has already several branches in active existence, and promises, if judiciously and wisely managed, to be a very useful and valuable association, though, as has been already pointed out, its title—"The British Medical Defence Association"—is not quite a happy one. The Association is for the defence of the public primarily, and of the profession secondarily, and to insure success and vitality this should be clearly held in view and put forward. It is a difficult thing to change a name once publicly adopted, but we should think that some such title as "The Medico-Political Association" would be more *ad rem* and fortunate.

The various medical societies have been active and prosperous. There were special debates at the Pathological, the Obstetrical, and the Clinical Societies; but the honours were carried off this year by the Obstetrical Society. At the Pathological Society the special debate was on the Germ Theory of Disease, and was opened, in an able address, by Dr. Charlton Bastian, whose opinions on the subject were already pretty well known to the profession. Many distinguished and able workers took part in the debate, among whom we may mention Dr. Burdon Sanderson, Dr. Maclagan (of Dundee), Dr. Dougall (of Glasgow), Mr. Jonathan Hutchinson Mr. Knowsley Thornton, Dr. Murchison, and Dr. Payne; but the opposition was rather weak compared with the defence of the germ theory; and the subject was too wide and vague for any good and clear result. Perhaps one of the most remarkable points in the debate was the extreme philosophic caution with which Dr. Sanderson spoke. He had been credited with being a promulgator and supporter of the germ theory; but, while refusing to accept the explanations of Dr. Bastian, he declined putting forward any theory of his own. At the Clinical Society the debate was, or rather perhaps seemed to promise to be, on Aseptic Surgery, but wandered into a discussion on the use and value of various kinds of antiseptic dressings, and certainly was not, if it was ever meant to be, a debate on what is known as the Lister method. At the Obstetrical Society, Mr. Spencer Wells opened a debate, which lasted through many meetings, with a most admirable address on "The Relations of Puerperal Fever to the Infectious Diseases and Pyæmia." The discussion was very ably and vigorously carried on, and many of our most eminent and prominent practitioner took part in it. Our space will not allow us to even give all their names here, but the fact that such men as Dr. Matthews Duncan, Dr. Barnes, Dr. Richardson, Dr. Swayne (of Clifton), Mr. Callender, Dr. Farre, Dr. Braxton Hicks, Drs. Playfair, W. Williams, Savage, Tilt, and Graily Hewitt, and Dr. Fordyce Barker (of New York) joined in it, personally or by letter, is of itself more than enough to show the interest taken in the debate, and the weight and importance of it. We cannot pretend here to summarise its outcome; but it may perhaps at least be said that the term "puerperal fever" must for the future be considered a very imperfect and vague term, comprehending a

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group of post-partum diseases; and that it was shown that we have a very imperfect and insufficient knowledge of the real condition of women during the period of utero-gestation and after ordinary delivery, of the sources of danger, and of the causes of the terrible diseases included under the name "puerperal fever."

"Hospital Sunday" was again observed on the second Sunday in June, and the results were not very encouraging to the earnest and zealous supporters of the movement, for the sum received was nearly three thousand pounds less than that collected last year. This was owing partly, no doubt, to the fact that the weather on the selected Sunday was extremely wet and unfavourable, but partly also to some disputes and differences, to which we need not make more special reference now, on some points of management.

The "Hospital Saturday" movement was continued, and the result was again what must be called a failure. It is a very great pity that the movement should be persisted in as a separate one, but as yet its committee will not either mark, learn, or digest the lessons of experience.

We have had the pleasant and satisfactory task of recording many instances of public acknowledgment of the worth and usefulness of individual members of the profession. Mr. Hancock, the distinguished Surgeon to the Charing-cross Hospital, with which he had been connected for thirty-six years, was presented with his portrait, painted by G. Richmond. Mr. J. Hamilton was appointed Surgeon-in-Ordinary to her Majesty the Queen in Ireland, in succession to Dr. Robert Adams, but enjoyed the well-deserved distinction only a few months, and has been, in his turn, succeeded by Mr. W. Colles, who was also, to the satisfaction of our Irish brethren, appointed Regius Professor of Surgery in the University of Dublin, in succession to Dr. Robert Adams. Dr. Sedgwick Saunders received from those he so ably serves in the City of London, a testimonial of the value of £400 in silver candelabra, a purse of gold, and a handsome piece of plate; and Dr. A. P. Stewart was presented, chiefly by members of the Metropolitan Branch of the British Medical Association, with a very gratifying and well-merited testimonial, the greatest part of which was, at his desire, devoted to the founding of a "Stewart Grant" for the encouragement of researches into the origin, spread, and prevention of epidemic diseases. Her Majesty the Queen conferred the honour of the Companionship of the Civil Division of the Order of the Bath on Dr. W. B. Carpenter, so well known and distinguished as a writer on and teacher of physiology. The honour is not, indeed, a great one, but it has very rarely been bestowed for similar services. Dr. Stokes, Regius Professor of Physic in Ireland, received from the Emperor of Germany the diploma and decoration of the Prussian Order "Pour le Mérite,"—a high honour and distinction. The Order consists of sixty knights, thirty of whom are Germans, and thirty foreigners. Among the English knights are Professor Owen, Sir H. Rawlinson, Sir George B. Airey, Sir Edward Sabine, Professor Darwin, and Thomas Carlyle. And Dr. Vincent Ambler received from the Shah of Persia the distinction of the Imperial Order of the Lion and the Sun. Many other gratifying presentations, in grateful recognition of professional services, are also recorded in our pages, but we must be content with noting these few here.

Busy Death has, as usual, caused many gaps in our professional ranks during the year. Some of those whom he garnered were ripe in years and honours, and had retired from the heat and strife of the battle with disease; some, though advanced in years, were still in arms; while not a few were only in the prime of life; and some, alas! fell very early, while they yet had their spurs to win. Mr. James Dawson had attained the age of ninety-six, and Dr. A. Walsham that of ninety, when death took them; Dr. Peter Mere Latham, long so well known and honoured by the profession in London, died at eighty-six; and Sir Charles Locock so early in life, and so many years ago, attained the highest position in his department of medicine, that it seemed almost impossible that he could be "only" seventy-six when he joined the "majority." Dr. Robert Adams, of Dublin, was eighty-two when his career of fame closed; Francis Kiernan, the anatomist, died at seventy-four; and Dr. George Webster, of Dulwich, died in harness at the age of seventy-eight. Many others might also be mentioned who had passed, some by many years, the threescore-and-ten years of the psalmist—as Dr. R. S. Island, who died at eighty-eight; Dr. S. H. Manley, at eighty-seven; Dr. John Jobson, at eighty-five; Dr. H. M. Keble, Staff-Surgeon R.N., at eighty-four; Dr. F. B. White, who also had been an army surgeon, at eighty-two; Dr. W. Beattie, at eighty-two; Mr. R. Rankine, late of the Bengal Medical Service, at eighty; William Hey (one of the Leeds Heys), at seventy-eight; Mr. Benjamin Hands, at seventy-eight; Dr. Robt. Law, at seventy-five; and Mr. T. E. Webb, at seventy-three. Among those who were taken away from us in the more vigorous and active period of life, may be mentioned Dr. Alexander Halley, Mr. J. Fernandez Clarke, Mr. G. Lewis Cooper, Dr. J. M. Dempsey, Dr. James Park, Dr. Edward Johnson, Dr. Sarvis, Dr. George Ross, Dr. F. W. Headland, Mr. William Acton, and Dr. Squarey, all of London; Dr. D. P. Evans, of Belper; Dr. Hughes Bennett, of every place where English medical science is known, but who died at Nice; Mr. J. Hamilton, Sir John Gray, and Dr. T. Maunsell, of Dublin; and Dr. O. Home Bell, of St. Andrews. While of younger and young men we have lost Mr. John Bunyan Forster, so well known as Sir Henry Thompson's able assistant; Dr. J. D. Hill, of the Gray's-inn-road Hospital; Dr. S. N. Moore, of St. George's Hospital; Dr. J. T. Mercer, and Mr. Herbert M. Floyer. We must note also again here the regret with which the profession in Great Britain heard of the death of many of our most distinguished brethren abroad, among whom we may mention M. Demarquay, Dr. Duchenne (of Boulogne), M. Jacobin Albin, C. C. Giraldès, Dr. Lorain, and Professor Luigi Porta (of Florence).

Turning now to the journal itself, we give, as has been our wont, a summary of its principal contents.

Among the "Original Lectures" that we have published during the year, we deem ourselves fortunate in having been able to give our readers part of a series of "Lectures on Injuries to the Head" from such an accomplished and experienced observer and surgeon as Mr. Jonathan Hutchinson, on the great practical value of which it would be superfluous to dwell; our pages have also contained a Clinical Lecture entitled, "Can Arsenic Cure Pemphigus?" from the pen of the same able surgeon. We have continued to publish Dr. Eustace Smith's "Commentaries on Diseases of Children"; and some of Dr. B. W. Richardson's "Lectures on Experimental and Practical Medicine," including his last two historical and instructive Lectures on "The Science and Art of Embalming"; and we were enabled also to give our readers the pleasure of reading, *in extenso*, his Address on "A Model City of Health," delivered as President of the Health Section of the Social Science Congress. Of the great value of Professor Huxley's "Notes on the Invertebrata for the use of Students of Zoology" we need not speak; as published in our pages they were eagerly sought after by the students who attended his class in Edinburgh, as well as by those who, under less privileged circumstances, were studying the same subject. We have given Mr. Thomas Annandale's instructive "Clinical Remarks on Injuries of the Hip"; Clinical Lectures by Dr. J. Andrew, "On Two Cases of Otitis, followed by Meningitis"; by Mr. Thos. Bryant, "On Diagnosis of Tumours of the Breast"; by Mr. J. W. Hulke, "On a Wound of the Palm"; by Dr. T. Grainger Stewart, "On Abdominal Abcess"; by Mr. Haynes Walton, on "Sympa-

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thetic Ophthalmitis"; by Dr. Edward Mackey, on "Empyema in Children"; and on "Typhoid Fever," by Mr. W. Robert Smith. Through the kindness of Dr. Lionel Beale we had the satisfaction of publishing in full his Lumleian Lectures "On Life and on Vital Action in Health and Disease"; while we also gave abstracts of Dr. Headlam Greenhow's instructive Croonian Lectures "On Disease of the Supra-Renal Capsules," of Dr. J. R. Lee's Gulstonian Lectures "On Puerperal Fever," and of Mr. C. F. Maunder's Lettsomian Lectures "On the Surgery of the Arteries." Hofrath Professor von Pitha's able Lecture on "The Diagnosis and Treatment of Neuralgia" will have been welcomed by our readers; and Mr. George Kirkwood enabled us to give a valuable "Statistical Report of the Major Operations performed by Professor Spence in the Edinburgh Royal Infirmary." While, as almost a matter of course, we have published in full Sir William Jenner's highly suggestive and instructive Address to the Clinical Society; Mr. Spencer Wells' able Address "On the Relation of Puerperal Fever to the Infective Diseases and Pyæmia," delivered to the Obstetrical Society; Dr. George Buchanan's Address at the Society of the Medical Officers of Health, "On some Directions for Scientific Work by Medical Officers of Health"; and Dr. Guy's "Harveian Oration."

We are glad to take this opportunity of offering our most hearty thanks to the many friends, old and new, who have given us able support and help by entrusting to us the valuable contributions we have published under the heading of "Original Communications," among which we may mention the continuation of Dr. T. H. Green's "Notes on the Pathology of Pulmonary Phthisis"; Mr. John Gorham's papers on "The Leverage of the Lower Human Jaw"; papers by Dr. Handfield Jones, on "A Case of Laryngitis, treated successfully by Veratrum Viride," on "Three Cases of Intestinal Obstruction," on "Some Analyses of the Urine in Cases of Chorea," on "Cases of Obscure Nerve Disorder," and other subjects; by Mr. T. Annandale, on "Two Cases of Foreign Bodies in the Air-Passages," and on "Unreduced Dislocations"; by Dr. James Russell, on "A very large Hydatid Cyst in the Left Cerebral Hemisphere, producing Gradual Compression of the Organs forming the Left Half of the Brain"; by Dr. Edward B. Gray, on "Cases of Nervous Disturbance during and after Enteric Fever"; and by Dr. Morell Mackenzie, "On the Hypodermic Treatment of Indolent Enlargement of Cervical Glands"; also Communications from Dr. George Johnson, on "The Chief Causes of Coma, and the Diagnostic Marks of each Variety," on "Presystolic Murmur, and on Presystolic Friction-Sound," and on "Lead Poisoning by Flake-White"; from Dr. Gavin Milroy, on the question, "Is Leprosy Contagious?"; from Dr. Hughlings-Jackson, on "A Case of nearly complete Deafness of One Ear after an Apoplectic Seizure"; from Mr. J. Knowsley Thornton, on "Unilocular Ovarian, and Extra-Ovarian Cysts"; from Dr. A. Wynter Blyth, on "The Identification of the Poisonous Alkaloids"; from Dr. J. Heaton, on "Opium Poisoning successfully treated by Belladonna"; from Mr. George Gaskoin, on "A Rare Case of Skin Disease"; from Dr. A. Yule, on Typhoid Fever and Sewer Gas"; and from Mr. Charles Orton, on "A Case of Typhoid Fever from Sewage Emanations"; and Dr. Thomas Green, on "The Sanitary State of Clifton"; from Dr. Stephen Mackenzie, on "Spontaneous Pulsation of the Retinal Vessels in connexion with Aortic Regurgitation"; from Mr. E. L. Hussey, on "Aneurism of the Popliteal Artery cured by Compression"; from Dr. H. B. Clarke, on "Infantile Convulsions"; from Dr. T. S. Dowse, on "A Case of Cerebro-Spinal Meningitis"; from Dr. Thomas Cole, on "A Case of Typhoid Fever and Thrombosis of the Left Innominate Vein"; from Mr. H. E. Cauty, on "Chronic Eczema."

We have also published "Clinical Studies," by Sir John Rose Cormack; Dr. Joseph Coats' "Notes on the Localisation of the Function of Language"; a paper by Dr. A. F. Dawson, of New York, on "Special Points in Spencer Wells' Ovariotomy Operations"; a paper on "Goa Powder," by Dr. J. F. Da Silva Lima, translated by Dr. J. L. Paterson; Mr. W. J. Lush's "Notes on a Case of Diphtheria followed by Paraplegia"; Dr. W. Macrae's "Notes on the Distinction of the Sensations of Touch, Pain, and Heat in the Sentient Nerves of Lepers"; Dr. C. Bell Taylor's "Notes on Cases of apparently Hopeless Blindness, cured by Operation or Treatment"; Dr. John Sullivan's papers on "Anæmia in Tropical Climates," and on "Marsh Fever"; Surgeon-Major C. B. Francis's "Case of Malarious Hæmaturia"; a paper by Professor Maclean, C.B., "On the True Composition and Therapeutic Value of Warburg's Tincture"; Dr. Patrick Manson's "Observations on Lymph-Scrotum and Allied Diseases"; one of the Opera Clinica of Dr. B. W. Richardson, on "Artificial Respiration"; Mr. J. Temperley Gray's paper on "Choleraic Collapse: its Analogy to Stokers' Collapse"; and Mr. F. W. Lowndes' paper on "Prostitution and Syphilis in Liverpool, etc." Further we have had the pleasure of giving to our readers Mr. C. F. Maunder's "Suggestion concerning the Operation for Ruptured Perineum"; Dr. Schetelig's "Notes on the Climate of Nervi"; Surgeon J. M. Gunning's "Case of Snake-Bite, with Recovery"; Dr. W. W. Squires' "Case of Gunshot Injury"; Dr. George Thompson's paper on "The Antiseptic System of Surgery"; Mr. Edward Nettleship's "Cases of Purulent Ophthalmia with Membranous Discharge"; a paper by Dr. John Day, of Geelong, entitled, "Is Diphtheria primarily a Blood Disease?" a paper by Dr. W. J. Branch, Basseterre, on "The Treatment of Dysentery and Yellow Fever"; Surgeon-Major Dr. F. R. Hogg's "Therapeutic Notes," and his paper "On the Various Uses of Turpentine"; Dr. James Macraith's communication on "Midwifery in Smyrna," and his very instructive narration of "How the Cholera got into Salonica, and was carried out again without Accident"; Mr. Spencer Watson's papers on "Obstruction of the Lachrymal Sac and Nasal Duct," on "Abscess of the Frontal Sinus," and on "Imperfect Sight in Engine-Drivers"; Dr. A. Lutaud's paper on "Duplay's Operative Method for the Treatment of Perineo-Scrotal Hypospadias"; Mr. W. D. Wilkes's papers "On a Case of Imperforate Anus," and on "A Case of Carbuncular Inflammation of the Lip"; Dr. D. J. Brakenridge's "On the Prevention and Treatment of Scarlatina and other Infectious Diseases by the Internal Administration of Disinfectants"; communications from Dr. J. Lewtas, "On Progressive Paralysis of Cranial Nerves, due to Syphilis"; from Mr. H. Brickwell, "On the Treatment of Tapeworm by Creasote"; from Dr. John Chapman, on "Cases of Metrorrhagia arrested by the application of Heat to the Lumbar Region, treated by Dr. Noël Guéneau de Mussy"; and papers from many other friends, whom we must beg to excuse us from lengthening this long list by mentioning their names, and the subjects of their able communications.

Among other articles of special interest and value published in our pages during the year, we may enumerate some more of the elegantly written and instructive "Letters from Madras," and the "Notes on Wine"—all from a well-known and ever-welcomed writer; articles on "Native Practice in Rajpootana"; articles on "Dr. Bryden's Vital Statistics of the British Army"; papers on "Dr. Edward Hitzig's Researches on the Brain"; a paper by Dr. Oliver Wendell Holmes on the "Physiology of Versification"; abstracts of "Clinical Lectures on Diseases of the Heart," by Dr. George W. Balfour; a very interesting communication on "The Discoverer of Chloroform"; a paper by Professor Thiersch on "Antiseptic Surgery and the use of Salicylic Acid"; an article on "The Leper Asylum at Trinidad"; two last chapters of Mr. J. F. Clarke's entertaining and instructive "Autobiographical Recollections"; abstracts of the "Lec-

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tures on State Medicine," delivered in the Hall of the Apothecaries' Society," by Surgeon-Major F. De Chaumont, M.D.; and Surgeon-Major W. R. Cornish's "Note on the prevailing Cholera Epidemic in Southern India." And we published some very useful and interesting communications from Our Own Correspondent at Mentone.

In our Editorial Articles we have had to notice and comment on numerous subjects, of all kinds—scientific, professional, politico-social, social, etc.—having endeavoured to note in this way all subjects especially, for the time, of interest to the profession, and to the public from a professional point of view. And of these may be mentioned, "Aspiration in Pleurisy," "Experiments on Cough," "The Subacute Spinal Paralysis of Adults," "The Nature of Consumption," "Epidemic Influences," "The Discussion on the Germ Theory of Disease," "The Discussion on Puerperal Fever," "Cirrhosis of the Liver in Children," "Jaborandi," "Paroxysmal Hæmaturia," "The Sensibility of the Skin in Acute Rheumatism," "Croton-Chloral Hydrate," "Responsibility in Mental Disease," "The Functions of the Brain," "The Origin of Cancer," "The Treatment of Internal Aneurism," "Carbolic Acid as a Remedy for Diabetes," and "Aseptic Surgery." On less purely scientific, but still strictly professional subjects, we have had editorial articles on "Climate and Disease in Fiji," on "Vivisection," on "Professional Remuneration," on "Success," on "Homœopathy," "Salicylic Acid," "Total Excision of the Larynx," "Health as a Qualification for the Medical Profession," "The Lost Art of Medicine," "Warburg's Tincture," "The Cambridge Certificate in Sanitary Science," "Carbolised Catgut Ligature," "The Remuneration of the General Practitioner," on "The Forensic Relations of the Whitechapel Murder," and on "Poisoning by Carbolic Acid." While on matters affecting more directly the public as well as the profession, we have treated of such subjects as "The Hospital Sunday Fund," "The Hampstead Hospital Question," Mr. Seymour Haden's eloquent letters on "Earth to Earth," "The Sanitary Conference at Birmingham," "The Public Health Bill," "The Artisans' and Labourers' Dwellings Act," and the other "Government Sanitary Measures"; "Hidden Sources of Pollution," "Some Steps towards an Ideal House," and Dr. Richardson's "Model City of Health." We have commented on "The Sale of Food and Drugs Act," "Public Analysts," and on "Alum in Bread"; on "The Inquest on Sir Charles Lyell," "Coroners and Juries," "Juries on Medical Treatment," and on "The Coroner for Central Middlesex"; on "The Army Medical Department," and "The Medical Officers of the Navy"; on "Secret Poisoning in India," on the "Certification of Lunatics," on "The General Medical Council," and on "The Admission of Women to the Medical Profession"; on "Medical Despotism," "Anti-Vaccination," and the "Rehabilitation of Small-pox"; on "Special Hospitals," on "The Grand New Hospital for Throats and Ears," and on "A Unique Medical Charity." We do not attempt to give a full list of the subjects we have had to deal with editorially, but the list we have thus given will show their wide range, and we have endeavoured in all cases to consider the interests of the public at large fully as much, if not more immediately than, those of the profession; as, indeed, we hold that our professional brethren do themselves view them. And one of our main objects has been, and ever will be, to guide and instruct the public themselves on all matters affecting the public health and well-being.

In our "Hospital Reports" we have given cases in medicine and surgery, selected as being in various ways specially useful, instructive, or interesting. The "Topics of the Day" and "The Week" have told of what has been going on at home of particular interest, professionally or socially, and the notes "From Abroad" of what our continental brethren have been most interested in. We have endeavoured to notice by our "Reviews" the new professional works; and we have tried to inform our readers of all such new inventions and new or improved articles of diet as we have thought likely to prove useful; but in these, as in some other departments of the journal, the fertility and activity of production have much outstripped our endeavours, and exceeded our capacities of space.

It only remains further for us to heartily wish to all and each of our friends and supporters, and of our brethren, wheresoever they may be, "A Merry Christmas, and a Happy and Prosperous New Year."

THE WEEK.

TOPICS OF THE DAY.

A SPECIAL meeting of the Metropolitan Board of Works was held last week for the purpose of hearing applications for the renewal of slaughter-house licences, under the Act of 1874, and opposition to the granting of the same. This was the first meeting of the Board for this purpose, and we are glad to see that the various applications were thoroughly investigated, and that in all doubtful cases the licences were refused. The Board cannot be too particular in sanctioning the opening of new establishments of this kind in the already overcrowded state of several portions of the metropolis; and in one case, where it was shown that the applicant had owned slaughter-houses in St. Pancras, sublet to another tenant, which were so badly kept as to draw forth a report from the Officer of Health for the district, the Board declined to allow the applicant to alter his premises to meet the requirements of the new Act, and at once refused the licence.

We are very pleased to find that Dr. Whitmore, Medical Officer of Health for the parish of Marylebone, in his last monthly report, has called attention to the subject of street-cleansing. He remarks that during the late severe weather the state of the public thoroughfares of the metropolis has been most deplorable. On sanitary grounds alone some improved and vastly more efficient system of street-cleansing is imperatively needed. It may be accepted as a fact that a damp, humid atmosphere tends materially to lower the standard of health among those persons exposed to its influence; and, bearing in mind that the vast superficial area which the streets and byways of the metropolis present has frequently been for days together covered with a coating of mud or slush, in many places to a depth of three or four inches, it will not be difficult to realise the degree of discomfort to pedestrians, and the amount of sickness, in the form of colds, bronchitis, and rheumatism, which such a condition is calculated to produce. More frequent cleansing of the streets would undoubtedly be attended with increased expenditure; this, however, would be repaid tenfold to the inhabitants in the shape of increased comfort and health. We are inclined to think that the state of our streets during the late frost exhibits us as either the most reckless or the most long-suffering of nations; and we are amazed that no pressure was put upon the several local authorities to compel them to have hoses attached to the street-mains for the purpose of washing away the accumulation of snow and mud so soon as the thaw had actually set in.

A Parliamentary return, procured by Mr. James, M.P., has just been published, showing the offences against the Vaccination Act of 1867 in neglecting to have children vaccinated, and in refusing to obey the orders of magistrates in regard to vaccination. The offences are enumerated from January 1, 1870, to January 1 last, as heard before justices, and so numerous are they that the document consists of ninety-three folio pages. In the face of this return, it will not be surprising to hear that Mr. Disraeli, in replying to a communication from the Keighley Guardians, refers them to the

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Acts making vaccination compulsory, showing them that no power is left with the guardians or their officers to decide as to the expediency of carrying out either the provisions of the Acts or the regulations of the Local Government Board made in conformity therewith, and informing them that, so long as they hold office, they are bound to discharge the duties imposed upon them.

At the last meeting of the Metropolitan Asylums Board the reports showed a decrease in the number of fever cases, and also that the pauper population of London is entirely free from small-pox, not one case being in the asylums. A proposition which was submitted to the meeting, but not carried, was to the effect that all the hospitals intended for the treatment of infectious diseases should be known by the names of the postal districts in which they were situated. It was, however, generally thought that the re-naming of the asylums would lead to practical inconvenience, as the drivers who had to convey the sick paupers would be delayed by misdirection whilst it was considered that their present names would always attach to them.

Dr. Buchanan, the Commissioner appointed by the Local Government Board, has commenced his inquiry into the origin of the late epidemics of typhoid fever at Croydon. He has held a public conference with the memorialists and leading inhabitants, for the purpose of receiving suggestions as to the method of conducting the inquiry. A number of theories have been communicated to him as to the probable cause of the outbreaks, one being that they were due to the pollution of the water in consequence of the use of screw-down taps and an intermittent supply, which rendered it possible for noxious matter to be absorbed into the mains and service-pipes; another suggesting that the cause might be traced to the rise of the intermittent stream known as "the Surrey Bourne Water." It was stated that out of ninety deaths, seventy had been the deaths of the servants and children of those who might be presumed to live in the upper parts of houses where sewer-gas could obtain access. Dr. Buchanan adjourned the conference to receive any further suggestions which might be tendered to him. The inhabitants of Croydon continue in a state of excitement on this question, and certain of them representing the building and lodging-house interests have been endeavouring to get up an indignation meeting against Dr. Carpenter for writing to the daily papers on the subject; but the attempt was a failure, as only a very few persons put in an appearance.

It is reported that the resignation of Dr. Stevenson, Medical Officer of Health for St. Pancras, has led to a reaction in the Vestry in opposition to the views of the Sanitary Committee. Dr. Stevenson had recommended the appointment of two additional sanitary inspectors, but the Sanitary Committee reported that there was no necessity for any additional aid. After some very vigorous opposition, however, it has been decided to appoint an additional sanitary inspector, at a salary of £100 per annum, and meanwhile the question of the resignation of the Medical Officer of Health has been deferred until the next meeting of the Vestry.

Professor Hebra, who some time ago was laid up with an attack of pleuro-pneumonia, is, we are happy to hear, now completely convalescent, and it is hoped that he will be able to commence his course of winter lectures during the present month. It would be a sore loss for the Vienna Medical School, and for the numerous foreigners who resort to it, if they were to be deprived for any lengthened period of the services of this genial and popular teacher.

ON THE TRANSPLANTATION AND IMPLANTATION OF HAIRS.

THE *Centralblatt für Chirurgie*, December 4, takes a very interesting paragraph from the *Zeitschrift für Biologie*, Bd. xi., pp. 341-380, on the subject of the transplantation of hairs, which, if verified, may form a useful addition to the practical bearings of this question. E. Schweninger was led by the well-known experiments of Reverdin on the transplantation of epidermis to conduct a series of similar observations with hairs. It appeared to him that although experiments were not altogether wanting on the subject, they were far from being of a convincing character. The hair, if torn out with its root-sheath complete, offers conditions which might *à priori* be considered favourable for the starting-point of epidermic growth, for, in the first place, the cells of the outer layer of the sheath are pigmented, and genetically identical with the lowest cells of the rete Malpighii; and, in the second place, the hair-bulb is completely surrounded below with cells which exactly correspond with those of the Malpighian layer, and, like this, especially in dark men and animals, are provided with ordinary pigment-cells. The experiments were conducted in Professor Nussbaum's clinique, and consisted in pulling out human hairs with the root-sheath entire, and placing them on, or less frequently sticking them into, the granulations of a healthy sore. The projecting hair was then cut off, and a piece of oiled-silk protective and a light carbolic acid dressing applied. In the most successful cases the result is "that from a hair which is surrounded by its outer root-sheath centres of cicatrisation may start, which unite firmly and intimately with the underlying granulations." Sometimes in twenty-four hours, more often in from three to five days, a delicate pellicle appears, the edges of which spread further and further, but never reach a size larger than that of a sixpence. He thinks that after complete union has taken place between the sheath and the underlying or surrounding tissues, the hair itself falls out. Cicatrisation only takes place from the edges when epithelium already exists, and the author considers that there are no facts to support the theory of the regeneration of epithelium from connective tissue or wandering cells.

A second set of experiments was made with reference to the implantation of hairs recently torn out, with their sheaths attached, into the anterior chamber of the eye, analogous to those previously performed by Dooremal and Guldzieher. He punctured the cornea, generally in its centre, with a fine needle, and then placed a hair, taken from the eyelid or snout, into the minute opening so made; and, after cutting it short at the level of the cornea, left the eye without any dressing whatever. As a rule, the presence of the hair caused no reaction of any kind, but sometimes considerable inflammation was the result. But when the hair lay with its sheath against the iris, a covering was always thrown out by the latter over the root, which then extended along the hair to the back of the cornea. If the apex of this conical prolongation reached the cornea, a complete anterior synechia was the result; and under the microscope the richly pigmented tissue of the iris was often seen to project far into the cornea; whilst the fibres of both lens and cornea constantly ran one into the other, and formed a continuous network. From the sheath then started a special growth of cells corresponding to those originally existing in it. The branched cells of the iris not only became closely united with those of the sheath, but also sent processes into their interior. The epithelium of the sheath, which retained its typical form, not unfrequently acquired pigment from the surrounding iris.

THE ROYAL VISIT TO INDIA.

IN a letter dated "At Sea, November 26," our Special Correspondent, travelling in the suite of H.R.H. the Prince of Wales, says:—We left Bombay yesterday, and hope to be at Goa, just for a passing visit, to-morrow. We shall also call at Beypore, and then go on to Ceylon. The report we receive there will determine our future movements; at present they

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are rendered uncertain by the fact that cholera is on the move epidemically in Southern India. The reports and telegrams we have received in numbers from those districts we intended visiting show that it would not be prudent to let His Royal Highness go there, and consequently our programme is changed, and the visit to certain portions of the Madras Presidency postponed. We hope that the reports we may receive at Ceylon will enable us to do that later which we thought would have been done now. The visit to Bombay, Poonah, and Baroda has been very successful, and, notwithstanding a considerable amount of hard work and great heat, the Prince of Wales has borne it wonderfully. He is in excellent health and spirits, and is as tolerant of heat as anyone I have ever met. Of course, care and precautions are necessary, and all these are taken. I am delighted to say that the Prince and his suite have left Bombay, after sixteen days' sojourn, in the best of health. The Prince has now seen something of Indian life, not only in a Presidency town, but in a native State—Baroda,—and he has encountered an amount of heat very unusual at this season even in Bombay, which conveys a very good idea of what the English in India have to submit to. The Prince's reception everywhere has been most enthusiastic, and he is naturally much pleased with all he sees. There is every reason to hope that the weather will improve daily. Hot it must be to a certain extent in Ceylon, but at Kandy it will probably be less so than at Colombo or even Bombay. No really cold weather can be relied on till after we leave Calcutta early in January. It is a great misfortune that cholera should have made its appearance in the Madras Presidency. There has clearly been a tendency to it during the year. We must hope that, having passed over the North-West of India, his Royal Highness's route, after leaving Calcutta, will be free from all danger. Of course, careful inquiry will be needed throughout the whole expedition. In the meantime, it will be satisfactory to everyone to know that the Prince of Wales is in high health and spirits. His visit to India will, I trust, be as satisfactory to himself as it is evidently gratifying to his people.

CAN A SURGEON CLAIM FOR SERVICES RENDERED BY AN UNQUALIFIED ASSISTANT?

A CASE of great importance to the medical profession, as well as to the public, was decided last week at the Clerkenwell County Court. The plaintiff, Dr. E. Godfrey Purcell, of Southampton-street, Strand, who also has a shop in the King's-cross-road, sued the defendant, Mr. George Jackson, of Pentonville, for two guineas for services rendered. The defendant pleaded never indebted. The plaintiff was represented by a man named Edward Gater, who said that he was the assistant of Dr. Purcell, and had attended the wife of the defendant in her confinement, and had also attended the infant afterwards. The defendant did not deny that his wife and child were attended by Gater, but objected to pay on the ground that Gater was unqualified, and therefore should not have undertaken the care of his wife and child. His wife had gone to a shop fitted up as a chemist's, in the Gray's-inn-road, over which the plaintiff's name is painted, with the intention of engaging him to attend her in her confinement. She saw Gater, who said that Dr. Purcell resided too far away to attend her himself, but that he would attend her for the usual fee. She, believing he was duly qualified, engaged him, and he attended her. He also attended the baby, which died within a month of its birth. Dr. Purcell had nothing whatever to do with the cases, except that a day or two before the child died he called and asked to see it. He simply looked at it for a moment and left the house again directly. When the child died, defendant applied to Gater for a certificate, who said that he could not give it himself, but would get it from Dr. Purcell. From this, the defendant said, he first suspected that Gater was unqualified, and he decided not to pay the account, as he felt that he had been deceived. In cross-examination, Gater said that he was registered as an assistant but was not qualified. The judge said that neither Dr. Purcell nor Gater had any legal claim upon the defendant, and he should therefore give judgment in favour of the defendant with costs.

THE NEW BOARD OF EXAMINERS, ROYAL COLLEGE OF SURGEONS.

AT a meeting of the Council of the Royal College of Surgeons, on Monday, the 20th inst., to elect nine members for the new Board of Examiners in Anatomy and Physiology for the Fellowship and Membership of the College, the following gentlemen (twenty-eight in number) came forward, viz.:—J. E. Adams, London Hospital; W. M. Baker, St. Bartholomew's; T. H. Bartleet, Birmingham; R. Barwell, Charing-cross; E. Bellamy, ditto; **J. Birkett*, Guy's; J. N. C. Davies-Colley, ditto; A. E. Durham, ditto; **J. C. Forster*, ditto; **G. G. Gascoyen*, St. Mary's; **C. Heath*, University College; **L. Holden*, St. Bartholomew's; **T. Holmes*, St. George's; H. G. Howse, Guy's; J. Langton, St. Bartholomew's; B. T. Lowne, Middlesex; J. McCarthy, London; F. Mason, St. Thomas's; H. Morris, Middlesex; A. T. Norton, St. Mary's; T. W. Nunn, Middlesex; **H. Power*, St. Bartholomew's; U. Pritchard, King's College; W. Rivington, London; **W. S. Savory*, St. Bartholomew's; W. Thomas, Birmingham; W. W. Wagstaffe, St. Thomas's; **J. Wood*, King's College. The choice of the Council fell on those gentlemen whose names are printed in italics and marked with an asterisk.

SOUTH LONDON SCHOOL OF PHARMACY.

THE annual dinner in connexion with the South London School of Pharmacy took place at the Horns Assembly Rooms, Kennington, on the 17th inst. About 100 students were present, in addition to the teaching staff and several visitors. Dr. Muter, as usual, presided, and proposed the toast of the evening—"Success to the South London School of Pharmacy,"—which was received with great cheering. "The Health of Dr. Muter" was proposed by one of the students, and enthusiastically responded to. During the evening the following prizes were presented to the successful candidates, viz.:—Senior Chemistry: Medal, Mr. Hannah; Certificate of Honour, Mr. Bumpstead. Junior Chemistry: Medal, Mr. Shepley; Certificate of Honour, Mr. Brooks. Botany: Medal, Mr. Hunter; Certificates of Honour, Messrs. Bumpstead, Keer and Fryer (equal). Materia Medica: Medal, Mr. Keer; Certificate of Honour, Mr. Hannah. Practical Pharmacy: Medal, Mr. Brooks; Certificate of Honour, Mr. Shepley.

THE NEW PROFESSOR OF PATHOLOGICAL ANATOMY IN VIENNA.

PATHOLOGY in Vienna seems to be entering on a new era with the advent of Professor Heschl. The Pathological Institute is to be completely remodelled. New post-mortem rooms are to be built, with proper ventilation, and with windows in the roof, instead of, as at present, in the side walls. There will also be proper laboratories for microscopical work, in which the abundant material afforded by the gigantic General Hospital may be made practically available for the instruction of the students; hitherto this material has been allowed to run to waste in a most unsatisfactory manner. The transference of the medico-legal post-mortems from the Professor of Pathological Anatomy to the Professor of Forensic Medicine will enable the former to devote himself exclusively to his proper subject, while, at the same time, the appointment of three assistants instead of two will still further distribute the merely mechanical functions of his office, and permit the new Professor to devote himself to really scientific work, as well as to bestow the necessary amount of time and pains on his course of lectures.

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THE LATE TRAGEDY AT NORWICH.

We notice with satisfaction that the coroner and jury have completed their inquiry into the circumstances attending the death of the three unfortunate children who were murdered by Robert Edwards whilst they were patients of the Norfolk and Norwich Hospital. In returning a verdict of "Wilful murder" against Edwards, the jury expressed strongly their condemnation of the conduct of Mr. Little, surgeon, of Aylsham, who recommended Edwards as a fit and proper person to be admitted as a patient of the Hospital; and they further stated that, in their opinion, great blame attached to the Rev. John Gunton, Rector of Marsham, in giving Edwards an order of admission, as he must have known his antecedents, and he had thus broken the laws of the charity. The jury warmly commended Mr. Baumgartner, the House-Surgeon, for the courage he displayed in securing the murderer whilst engaged in his deadly work.

FROM ABROAD.

Paris Hospital Mortality Returns.

M. Besnier, in his reports to the Paris Hospital Medical Society for the quarter ending September 30 (*Union Méd.*, November 1, 4, and 9), observes that this quarter, like that which had preceded it, had been characterised by numerous atmospheric variations, a medium temperature, a high hygrometric condition, and abundant rain, winds from the south and west being those which prevailed. The prevalence of disease was such as is observed in medium years, no marked predominance of any affection existing, with the sole exception of diphtheria, which was both frequent and fatal The general mortality of the quarter in the hospitals and hospices has been relatively moderate. It amounted in 1875 to 2548 deaths, as compared with 2524 deaths in the same quarter of 1874, 2707 in 1873, and 2778 in 1872. 1. *Affections of the Respiratory Organs.*—Of 3144 cases admitted in 1875, there died 802, or 25·50 per cent.—625 of the deaths, or 45·25, being due to phthisis; 111, or 23·71, to pneumonia; 41, or 4·25, to bronchitis; 20, or 6·71, to pleurisy; and 5, or 15·15, to pertussis. For the period of time ranging from 1868 to 1875 (omitting the year 1871) the entire number of admissions for this class of affections for this quarter amounted to 21,636, and of the deaths to 5897, or 27·25 per cent. M. Lépine, in a communication from the St. Antoine, draws attention to a case of simple *pneumonia* in which a characteristic amendment of the stethoscopic signs preceded by twenty-four hours the fall of the temperature, this only descending from 39·8° and 40° C. to 36·5° at the end of that time. In another case of pneumonia he observed a very notable difference of temperature in the two arms, that of the side of the pneumonia being the highest. This, indeed, he observes, is a very common occurrence in pneumonia, especially in the aged, and would receive, in a clinical point of view, as much consideration as the redness of the cheek (*pommette*), if it forced itself as readily on the attention of the observer. 2. *Diphtheritic affections* manifested themselves more frequently and more severely during this quarter than they have done at corresponding epochs since 1867. There were 132 admissions and 92 deaths, or 69·69 per cent., the total number of cases during 1868-75 having been 591, with 376 deaths, or 63·62 per cent. At the Hôpital des Enfants Malades, M. Labric had 20 cases of croup. Of these 2 died without operation, and 18 were operated upon; of these 12 died, 5 recovered, and 1 remained under treatment. M. Archambault had 5 cases of croup, and operated upon them all, with 3 recoveries. He calls attention to the fact that in all these cases *albuminuria* was present for several consecutive days, and sometimes was very abundant; then it diminished, and at the commencement of convalescence (*i.e.*, when the canula could be dispensed with) disappeared. It does not exert any ill influence on the issue of the operation, but its cessation marked the period of amelioration. Thus it may be said that if its presence is not absolutely a bad sign, its disappearance is a good one. At the St. Eugénie, M. Lépine had 2 cases of croup, both dying after operation. 3. *Small-pox.*—After small-pox had entirely ceased to appear in Paris, an epidemic on a small scale began during the present year, as recorded in M. Besnier's former quarterly reports, which we noticed as they were published. In the present quarter the disease showed a tendency to decline (39 deaths in July, 22 in August, and 13 in September),—a fact which must not be taken to indicate the approaching termination of the epidemic, but as an additional proof of its abatement during the summer months, which has always been the case also in former epidemics. After repeated demands on the part of the hospital physicians, the Assistance Publique has at last consented to establish three separate services for small-pox patients, instead of scattering them over the general wards. Since May, when this took place, there have been 178 admissions, with 151 dismissals and 21 deaths. In one of these services 5 medical students took the disease, of whom 2 died. M. Besnier again urges what he has formerly so strongly recommended, that the revaccination of students should be rigorously insisted on. M. Dujardin-Beaumetz reports that in the service under his charge he has derived great advantage in confluent small-pox from the use of chloral baths. When the epidermis in these cases becomes denuded, he puts the patient into a large bath, to which are added from ten to twenty grains of chloral, avoiding larger quantities in fear of too rapid absorption. The ciactrisation is rendered more rapid, and the nauseous fetor is diminished. 4. *Typhoid Fever.*—The ordinary summer-autumnal epidemic of this affection has been lighter, both as regards numbers and mortality, than during the last seven years. There have been but 285 cases with 66 deaths, or 23·15 per cent. The total of cases for the seven years was 2534 with 709 deaths, or 27·54 per cent.

GENERAL CORRESPONDENCE.

A DIFFERENCE OF OPINION.

Letter from Mr. H. O. Thomas.

[To the Editor of the Medical Times and Gazette.]

Sir,—I notice, in the report of Mr. Maunder's lecture on a case of hip-joint inflammation, that he is represented as teaching that my hip appliance is "closely allied in its action to the long splint," &c., and is made of soft iron moulded to the inequalities of the limb. It is not the same in principle as the long splint, as it is applied posteriorly, not laterally, as the last is. Again, "fibrous anchylosis is said to be encouraged," when the reverse is the tendency of its use, if the theory I have advocated guides its use.

I am, &c.,

Hugh Owen Thomas.

11, Nelson-street, Liverpool, Dec. 14.

REPORTS OF SOCIETIES.

CLINICAL SOCIETY.

Friday, December 10.

Thomas Buzzard, M.D., F.R.C.S., Vice-President, in the Chair.

Sir Thomas Watson and Dr. C. J. B. Williams were elected Honorary Members of the Society.

Diabetes treated by Skimmed Milk.

Dr. Donkin read the reports of two cases; the subject of one of which, a carpenter, was present for examination. This man had fallen from a cart in June last, and been dragged 400 or 500 yards. Shortly afterwards, he began to suffer from the usual symptoms of diabetes. On October 6 he was first seen by Dr. Donkin, who found that the quantity of urine voided in twenty-four hours was about twelve pints, that its specific gravity was 1045, and that it contained twenty-eight grains of sugar to the ounce. There was great general prostration. Next day the patient's diet was restricted to seven pints of skimmed milk daily, being increased to eight pints a day on October 9. The specific gravity of the urine decreased at once, and on October 14 was 1010, whilst the urine did not contain a trace of sugar. There was a consentaneous great improvement in the general condition of the patient. Shortly a mutton-chop, with cabbage, was allowed daily, then twice daily, and subsequently with fish, sugar being still absent from the urine. Lastly, tea and a little brandy

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were added to the daily diet. Dr. Donkin considered this case another corroborative proof of his position that milk-sugar, as a constituent of milk, does not contribute to the formation of diabetic sugar. The second case was that of a child, ten years of age, of healthy parentage. She had been very healthy until about July last, when all the usual symptoms of severe diabetes began. She was then placed, by her usual medical attendant, on a meat diet; iron was given as a tonic, and Dover's powder at bedtime. Slight improvement followed this treatment. On October 17 the skimmed milk diet was begun, and, in a week, the specific gravity of the urine had fallen from about 1040 to 1016. On October 29 the density of the urine was 1012, whilst it did not contain a trace of sugar. Sir Thomas Watson had been consulted in the case before the treatment was begun, and had received from the patient's father a specimen of urine passed after the treatment had been adopted for eighteen days; and he wrote that it had a specific gravity of 1015, and that it did not contain a trace of sugar nor any albumen. Her diet was then increased by the addition of beef-tea, mutton-chops, and cabbages. Her general health greatly improved. Dr. Donkin thought these two cases good illustrations of the efficacy of the treatment in arresting the disease when applied early.

Dr. GLOVER remarked on the interest and importance of the cases related. He suggested that the man, who was present, should have his urine examined for sugar. This was done, and none was found.

CASE OF LYMPHADENOMA.

Mr. WARRINGTON HAWARD read notes of this case. The patient, a child of four years, had on the left side of the neck an immense mass of enlarged glands, extending from the ear above to the clavicle below, and from the spine behind to the trachea in front. The glands were elastic, and moderately firm, and not adherent to the skin. There was no evidence of disease in any other part of the body, and the number of the white globules in the blood was not increased. There was a family history of phthisis on the mother's side. The child was pale and rather thin; the growth was of a year's duration, and commenced soon after an attack of small-pox. As the disease of the glands appeared to be confined to those visible in the neck, it was determined to remove these, in the hope that the general infection might thus be prevented or delayed. As the removal of the disease involved the dissection of the whole of one side of the neck, it was effected in two operations. At the first, the affected glands were removed from the anterior triangle of the neck; at the second, from the posterior triangle. The child recovered well from the operation, and soon gained flesh and colour to a remarkable extent. Subsequently, however, the disease returned in the upper part of the left anterior triangle of the neck, and tumours afterwards appeared in the axilla and groin. The child died, pale and emaciated, and, post-mortem, adenoid growths were found in the abdominal viscera, in addition to the enlargement of the glands. No recurrence occurred in the posterior triangle of the neck, and it was thought that possibly some diseased glands might have been left in the upper part of the anterior triangle, where the growth first reappeared. The question raised before the Society was, whether, when the disease commenced in one set of accessible glands, by the removal of these the general infection might be prevented or postponed. Evidence was adduced to show that the disease was often for a time completely local, and appeared to have been so in the case related for at least a year; and the author expressed the opinion that in its early stages it would often be possible to remove all the glands affected by the disease, without incurring any graver risk than the nature of the case would seem to permit.

Dr. POWELL thought that, as a rule, this plan of treatment would not be of much use, but rather hurtful than otherwise. Such enlargements of glands were constitutional, the situation of them accidental, being often set up by local irritations, as eczematous eruptions about the ears in children. When these healed the enlarged glands remained behind. The operation, he thought, might aggravate the constitutional disease.

In reply to Dr. SOUTHEY, it was stated that there were no nervous symptoms in the case.

Mr. T. NORTON said he had seen and removed such sets of glands from the axilla, especially if of apparent local origin.

Dr. SILVER pointed out that the condition described by Mr. Norton was totally different from that described by Mr. Haward, whose case was one of a distinct and specific disease. He was interested in Mr. Haward's account of the case, having one under his care at the moment; and having also a well-marked case of leucocythæmia, the contrast was striking. In the case of leucocythæmia, the white blood-corpuscles were very numerous, but the red seemed natural. In the case of lymph-adenoma there was no excess of white corpuscles, but the red were scanty, and ran, not into *rouleaux*, but into heaps. In the other case the arrangement was natural. In the case of lymph-adenoma the blood contained a quantity of granular matter, fatty-looking in appearance. In this case the variation of night and morning temperature was marked, and the spleen had been enlarged from the time she came under treatment. At first, too, she had violent trembling or shaking movements, semi-choreic in character, especially about the middle part of the body.

Dr. GREENFIELD had seen two such cases. In them he said the temperature sometimes took a sudden rise to 105° or 106° Fahr., with or without distinct rigors. He had seen the blood corpuscles in heaps in other forms of anæmia, and also groups of smaller cells like granules most abundant after the sudden rise of temperature. Then, too, the skin would become discoloured—a brownish colour. There seemed to be some confusion as to the nature of the disease of the glands. These might become enlarged from other causes, as scrofula, but lymph-adenoma was an infective disease. Even in the spleen the nodules enlarged at their margin like a cancer. All adenoid growths should not be grouped together.

Dr. POWELL explained that he referred to a condition of constitution which kept up a local lesion.

Dr. SOUTHEY said he had collected twenty-two cases. In two of his own there were nervous symptoms apparently hysterical, afterwards epileptic.

Dr. MOXON saw no reason why the operation should not be attempted. Arsenic, which had been very highly recommended for such cases, he had tried without success.

Dr. GLOVER mentioned the case of a man with a large axillary tumour and an enlarged liver apparently from this cause. He complained greatly of cold.

Mr. HAWARD wished to make it clear that this was not scrofula. There was no local irritation, and the child greatly improved for a time after the removal of the affected glands. Scrofulous glands of this size would probably have been caseous. The temperature rose only to 103°, and there were no intermissions.

ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.

SATURDAY, DECEMBER 18.

Dr. GEORGE BUCHANAN, President, in the Chair.

THE minutes of the preceding meeting having been read and approved,

Dr. DUDFIELD read a paper on "The London Slaughter-Houses and Cowsheds," of which we append an abstract. The labours of the Society in respect of slaughter-houses had not been without effect: many of the recommendations had been adopted by the local authorities under the statute of 1874, and fully endorsed by the action of the justices in the Kensington division. The principal cause of failure to obtain effectual sanitary reforms was the want of a responsible Medical Officer to the Metropolitan Board of Works, but in a minor degree the evil could be traced to the mistaken idea that the new jurisdiction of that body was designed to supersede the powers hitherto possessed by vestries, and consequent inaction on their part. In Kensington the sanitary staff continued in the discharge of their ordinary duties, and the Vestry raised objections to licences in cases passed by the Metropolitan Board as having yielded technical compliance with the by-laws. The result of this course was the refusal of licences to existing slaughter-houses having no separate entrance and no separate lairage, matters that were fully as important as the by-laws forbidding slaughtering in view of the public or in premises used as stabling, or as a thoroughfare to stables or cowsheds. These points it was desirable, however, to embrace specifically in the by-laws, and the effect would be a reduction in the number of private slaughter-houses in the manner shadowed forth by the report of the Commons' Select Committee of 1873. On such grounds, and by reason of inability or unwillingness to comply with the regulations framed under the Act, the licences in Kensington were diminished from

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forty-eight in 1874, to thirty-two in October, 1875; and the decrease throughout London might be roughly estimated at nearly 300 from the total of 1340 heretofore existing. The main provisions still needed were—separate entrance; independent lairage (sanitarily complete); prohibition of the use of stabling, lairage, or cowsheds for the hanging of meat; a jointless flooring impervious to blood in the slaughter-houses; drainage quite free from direct communication with the sewers, or with the interior of the premises, so as to preclude nuisance from being charged with excreta and blood, and from escape of foul gases; an appropriate trap, the covering of which shall be irremovable by slaughterers; openness of the slaughter-house to the roof, and ventilation by louvred lanterns; non-allowance of rooms over lairs; prohibition of the running of blood, garbage, and manure down the common sewers; a slate or metal-lined tank for water, with an overflow pipe not connected with either waste-pipe or drainage; riddance of dung-pits in offensive proximity; requirement of the best-approved apparatus and tackle in old as well as new slaughter-houses; and the making of molestation (including abuse or intimidation) of an officer in the discharge of his official duties an offence within the meaning of the by-laws. Everything that is necessary should be specified, and not left to magistrates' discretion, as in no other way could uniformity of interpretation and administration be expected. The risks incidental to the system of private slaughter-houses were mainly dependent on nuisance and on the illicit sale of diseased, unsound, or unwholesome meat; and they might be reduced to a minimum by proper supervision and effective regulations. But in the matter of the supply of milk, dangers loomed in every direction, and there were considerations of vital importance to prompt the call for legislative intervention. The cowshed was often nothing more than an ordinary stable, with dwelling-rooms above, destitute of a yard, and with very defective ventilation. Almost any ricketty old building was thought good enough for a cowshed, and it would frequently be found full of stale, offensive litter, close and crowded, no rule having been laid down as to cubic and floor space. The food was sometimes far from nice, consisting largely of brewers' grains and distillers' mash, that quickly soured in hot weather, while vegetable refuse eked out the supply of hay and mangolds. The water-supply was generally deficient, a single cistern, in some instances, serving cows and residents above them, and for the flushing of latrines, and being connected by the waste-pipe with the drains. To enhance the milk-supply, distillers' wash was often given instead of water to drink, and for the same purpose a high temperature was maintained. There were many exceptions to this condition of things; but, as a rule, the objectionable sheds were held by totally uneducated small tradespeople, practically unacquainted with the management of cows, and bent on making as much milk as might be possible. A more cogent reason for regulation of these places was found, however, in the evidences of disease in man being traceable back to the milk-supply—to faults of construction and position of the sheds, to injurious diet of the cattle affecting the milk, to the existence of disease in the animals, and to the prevalence of infectious maladies in the persons of *employés* about the cows and in the dairies. The President of the Society was among the first to draw attention to this matter, so far back as the year 1862, when he traced the high rate of mortality in a crowded locality to the close contiguity of a cowshed in St. Giles's. Mr. A. H. Smee, in a work on "Milk in Health and Disease," had given valuable hints on the causation of disease through the insanitary condition of cowsheds, milk being a ready absorbent of offensive gases, and most injuriously affected by contact with impurities. But milk might become a factor of disease from the nature of the food on which cows were fed. Distillers' mash, given, probably, in bad condition to cows, produced severe attacks of diarrhœa in the consumers of milk. Dr. W. Price Jones informed Dr. Dudfield that he had repeatedly traced disease (diarrhœa especially) in young children to the milk they consumed being that of cows fed upon grains, probably sour or fermenting; and he had also seen disease pass quickly away on the substitution of milk from cows fed on hay or pasture. Mr. Smee illustrated the effect of food upon milk by the statement that where large quantities of oil-cake were given the milk produced was useless for the table, rancid oil floating on the surface after boiling. Milk from cows fed on sewage-grass went putrid, and stank in twenty-four hours, and butter churned from such milk became almost immediately rancid. Again, sickness had been traced to the contamination of milk by the products of disease; many distinct outbreaks of scarlatina furnishing illustrations, where, probably, contagion found its way into the milk-pail in the shape of cuticle from the peeling hands of the milker, from throat secretions, or from the absorption of germs floating in the air of infected places. Enteric fever was another disease undoubtedly spread through the agency of milk, by the addition of water polluted with typhoid excreta. Still further, disease in man might be caused by both ordinary and specific disease in cows; as inflammation of the lungs, severe and even fatal dysentery, etc. Dr. Meymott Tidy had acquainted the author of the paper with a group of cases of a carbuncular character, originating from the use of milk of cows suffering from foot-and-mouth disease. Affections of the mouth, and a blistered state of the mucous membrane of toes and fingers, were among the forms of such disease; and yet science was not able to detect any change in the appearance of the milk, although the quantity rapidly and greatly diminished. In concluding his paper, Dr. Dudfield submitted a series of proposed regulations, which might, after discussion, be referred to the Council of the Society for consideration and report.

In the debate which followed the reading of Dr. Dudfield's paper,

Dr. Stevenson remarked that since the passing of the Slaughter-Houses Act, nearly all the objectionable lairs, etc., had been removed or remodelled. He thought it most desirable that underground cisterns in connexion with cowsheds, etc., should be removed, as these get saturated with surface-water and sewage. He had frequently detected large quantities of albuminoid ammonia and filth in the water from such sources. He had known many calves die after taking the milk from a cow with foot-and-mouth disease.

Dr. Tripe desired that doors communicating with slaughter-houses be covered with zinc, to the same height as the cement on the walls according to by-laws, so as to have an impervious material all round the room. The magistrates are sure to support the medical officer of health if he can bring forward sufficient proof of the infraction of slaughter-house by-laws. In any proposed legislation for cowsheds he desired that there should be a uniform minimum quantity of cubic space.

Dr. Meymott Tidy had found thirty-two underground tanks in connexion with the dairies of Islington, and had now got rid of them all. He thought, on physiological grounds, sufficient importance had not been attached to the ease with which poisons can be conveyed through the milk-glands. He had given small doses of strychnia to a bitch, whose pups were killed by taking the milk, the mother surviving.

Dr. Dudfield, in his reply, considered that the Metropolitan Board of Works might frame a code of by-laws, under the sanction of the Local Government Board, as they would doubtless give fair consideration to the representations of medical officers of health.

Proposed by Dr. Tripe, and seconded by Dr. Tidy—"That the paper on Cowsheds, etc., be referred to the Council for consideration and report."

Mr. Rendle then read a paper "On Water-Supply by Private Companies, chiefly with reference to London." An abstract of this paper appeared in our report of the Social Science Congress at Brighton (*vide Medical Times and Gazette*, October 23). The author desires to show the need of special legislation for improving the water-supply of the metropolis, by taking the control of this first necessary of life out of the hands of "trading companies."

In commenting upon the paper, Dr. Buchanan enunciated some of the objections to transferring powers for water-supply from companies to vestries or local authorities. In either case the public might suffer inconvenience. The local authority had the power of controlling the water-supply to a certain extent.

A letter was read from Dr. Letheby, preferring the present system of supply by water companies; and

Dr. Tidy spoke in the same strain.

Dr. Jacob objected to any water for drinking purposes being derived from a river, such as the Thames, into which the drainage of towns and villages is still permitted to flow. He thought it could not be too widely known that private persons are responsible for keeping their cisterns clean, and not the water companies.

Dr. Dudfield thought that some change was necessary, as the companies were not all sufficiently alive to the importance

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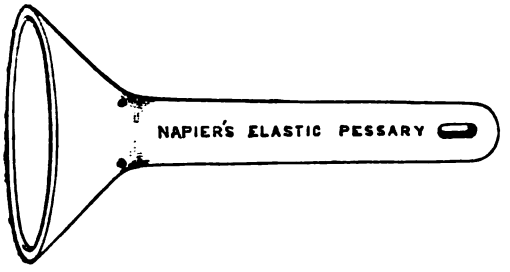
of supplying untainted water. He thought the Board of Works should have control over the companies.

Mr. RENDLE, in reply, stated that the powers of visitation necessary under the constant system could not be conceded to private companies. The evils of bad water were only found out when too late to remedy them.

NEW INVENTIONS.

PESSARY OF PERMANENTLY ELASTIC RED INDIA-RUBBER.

THE pessary of which an illustration is here given (three-quarter size) is the invention of Mr. William Donald Napier. It was brought before the Medical Society of London on Monday, the 6th inst., by Dr. R. J. Lee, who on that occasion read a paper—"On the Different Forms of Pessaries." Mr. Napier's attention was some time ago directed to the subject of pessaries by Dr. Lee and Mr. Henry Lee of St. George's Hospital, the latter having suggested a form of pessary similar to that which Mr. Napier was working out. The result has been the introduction to the profession of an instrument well calculated to serve the purpose for which it is intended.



The principal advantage which this pessary possesses over others is due to the fact that it is constructed of a permanently elastic substance, and, like Mr. Napier's catheters, is made in a mould by which perfection of form, combined with an absolutely smooth surface is obtained. The introduction of this pessary into the vagina may, if required, be facilitated by its being drawn, like the catheters alluded to, within a tube, from which it is afterwards expelled, an ordinary tubular speculum serving the purpose. The actual means by which the uterus is supported is (as will be seen by the opening in the stem) through the medium of broad bands placed round the waist or over the shoulders, no resistance being required from the soft parts or pelvic walls.

This pessary can be made of any size, and may be obtained of Messrs. Maw and Co., Aldersgate-street, or of any surgical instrument maker. The manufacturers are Messrs. Warne and Co., Tottenham.

MEDICAL NEWS.

UNIVERSITY OF DUBLIN.—At the Winter Commencements, held on Wednesday, December 15, 1875, in the Examination Hall of Trinity College, the following Degrees in Medicine and Surgery were conferred:—

Baccalaurei in Medicind.—Edvardus Josephus Blacker, Laurentius Corcoran, Kendal Matthæus Franks (*antea per diploma*), Carolus Fetherston Haugh, Thomas Harrison, Cuthbert Henricus Cooke Huddart, Jacobus Jackson, Johannes Russell West, Ricardus Blayney Wrightson.

Magistri in Chirurgid.—Franciscus Georgius Goodman, Georgius Arthurus Hughes, Thomas Harrison, Archibaldus Henricus Montfort, Johannes Russell West.

Doctores in Medicind.—Johannes Barton, Carolus Edvardus Gray, Hercules Henricus MacDonnell, Archibaldus Henricus Montfort, Jacobus Lane Notter, Jacob O'Connor, Gulielmus Henricus Robertus Stanley, Rev. Gulielmus Speer, Gulielmus Josiah Smyly.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Licentiates on Dec. 20:—

Atkinson, Francis Edward, 32, Regent-square, W.C.
Bartlett, Henry, 153, Great Dover-street, S.E.
Barton, James Kingston, 12, Doughty-street, W.C.
Birch, Philip, Lichfield.
Cadge, William Hotson, 28, Woburn-place, W.C.
Cobb, Robert, St. Bartholomew's Hospital, Chatham.
Crétin, Eugène, M.B. London, St. Bartholomew's Hospital, E.C.
Foley, Samuel, St. David's.
Harper, Robert Russell, Holbeach.
Hastings, George, M.D., Brussels, St. Bartholomew's Hospital, E.C.
Hawkins, Alexander Frederick, 32, Regent-square, W.C.
Miller, Frederick Daniel, Angles-road, S.W.
Morris, Henry, Wickham.
Morris, William Whytehead, East Bridgford.
Richardson, Timothy, 394, Commercial-road, E.
Sheehy, William Henry Patmore, St. Bartholomew's Hospital, E.C.
Smalley, Herbert, East Thurrock, Grays.
Strugnell, Frederick William, Queen Charlotte's Hospital, N.W.
Verco, Joseph Cooke, M.B. London, 24, Ovington-street, S.W.

KING AND QUEEN'S COLLEGE OF PHYSICIANS, IRELAND.—At the usual monthly examination meetings of the College, held on Tuesday, Wednesday, and Thursday, December 14, 15, and 16, the following candidates were successful for the licence to practise Medicine:—

Eyre, John Joseph.
Henderson, William George Hume.
Mara, William Francis.
O'Reilly, George John.
Patton, Alexander.
Reede, Samuel Thomas.
Smith, George.
Wolfenden, James Jackson.

For the licence to practise Midwifery—

Eyre, John Joseph.
Henderson, William George Hume.
O'Reilly, George John.
Reede, Samuel Thomas.
Smith, George.
Wolfenden, James Jackson.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members of the College, having undergone the necessary examinations for the Fellowship on the 25th, 26th, and 27th ult., were reported to have acquitted themselves to the satisfaction of the Court of Examiners, and, at a meeting of the Council on the 20th inst., were admitted Fellows of the College, viz.:—

Barrow, Albert Boyce, Newmarket, diploma of membership dated January 24, 1873, student of King's College.
Garton, William, M.B. Edin., L.S.A. Lond., St. Helen's, Lancashire, July 26, 1871, of St. Thomas's Hospital.
Jacobson, Walter Hamilton Acland, B.A. & M.B. Oxon., Guy's Hospital, November 13, 1872, of Guy's Hospital.
Jones, Thomas, M.B. Lond, L.S.A., Royal Infirmary, Manchester, May 17, 1870, of Guy's Hospital.
Law, William Thomas, M.D. Edin., L.S.A. Lond., Seamen's Hospital, Greenwich, May 16, 1871, of the Guy's and Edinburgh Schools.
Lyell, Robert, M.D. Lond., L.S.A., Headley Lodge, Penge, January 25, 1871, of the King's College and Middlesex Hospitals.
Mackenzie, Lewis, L.R.C.P. Lond., Tiverton, Devon, November 15, 1871, of the London Hospital.
Winterbottom, Augustus, Sloane-street, Chelsea, November 13, 1872, of St. George's Hospital.

Six candidates having failed to acquit themselves to the satisfaction of the Court of Examiners, were referred to their professional studies for twelve months.

The following gentlemen, elected Fellows at previous meetings of the Council, were admitted as such, viz.:—

Briscoe, John, L.S.A., Broad-street, Oxford, diploma of membership dated August 15, 1842.
Flower, Thomas Bruges, F.L.S., Beaufort-buildings, Bath, July 9, 1841.

At the same meeting, the following Members were elected Fellows of the College, viz.:—

Bratton, James, J.P., L.S.A., Shrewsbury, diploma of membership dated May 20, 1836.
Spong, William Nash, L.S.A., Faversham, Kent, August 1, 1842.

APOTHECARIES' HALL.—The following gentlemen passed their Examination in the Science and Practice of Medicine, and received certificates to practise, on Thursday, December 16:—

Buckell, Earnest Hook, University College Hospital.
Haselden, Robert, Bolton, Lancashire.
Macintire, John Henry Lee, 95, Gower-street, W.C.
Reeve, Henry, Victoria-park, Hackney.
Richardson, Arthur, Rusholme, Lancashire.

The following gentlemen also on the same day passed their primary professional examination:—

Dalton, Charles Gerald, London Hospital.
Gay, Charles William Ebenezer, King's College.
Morgan, John, Guy's Hospital.
Prior, Edward Thurlow, St. Bartholomew's Hospital.
Rigby, William Bradshaw, St. Bartholomew's Hospital.
Scallon, Ernest Oliver, King's College.
Symons, John, King's College.
Walsh, William Arthur Stephenson, King's College.
White, William Robert, King's College.
Whitley, Francis George Herbert, St. Bartholomew's Hospital.

BIRTHS.

ETHERIDGE.—On December 19, at Ivy House, Whitstable, the wife of Charles Etheridge, M.R.C.S. Eng., L.S.A., of a son.

LONGHURST.—On December 17, at Witham, Essex, the wife of Dr. Longhurst, late 60th Rifles, of a son.

OGLE.—On December 15, at The Elms, Duffield-road, Derby, the wife of W. Ogle, M.D., of a son.

WILL.—On December 20, at Sheerness, the wife of George Elmsly Will, Surgeon-Major Army Medical Department, of a daughter (Mildred Agnes).

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MARRIAGES.

BOULTON—MARCHANT.—On December 13, at the parish church, Pontefract, Charles Boulton, solicitor, youngest son of Robert George Boulton, M.D., J.P., of Beverley, to Georgiana, youngest daughter of the late Francis Marchant, M.D., of Hemsworth, Yorkshire.

KNOX—LONGRIDGE.—On November 19, at Santa Lucia, West Indies, Charles Frederick Knox, M.D., of Port of Spain, Trinidad, to Anna Eliza, eldest daughter of J. A. Longridge, Esq., of 22, Leinster-gardens, London, W.

MANSON—THURBURN.—On December 21, at St. George's, Campden-hill, Patrick Manson, M.D., son of John Manson, Esq., of Fingask, Aberdeenshire, to Henrietta Isabella, daughter of Captain Thurburn, Royal Navy, of 15, Campden-hill-gardens, Kensington, W.

DEATHS.

CREMEN, DAVID, B.A., M.B., M.R.C.S. Eng., formerly of Trinity College, Dublin, at 59, Milbank-street, Westminster, S.W., on December 6.

FURBER, LETITIA KENT, widow of the late George Furber, M.R.C.S., at the residence of her youngest son, 272, Kentish Town-road, N.W., on December 21, in her 68th year.

LLOYD, LYDIA, widow of the late Thomas Lloyd, M.D., formerly of Ludlow and Rome, at Brighton, on December 19.

LUCAS, RICHARD JAGO, youngest son of the late W. Bennett Lucas, F.R.C.S. Eng., at Melbourne, of scarlet fever, on November 1, in his 24th year.

REID, HENRY R., M.D., at Bowmanville, Ontario, Canada, on November 26, aged 43.

SMITH, HENRY CECIL, M.R.C.S. Eng., L.S.A., of Maidstone, eldest son of W. H. Smith, Esq., of Gresham House, London, at Ventnor, on December 9, aged 34.

SQUAREY, CHARLES EDWARD, M.B., M.R.C.P., M.R.C.S. Eng., L.S.A., late of 13, Upper Wimpole-street, Cavendish-square, London, son of the late Charles Squarey, Esq., of Salisbury, at Cliftonville, Brighton, on December 12, aged 32.

SUTHERLAND, ROBERT, Staff Surgeon Assistant (half-pay), late Assistant-Surgeon 24th Foot and 5th Lancers, and Statistical Officer to Inspector-General of Hospitals, India, during 1838 and 1839, at Thurso, on December 12.

WATSON, JOHN FREEMAN, infant son of A. M. Watson, M.D., at Weirfield, Penistone, Yorkshire, of acute bronchitis, on December 18, aged four months.

VACANCIES.

In the following list the nature of the office vacant, the qualifications required in the Candidate, the person to whom application should be made and the day of election (as far as known) are stated in succession.

ATKINSON-MORLEY'S CONVALESCENT HOSPITAL, COPSE-HILL, WIMBLEDON.—Resident Medical Officer. Candidates must be M.R.C.S. Eng. Applications, with testimonials, to the Secretary of St. George's Hospital, S.W., on or before December 30.

BERKS COUNTY ASYLUM, MOULSFORD, WALLINGFORD.—Assistant Medical Officer. Candidates must be legally qualified, and unmarried. Applications, with testimonials, to Dr. Gilland, Medical Superintendent.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer. Candidates must possess a double qualification. Applications, with testimonials, to Mr. W. Appleton, Clerk to the Managers, Cleveland-street Asylum, Fitzroy-square, W., before January 10.

CHORLTON-UPON-MEDLOCK, RUSHOLME, AND MOSS-SIDE DISPENSARY, MANCHESTER.—House-Surgeon. Candidates must be duly qualified. Applications, with testimonials, to Mr. Fox, 59, Princess-street, Manchester.

DENBIGHSHIRE INFIRMARY, DENBIGH.—House-Surgeon. Candidates must be duly qualified, unmarried, and conversant with the Welsh language. Applications, with testimonials, to the Chairman of the Committee of Management, under cover to the Secretary.

GLOUCESTER INFIRMARY.—Surgeon and Assistant-Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Committee, under cover to the Secretary, on or before January 27, 1876.

KENT AND CANTERBURY HOSPITAL, CANTERBURY.—Assistant House-Surgeon. Candidates must be duly qualified and registered. Applications, with testimonials, to the Secretary, on or before December 31.

MALE LOCK HOSPITAL.—House Surgeon. For information apply to the Secretary.

PARISH OF BIRMINGHAM.—Resident Assistant Workhouse Medical Officer. Candidates must be duly qualified. Applications, with testimonials, to the Guardians of the Poor of Birmingham, at the Parish Offices, Paradise-street, Birmingham, on or before January 16, 1876.

SHEFFIELD GENERAL INFIRMARY.—Physician. Candidates must be duly qualified. Applications, with testimonials, to the Secretary, on or before January 5, 1876.

ST. SAVIOUR'S UNION, SURREY.—District Medical Officer and Public Vaccinator. Candidates must be duly qualified. Applications, with testimonials, to Mr. H. C. Jones, Clerk's Offices, John-street West, Blackfriars-road, S.E., before January 3.

ST. MARY'S HOSPITAL AND DISPENSARY FOR WOMEN AND CHILDREN, QUAY-STREET, MANCHESTER.—Qualified Medical Man. Applications, with testimonials, to Mr. J. Barker, 41, John Dalton-street, Manchester, on or before January 7.

WESTMINSTER GENERAL DISPENSARY, GERRARD-STREET, SOHO.—Honorary Surgeon. Candidates must be F. or M.R.C.S. Applications, with testimonials, to the Secretary before December 30.

UNION AND PAROCHIAL MEDICAL SERVICE.

*** The area of each district is stated in acres. The population is computed according to the census of 1871.

RESIGNATIONS.

Barnstaple Union.—Mr. Joseph Harper has resigned the Second District; area 16,910; population 4205; salary £60 per annum.

Chorlton Union.—Mr. R. Allen has resigned the Didsbury District; area 5948, population 11,526; salary £30 per annum.

Cranbrook Union.—Mr. R. Minors has resigned the Benenden District; area 6600; population 1553; salary £43 per annum.

Lincoln Union.—Mr. Thos. M. Wilkinson has resigned the Third District; area 9528; population 2226; salary £30 per annum.

Risbridge Union.—Mr. John E. N. Whitlock has resigned the Fourth District; area 12,020; population 2921; salary £53 10s. per annum.

APPOINTMENTS.

Louth Union.—Frederick Hall, M.R.C.S. Eng., L.S.A., to the Hainton District.

Rugby Union.—Frederic A. Bond, M.B. & C.M. Edin., to the Brinklow District.

Southmolton Union.—Hercules S. Traill, L.R.C.P. Edin., L.R.C.S. Edin., to the Seventh District.

ON Friday, Dec. 10, Professor Skoda celebrated his seventieth birthday. It will be recollected that the famous author of the treatise on "Auscultation and Percussion" retired from active educational work five years ago.

DR. KUNDRAT, late assistant of Professor Rokitansky, has been appointed Professor of Pathological Anatomy at Gratz, in the place of Professor Heschl. Dr. Kundrat's old pupils, of whom there are several in London, and a still larger number in America, will, we are sure, greet his promotion in the warmest manner. The energy, scientific ability, and friendly interest with which his classes were conducted at Vienna, allow us to anticipate for him the utmost success in his new position.

ON November 9 last, a statue was inaugurated in the grounds of the Vienna General Hospital, to the memory of Professor Schule, formerly a distinguished surgical teacher in the Vienna University. There was a numerous attendance of the professors, medical men, and students at the ceremony, and the merits of the deceased—in endeavouring to give greater precision to surgical diagnosis, in developing the operations of paracentesis thoracis, and of the resections of nerves, as well as in improving the treatment of deformities of the feet—were dwelt upon in the highest terms in an oration delivered by Professor Salzer.

A LARGE MOUTH.—The *Medical and Surgical Journal* says that Dr. Robinson, of Rome, N.Y., took the impression of the jaw of a coloured woman, which measured three inches from front to back, and three inches across, the usual dimensions being only one inch and a half by two inches. This is said to be the largest mouth known to the dental profession in this country.—*New York Medical Record*, October 6.

NOTES, QUERIES, AND REPLIES.

"He that questioneth much shall learn much."—*Bacon.*

Dr. Harding, Wellington.—Letter with enclosure received.

Dr. Andrew Ross, Molong.—Letter with enclosure received.

Dr. J. Hamilton.—Letter with enclosure received.

Dr. F. D. Edgerton, Middletown.—Letter with enclosure received.

J. J.—A celebrated poet said, "If Davy had not been the first chemist, he would have been the first poet of his age"; he wrote poems for Southey's "Annual Anthology," and jointly with Danvers corrected the sheets of "Thalaba."

Aqua Pura.—The advantage of boiling water before drinking it was well understood even in ancient times. Herodotus, writing about 450 years before the Christian era, of a period a century earlier, states—"The great king when he is on a campaign is supplied from home with provisions well prepared, and with cattle. Moreover, he carries with him water from the River Choaspes, which flows past Susa, whereof alone and of none other does he drink; and with this Choaspes water, *previously boiled*, and stored in silver vessels, many four-wheeled mule-carts are laden, which follow him whithersoever he marches."

J. A. V.—Mr. W. J. Moore, Bombay Medical Service, in his work, "Health in the Tropics, or Sanitary Art applied to Europeans in India" (published in 1862 by John Churchill, London), remarks:—"The fact is, for the white man or his offspring there is no such thing as acclimatisation in India. As a rule, Europeans enjoy the best health, and suffer less from heat, during their first years of residence in this country. Acclimatisation as regards an Indian sun is simply impossible. Exposure, instead of 'hardening' the system, actually has the contrary effect, and the longer Europeans remain in this country, the more they feel the effects of the vertical sun. Men with a larger amount of strength and vital force than others can bear exposure and the effects of heat longer than those not so gifted; but the deteriorating process, though slow, is nevertheless certain, and if acute dysentery, epidemic cholera, ardent fever, or sunstroke do not some day suddenly destroy, insidious malarious disease, cachexia local, or splenic leucocythæmia sooner or later results."

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Enquirer.—The resolution passed, last week, by the Keighley Board of Guardians was to the following effect:—"That the time has arrived when no further resistance to the writ of *mandamus* shall be made by the Board; but that they accept the decision of the Court of Queen's Bench, and carry out the compulsory clauses of the (Vaccination) Acts." The chairman and three anti-vaccinating members only voted against the resolution.

Zeno.—It has been decided that the future collections of the Hospital Sunday Fund in Belfast shall take place on the last Sunday in each year.

COMMUNICATIONS have been received from—

Dr. Robertson, London; Dr. Fayrer, Madras; Dr. Sparks, Mentone; Dr. Gavin Milroy, Richmond; Dr. J. W. Moore, Dublin; Dr. Dyce Brown, Aberdeen; The Registrar of Apothecaries' Hall, London; Mr. H. O. Thomas, Liverpool; Our Edinburgh Correspondent; Our Liverpool Correspondent; Our Hastings Correspondent; Dr. McLaren, Edinburgh; Dr. Donkin, London; Mr. F. A. Bulley, Reading; Mr. Vincent, London; Registrar of the Royal College of Physicians, London; The Registrar-General, Edinburgh; Mr. C. F. Maunder, London; Mr. R. J. Godlee, London; Mr. J. Chatto, London; Messrs. Billings, Clapp, and Co., Boston, U.S.A.; Messrs. W. R. Seelie and Co., London; Dr. F. Montizambert, Quebec; Mr. H. M. Hewitt, London; Dr. F. Edgerton, Connecticut; Sir C. McGrigor, Bart., and Co., London; Dr. J. Hamilton, Sydney; Dr. Brinsley Nicholson, London; Messrs. Brand and Co., London; Dr. Priest, Toledo; Mr. S. Murphy, London; Dr. Dunlop, Glasgow; Mr. Tallack, London; Dr. D. Paton, Letham; Mr. G. Jamieson, Carlow; Dr. Newbould, Gisborne; Dr. Smyly, Dublin; Dr. Aitken, Inverness; Mr. C. Ward, London; Dr. Dobbin, Banbridge; Mr. A. P. Watkins, Worcester; Messrs. Allen and Hanbury, London; Mr. German Reed, London; Mr. H. C. Shepard, Raglan; Dr. Fraser, Gipsy Hill; Mr. D. Edmundton, Ordale; Mr. E. Force, Exeter; Mr. T. Ransom, Westerham; Dr. E. Watson, Glasgow.

BOOKS AND PAMPHLETTS RECEIVED—

Storer on Southern Italy as a Health-Station for Invalids—Jahresbericht des Schwedischen Heilgymnastischen Institutes in Bremen, von Prof. Dr. A. S. Ulrich—Des Névralgies, par le Dr. A. Cartaz—Morgan on Medical Education at the Universities—Transactions of the American Otological Society, vol. ii., part 1—Report of the Council of the Metropolitan Hospital Sunday Fund—Year-Book of Pharmacy—Haviland's Geography of Heart Disease, etc.—West Riding Lunatic Asylum Reports, vol. v.—De Chaumont's Lectures on State Medicine—Tanfier's Index of Diseases, sixth edition, revised by Broadbent—Army Medical Department Report for the Year 1873—Graham's Temperance Guide—The Cholera Epidemic of 1873 in the United States—Die Vererbung der Syphilis, von Dr. M. Kassowitz—Abercromby on Small Oscillations of the Barometer—Abercromby on the Barometric Fluctuations in Squalls and Thunderstorms.

PERIODICALS AND NEWSPAPERS RECEIVED—

Lancet—British Medical Journal—Medical Press and Circular—Nature—Berliner Klinische Wochenschrift—Centralblatt für Chirurgie—Gazette des Hôpitaux—Gazette Médicale—Gazette Hebdomadaire—Le Progrès Médical—Bulletin de l'Académie de Médecine—National Food and Fuel Reformer—Philadelphia Medical Times—Pharmaceutical Journal—Centralblatt für die Medicinischen Wissenschaften—La France Médicale—Iron—Wiener Medizinische Wochenschrift—Journal des Sages-Femmes—Paris Médical—The Pictorial World—Northern Daily Express—Old Jonathan—Canada Lancet—Medical Enquirer—The Examiner.

APPOINTMENTS FOR THE WEEK.

December 25. ***Saturday (this day).***

Operations at St. Bartholomew's, 1½ p.m.; King's College, 2 p.m.; Charing-cross, 2 p.m.; Royal Free, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. Thomas's, 9½ a.m.

27. *Monday.*

Operations at the Metropolitan Free, 2 p.m.; St. Mark's Hospital for Diseases of the Rectum, 2 p.m.; St. Peter's Hospital for Stone, 3 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

28. *Tuesday.*

Operations at Guy's, 1½ p.m.; Westminster, 2 p.m.; National Orthopædic, Great Portland-street, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; West London, 3 p.m.

Anthropological Institute, 8 p.m. Meeting.

29. *Wednesday.*

Operations at University College, 2 p.m.; St. Mary's, 1½ p.m.; Middlesex, 1 p.m.; London, 2 p.m.; St. Bartholomew's, 1½ p.m.; Great Northern, 2 p.m.; St. Thomas's, 1½ p.m.; Samaritan, 2½ p.m.; King's College (by Mr. Wood), 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.

30. *Thursday.*

Operations at St. George's, 1 p.m.; Central London Ophthalmic, 1 p.m.; Royal Orthopædic, 2 p.m.; University College, 2 p.m.; Royal London Ophthalmic, 11 a.m.; Royal Westminster Ophthalmic, 1½ p.m.; Hospital for Diseases of the Throat, 2 p.m.; Hospital for Women, 2 p.m.

31. *Friday.*

Operations at Central London Ophthalmic, 2 p.m.; Royal London Ophthalmic, 11 a.m.; South London Ophthalmic, 2 p.m.; Royal Westminster Ophthalmic, 1½ p.m.; St. George's (ophthalmic operations), 1½ p.m.; Guy's, 1½ p.m.

VITAL STATISTICS OF LONDON.

Week ending Saturday, December 18.

BIRTHS.

Births of Boys, 1289; Girls, 1250; Total, 2539.
Average of 10 corresponding years 1865-74, 2181·3.

DEATHS.

	Males.	Females.	Total.
Deaths during the week	976	858	1834
Average of the ten years 1865-74	832·4	802·0	1634·4
Average corrected to increased population ...	...	...	1749
Deaths of people aged 80 and upwards ...	...	...	79

DEATHS IN SUB-DISTRICTS FROM EPIDEMICS.

	Population, 1871.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.
West	561359	...	16	9	2	18	...	2	...	...
North	751729	...	16	24	1	22	1	4	1	2
Central ...	334369	...	8	15	1	6	...	...	...	2
East	639111	...	4	16	2	23	...	1	2	5
South	967692	1*	24	43	2	19	1	8	4	6
Total	3254260	1*	68	107	8	88	2	15	7	15

* This was a fatal case of chicken-pox.

METEOROLOGY.

From Observations at the Greenwich Observatory.

Mean height of barometer	29·909 in.
Mean temperature	37·5°
Highest point of thermometer	49·7°
Lowest point of thermometer	24·2°
Mean dew-point temperature	35·7°
General direction of wind	S.S.E., S., & S.S.W.
Whole amount of rain in the week	0·01 in.

BIRTHS and DEATHS Registered and METEOROLOGY during the Week ending Saturday, December 18, 1875, in the following large Towns:—

Boroughs, etc. (Municipal boundaries for all except London.)	Estimated Population to middle of the year 1875.*	Persons to an Acre. (1875.)	Births Registered during the week ending Dec. 18.	Deaths Registered during the week ending Dec. 18.	Temperature of Air (Fahr.) Highest during the Week.	Lowest during the Week.	Weekly Mean of Mean Daily Values.	Temp. of Air (Cent.) Weekly Mean of Mean Daily Values.	Rain Fall. In Inches.	In Centimetres.
London	3445160	45·7	2539	1834	49·7	24·2	37·5	3·06	0·01	0·03
Portsmouth ...	122632	27·3	75	65	...	...	...	...	...	...
Norwich	82842	11·1	49	30	44·0	32·0	37·8	3·23	0·00	0·00
Bristol	196186	44·1	132	110	48·0	26·2	40·1	4·50	0·14	0·36
Wolverhampton ...	71718	21·1	44	36	46·9	30·7	38·4	3·55	0·04	0·10
Birmingham ...	366325	43·6	345	224	48·0	30·5	39·2	4·00	0·00	0·00
Leicester	109830	34·3	91	51	46·0	30·2	39·1	3·95	0·00	0·00
Nottingham ...	92251	46·2	62	43	48·1	29·7	38·4	3·55	0·05	0·13
Liverpool	516063	99·1	388	306	48·4	31·1	39·0	3·89	0·26	0·66
Manchester ...	356626	83·1	262	257	...	...	...	...	...	...
Salford	135720	26·3	122	120	47·6	30·0	39·0	3·89	0·13	0·33
Oldham	87437	18·7	75	53	...	...	...	...	...	...
Bradford	168305	23·3	138	89	45·4	28·0	37·5	3·06	0·05	0·13
Leeds	285118	13·2	230	171	47·0	28·0	39·2	4·00	0·06	0·15
Sheffield	267881	13·6	230	145	47·0	26·5	37·9	3·28	0·06	0·15
Hull	133932	36·8	129	61	45·0	31·0	37·5	3·06	0·08	0·20
Sunderland ...	106342	32·2	87	47	...	...	...	...	...	...
Newcastle-on-Tyne	137665	25·6	114	69	46·0	25·0	37·9	3·23	0·00	0·00
Edinburgh	211626	50·5	132	101	47·0	27·0	39·1	3·95	...	...
Glasgow	534564	88·6	427	305	...	...	...	...	...	...
Dublin	314666	31·3	167	187	53·5	27·0	40·2	4·55	0·16	0·41
Total of 21 Towns in United Kingdm	7742889	37·0	5838	4304						

At the Royal Observatory, Greenwich, the mean reading of the barometer last week was 29·91 in. The highest was 30·05 in. on Monday evening, and the lowest 29·68 in. at the end of the week.

* The figures for the English and Scottish towns are the numbers enumerated in April, 1871, raised to the middle of 1875 by the addition of four years and a quarter's increase, calculated on the rate which prevailed between 1861 and 1871. The population of Dublin is taken as stationary at the number enumerated in April, 1871.

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